

Daily Analysis Runlog For Sequence/QC Batch ID # LB90604

Review By		Review On				
SubDirectory		LB90604		Test : Cyanide		
STD. NAME		STD REF.#				
ICAL Standard		WP58587,WP58586,WP58585,WP58584,WP58583,WP58582				
ICV Standard		WP585888				
CCV Standard		WP58589				
ICSA Standard		N/A				
CRI Standard		N/A				
LCS Standard		N/A				
Chk Standard		WP53945,WP55836,WP58547				
Sr#	SampleId	ClientID	QcType	Date	Comment	Status
1	S0.0	S0.0	CAL1	10/05/17 13:43		OK
2	S5.0	S5.0	CAL2	10/05/17 13:43		OK
3	S10.0	S10.0	CAL3	10/05/17 13:43		OK
4	S100.0	S100.0	CAL4	10/05/17 13:43		OK
5	S250.0	S250.0	CAL5	10/05/17 13:43		OK
6	S500.0	S500.0	CAL6	10/05/17 13:43		OK
7	ICV	ICV	ICV	10/05/17 16:07		OK
8	ICB	ICB	ICB	10/05/17 16:07		OK
9	CCV001	CCV001	CCV	10/05/17 16:07		OK
10	CCB001	CCB001	CCB	10/05/17 16:07		OK
11	PB102950BL	PBS006	MB	10/05/17 16:07		OK
12	I5611-01	B-44(0-1)_100217	SAM	10/05/17 16:07		OK
13	I5611-02	B-44(5-5.5)_100217	SAM	10/05/17 16:15		OK
14	I5611-03	B-42(0.3-1.3)_100217	SAM	10/05/17 16:15		OK
15	I5652-01	B-39(0.5-1.5)-100317	SAM	10/05/17 16:15		OK
16	I5652-02	B-39(5-7)-100317	SAM	10/05/17 16:15		OK
17	I5652-03	B-59(FILL)-100317	SAM	10/05/17 16:15		OK
18	I5652-04	B-59(FILL)-100317D	DUP	10/05/17 16:15		OK
19	I5652-05	B-59(FILL)-100317S	MS	10/05/17 16:15		OK
20	I5652-06	B-59(5-7)-100317	SAM	10/05/17 16:15		OK
21	I5652-07	B-59(12-13.5)-100317	SAM	10/05/17 16:15		OK

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Review By		Review On				
SubDirectory		LB90604		Test : Cyanide		
STD. NAME		STD REF.#				
ICAL Standard		WP58587,WP58586,WP58585,WP58584,WP58583,WP58582				
ICV Standard		WP585888				
CCV Standard		WP58589				
ICSA Standard		N/A				
CRI Standard		N/A				
LCS Standard		N/A				
Chk Standard		WP53945,WP55836,WP58547				
22	I5652-08	B-57(1-2)-100317	SAM	10/05/17 16:15		OK
23	I5652-09	B-57(2-4)-100317	SAM	10/05/17 16:15		OK
24	I5652-10	DUP-2	SAM	10/05/17 16:22		OK
25	I5652-11	B-42(7-9)-100217	SAM	10/05/17 16:22		OK
26	PB102957BL	PBS006	MB	10/05/17 16:22		OK
27	I5693-01	B-55(0.5-1.5)-100317	SAM	10/05/17 16:22		OK
28	I5693-01D	B-55(0.5-1.5)-100317	DUP	10/05/17 16:22		OK
29	I5693-02	B-55(3.5-5)-100317	SAM	10/05/17 16:22		OK
30	I5693-03	B-32(1-2)-100417	SAM	10/05/17 16:22		OK
31	I5693-04	B-32(2-4)-100417	SAM	10/05/17 16:22		OK
32	I5693-05	B-33(0.5-1.5)-100417	SAM	10/05/17 16:23		OK
33	I5693-06	B-33(3.5-4.5)-100417	SAM	10/05/17 16:23		OK
34	I5693-07	B-30(0-1)-100417	SAM	10/05/17 16:29		OK
35	I5693-08	B-30(3-3.8)-100417	SAM	10/05/17 16:29		OK
36	I5695-03	B-74(0-1)-100417	SAM	10/05/17 16:30		OK
37	I5695-04	B-74(3-4)-100417	SAM	10/05/17 16:30		OK
38	PB102958BL	PBW005	MB	10/05/17 16:30		OK
39	I5693-09	EQB-2-100417	SAM	10/05/17 16:30		OK
40	I5693-09D	EQB-2-100417D	DUP	10/05/17 16:30		OK
41	I5693-09S	EQB-2-100417S	MS	10/05/17 16:30		OK
42	CCV002	CCV002	CCV	10/05/17 16:30		OK
43	CCB002	CCB002	CCB	10/05/17 16:30		OK



Instrument ID : CN

284 Sheffield Street, Mountainside, New Jersey 07092 Phone : 908 789 8900 Fax : 908 789 8922

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SubDirectory		LB90604		Test : Cyanide		
STD. NAME		STD REF.#				
ICAL Standard		WP58587,WP58586,WP58585,WP58584,WP58583,WP58582				
ICV Standard		WP585888				
CCV Standard		WP58589				
ICSA Standard		N/A				
CRI Standard		N/A				
LCS Standard		N/A				
Chk Standard		WP53945,WP55836,WP58547				
44	I5693-01S	B-55(0.5-1.5)-100317	MS	10/05/17 17:21		OK
45	CCV003	CCV003	CCV	10/05/17 17:21		OK
46	CCB003	CCB003	CCB	10/05/17 17:21		OK



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Report of Analysis

Client:		Date Collected:	10/2/2017 12:00:00 AM
Project:	LB90604	Date Received:	10/2/2017 12:00:00 AM
Client Sample ID:	B-44(0-1)_100217	SDG No.:	LB90604
Lab Sample ID:	I5611-01	Matrix:	Solid
Level (low/med):	low	% Solid:	90.9

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.067	J	1	0.058	0.013	0.53	mg/kg	10/05/2017	10/05/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	10/2/2017 12:00:00 AM
Project:	LB90604	Date Received:	10/2/2017 12:00:00 AM
Client Sample ID:	B-44(5-5.5)_100217	SDG No.:	LB90604
Lab Sample ID:	I5611-02	Matrix:	Solid
Level (low/med):	low	% Solid:	78.6

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.44	J	1	0.067	0.015	0.61	mg/kg	10/05/2017	10/05/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	10/2/2017 12:00:00 AM
Project:	LB90604	Date Received:	10/2/2017 12:00:00 AM
Client Sample ID:	B-42(0.3-1.3)_100217	SDG No.:	LB90604
Lab Sample ID:	I5611-03	Matrix:	Solid
Level (low/med):	low	% Solid:	89.8

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.28	J	1	0.059	0.013	0.54	mg/kg	10/05/2017	10/05/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	10/3/2017 12:00:00 AM
Project:	LB90604	Date Received:	10/3/2017 12:00:00 AM
Client Sample ID:	B-39(0.5-1.5)-100317	SDG No.:	LB90604
Lab Sample ID:	I5652-01	Matrix:	Solid
Level (low/med):	low	% Solid:	86.8

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.11	J	1	0.062	0.014	0.56	mg/kg	10/05/2017	10/05/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	10/3/2017 12:00:00 AM
Project:	LB90604	Date Received:	10/3/2017 12:00:00 AM
Client Sample ID:	B-39(5-7)-100317	SDG No.:	LB90604
Lab Sample ID:	I5652-02	Matrix:	Solid
Level (low/med):	low	% Solid:	83.7

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.07	J	1	0.063	0.014	0.57	mg/kg	10/05/2017	10/05/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	10/3/2017 12:00:00 AM
Project:	LB90604	Date Received:	10/3/2017 12:00:00 AM
Client Sample ID:	B-59(FILL)-100317	SDG No.:	LB90604
Lab Sample ID:	I5652-03	Matrix:	Solid
Level (low/med):	low	% Solid:	96.2

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.19	J	1	0.056	0.013	0.51	mg/kg	10/05/2017	10/05/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	10/3/2017 12:00:00 AM
Project:	LB90604	Date Received:	10/3/2017 12:00:00 AM
Client Sample ID:	B-59(5-7)-100317	SDG No.:	LB90604
Lab Sample ID:	I5652-06	Matrix:	Solid
Level (low/med):	low	% Solid:	90.5

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.53		1	0.058	0.013	0.53	mg/kg	10/05/2017	10/05/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	10/3/2017 12:00:00 AM
Project:	LB90604	Date Received:	10/3/2017 12:00:00 AM
Client Sample ID:	B-59(12-13.5)-100317	SDG No.:	LB90604
Lab Sample ID:	I5652-07	Matrix:	Solid
Level (low/med):	low	% Solid:	86.4

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.018	U	1	0.06	0.014	0.55	mg/kg	10/05/2017	10/05/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	10/3/2017 12:00:00 AM
Project:	LB90604	Date Received:	10/3/2017 12:00:00 AM
Client Sample ID:	B-57(1-2)-100317	SDG No.:	LB90604
Lab Sample ID:	I5652-08	Matrix:	Solid
Level (low/med):	low	% Solid:	84.4

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.09	J	1	0.061	0.014	0.55	mg/kg	10/05/2017	10/05/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	10/3/2017 12:00:00 AM
Project:	LB90604	Date Received:	10/3/2017 12:00:00 AM
Client Sample ID:	B-57(2-4)-100317	SDG No.:	LB90604
Lab Sample ID:	I5652-09	Matrix:	Solid
Level (low/med):	low	% Solid:	65.7

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.16	J	1	0.08	0.018	0.73	mg/kg	10/05/2017	10/05/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	10/3/2017 12:00:00 AM
Project:	LB90604	Date Received:	10/3/2017 12:00:00 AM
Client Sample ID:	DUP-2	SDG No.:	LB90604
Lab Sample ID:	I5652-10	Matrix:	Solid
Level (low/med):	low	% Solid:	90.9

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.92		1	0.057	0.013	0.52	mg/kg	10/05/2017	10/05/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	10/2/2017 12:00:00 AM
Project:	LB90604	Date Received:	10/3/2017 12:00:00 AM
Client Sample ID:	B-42(7-9)-100217	SDG No.:	LB90604
Lab Sample ID:	I5652-11	Matrix:	Solid
Level (low/med):	low	% Solid:	67.7

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.14	J	1	0.079	0.018	0.72	mg/kg	10/05/2017	10/05/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	10/3/2017 12:00:00 AM
Project:	LB90604	Date Received:	10/4/2017 12:00:00 AM
Client Sample ID:	B-55(0.5-1.5)-100317	SDG No.:	LB90604
Lab Sample ID:	I5693-01	Matrix:	Solid
Level (low/med):	low	% Solid:	91

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.065	J	1	0.059	0.013	0.53	mg/kg	10/05/2017	10/05/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	10/3/2017 12:00:00 AM
Project:	LB90604	Date Received:	10/4/2017 12:00:00 AM
Client Sample ID:	B-55(3.5-5)-100317	SDG No.:	LB90604
Lab Sample ID:	I5693-02	Matrix:	Solid
Level (low/med):	low	% Solid:	82.4

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.1	J	1	0.064	0.015	0.58	mg/kg	10/05/2017	10/05/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	10/4/2017 12:00:00 AM
Project:	LB90604	Date Received:	10/4/2017 12:00:00 AM
Client Sample ID:	B-32(1-2)-100417	SDG No.:	LB90604
Lab Sample ID:	I5693-03	Matrix:	Solid
Level (low/med):	low	% Solid:	90.5

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	4.1		1	0.058	0.013	0.53	mg/kg	10/05/2017	10/05/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	10/4/2017 12:00:00 AM
Project:	LB90604	Date Received:	10/4/2017 12:00:00 AM
Client Sample ID:	B-32(2-4)-100417	SDG No.:	LB90604
Lab Sample ID:	I5693-04	Matrix:	Solid
Level (low/med):	low	% Solid:	79.9

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	2.2		1	0.065	0.015	0.59	mg/kg	10/05/2017	10/05/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	10/4/2017 12:00:00 AM
Project:	LB90604	Date Received:	10/4/2017 12:00:00 AM
Client Sample ID:	B-33(0.5-1.5)-100417	SDG No.:	LB90604
Lab Sample ID:	I5693-05	Matrix:	Solid
Level (low/med):	low	% Solid:	95.2

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.31	J	1	0.055	0.012	0.5	mg/kg	10/05/2017	10/05/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	10/4/2017 12:00:00 AM
Project:	LB90604	Date Received:	10/4/2017 12:00:00 AM
Client Sample ID:	B-33(3.5-4.5)-100417	SDG No.:	LB90604
Lab Sample ID:	I5693-06	Matrix:	Solid
Level (low/med):	low	% Solid:	81.8

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.57	J	1	0.065	0.015	0.59	mg/kg	10/05/2017	10/05/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	10/4/2017 12:00:00 AM
Project:	LB90604	Date Received:	10/4/2017 12:00:00 AM
Client Sample ID:	B-30(0-1)-100417	SDG No.:	LB90604
Lab Sample ID:	I5693-07	Matrix:	Solid
Level (low/med):	low	% Solid:	90

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	1.0		1	0.059	0.013	0.53	mg/kg	10/05/2017	10/05/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	10/4/2017 12:00:00 AM
Project:	LB90604	Date Received:	10/4/2017 12:00:00 AM
Client Sample ID:	B-30(3-3.8)-100417	SDG No.:	LB90604
Lab Sample ID:	I5693-08	Matrix:	Solid
Level (low/med):	low	% Solid:	83.7

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.98		1	0.064	0.014	0.58	mg/kg	10/05/2017	10/05/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	10/4/2017 12:00:00 AM
Project:	LB90604	Date Received:	10/4/2017 12:00:00 AM
Client Sample ID:	EQB-2-100417	SDG No.:	LB90604
Lab Sample ID:	I5693-09	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	0.26	U	1	1.5	5	10	ug/L	10/05/2017	10/05/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	10/4/2017 12:00:00 AM
Project:	LB90604	Date Received:	10/4/2017 12:00:00 AM
Client Sample ID:	B-74(0-1)-100417	SDG No.:	LB90604
Lab Sample ID:	I5695-03	Matrix:	Solid
Level (low/med):	low	% Solid:	98

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.47	J	1	0.053	0.012	0.49	mg/kg	10/05/2017	10/05/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	10/4/2017 12:00:00 AM
Project:	LB90604	Date Received:	10/4/2017 12:00:00 AM
Client Sample ID:	B-74(3-4)-100417	SDG No.:	LB90604
Lab Sample ID:	I5695-04	Matrix:	Solid
Level (low/med):	low	% Solid:	86.1

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.25	J	1	0.06	0.014	0.55	mg/kg	10/05/2017	10/05/2017	ISM02.4_CN



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Report of Analysis

Client:		Date Collected:	10/4/2017 12:00:00 AM
Project:	LB90604	Date Received:	10/4/2017 12:00:00 AM
Client Sample ID:	B-74(3-4)-100417	SDG No.:	LB90604
Lab Sample ID:	I5695-04	Matrix:	Solid
Level (low/med):	low	% Solid:	86.1

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: LB90604 **SDG No.:** LB90604
Contract: **Lab Code:** CHEM **Method:**
Case No.: LB90604 **SAS No.:** LB90604

					Initial Sample Size(g)	Final Sample Volume (mL)	Percent Solids
Sample ID	Client ID	Sample Type	Matrix	Prep Date			
Batch Number: PB102950							
PB102950BL	PBS006	MB	SOLID	10/05/2017	1.02	50.0	100.00
I5611-01	B-44(0-1)_100217	SAM	SOLID	10/05/2017	1.04	50.0	90.90
I5611-02	B-44(5-5.5)_100217	SAM	SOLID	10/05/2017	1.05	50.0	78.60
I5611-03	B-42(0.3-1.3)_100217	SAM	SOLID	10/05/2017	1.04	50.0	89.80
I5652-01	B-39(0.5-1.5)-100317	SAM	SOLID	10/05/2017	1.03	50.0	86.80
I5652-02	B-39(5-7)-100317	SAM	SOLID	10/05/2017	1.05	50.0	83.70
I5652-03	B-59(FILL)-100317	SAM	SOLID	10/05/2017	1.03	50.0	96.20
I5652-04	B-59(FILL)-100317D	DUP	SOLID	10/05/2017	1.06	50.0	96.20
I5652-05	B-59(FILL)-100317S	MS	SOLID	10/05/2017	1.05	50.0	96.20
I5652-06	B-59(5-7)-100317	SAM	SOLID	10/05/2017	1.04	50.0	90.50
I5652-07	B-59(12-13.5)-100317	SAM	SOLID	10/05/2017	1.06	50.0	86.40
I5652-08	B-57(1-2)-100317	SAM	SOLID	10/05/2017	1.07	50.0	84.40
I5652-09	B-57(2-4)-100317	SAM	SOLID	10/05/2017	1.04	50.0	65.70
I5652-10	DUP-2	SAM	SOLID	10/05/2017	1.06	50.0	90.90
I5652-11	B-42(7-9)-100217	SAM	SOLID	10/05/2017	1.03	50.0	67.70



Metals
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SAMPLE PREPARATION SUMMARY

Client: LB90604 **SDG No.:** LB90604
Contract: **Lab Code:** CHEM **Method:**
Case No.: LB90604 **SAS No.:** LB90604

					Initial Sample Size(g)	Final Sample Volume (mL)	Percent Solids
Sample ID	Client ID	Sample Type	Matrix	Prep Date			
Batch Number: PB102957							
PB102957BL	PBS006	MB	SOLID	10/05/2017	1.04	50.0	100.00
I5693-01	B-55(0.5-1.5)-100317	SAM	SOLID	10/05/2017	1.03	50.0	91.00
I5693-01D	B-55(0.5-1.5)-100317D	DUP	SOLID	10/05/2017	1.03	50.0	91.00
I5693-02	B-55(3.5-5)-100317	SAM	SOLID	10/05/2017	1.04	50.0	82.40
I5693-03	B-32(1-2)-100417	SAM	SOLID	10/05/2017	1.05	50.0	90.50
I5693-04	B-32(2-4)-100417	SAM	SOLID	10/05/2017	1.06	50.0	79.90
I5693-05	B-33(0.5-1.5)-100417	SAM	SOLID	10/05/2017	1.06	50.0	95.20
I5693-06	B-33(3.5-4.5)-100417	SAM	SOLID	10/05/2017	1.03	50.0	81.80
I5693-07	B-30(0-1)-100417	SAM	SOLID	10/05/2017	1.04	50.0	90.00
I5693-08	B-30(3-3.8)-100417	SAM	SOLID	10/05/2017	1.03	50.0	83.70
I5695-03	B-74(0-1)-100417	SAM	SOLID	10/05/2017	1.05	50.0	98.00
I5695-04	B-74(3-4)-100417	SAM	SOLID	10/05/2017	1.06	50.0	86.10
I5693-01S	B-55(0.5-1.5)-100317S	MS	SOLID	10/05/2017	1.03	50.0	91.00



Metals
- 13 -

SAMPLE PREPARATION SUMMARY

Client:	LB90604	SDG No.:	LB90604
Contract:		Lab Code:	CHEM
		Method:	
		Case No.:	LB90604
		SAS No.:	LB90604

						Initial Sample Size(mL)	Final Sample Volume (mL)	Percent Solids
Sample ID	Client ID	Sample Type	Matrix	Prep Date				
Batch Number: PB102958								
PB102958BL	PBW005	MB	WATER	10/05/2017		50.0	50.0	
I5693-09	EQB-2-100417	SAM	WATER	10/05/2017		50.0	50.0	
I5693-09D	EQB-2-100417D	DUP	WATER	10/05/2017		50.0	50.0	
I5693-09S	EQB-2-100417S	MS	WATER	10/05/2017		50.0	50.0	

FORM 15-IN
INITIAL CALIBRATION

Lab Name: LB90604 Contract: _____
Lab Code: CHEM Case No.: LB90604 MA No.: _____ SDG No.: LB90604
Instrument ID: CN Start Date: 10/05/2017
Analytical Method: _____ Run Batch: LB90604.mdb
Concentration Units: ug/L

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Cyanide	0	0.58	0	5	4.4	-12	10	9.5	-5

FORM 15-IN
INITIAL CALIBRATION

Lab Name: LB90604 Contract: _____
Lab Code: CHEM Case No.: LB90604 MA No.: _____ SDG No.: LB90604
Instrument ID: CN Start Date: 10/05/2017
Analytical Method: _____ Run Batch: LB90604.mdb
Concentration Units: ug/L

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Cyanide	100	99.8	0	250	251	0	500	499	0

Metals**- 2a -****INITIAL AND CONTINUING CALIBRATION VERIFICATION****Client:** LB90604**SDG No.:** LB90604**Contract:** _____**Lab Code:** CHEM**Case No.:** LB90604**SAS No.:** LB90604**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	95.4	99	96	0	85 - 115	CN	10/05/2017	16:07	LB90604



Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: LB90604

SDG No.: LB90604

Contract: _____ Lab Code: CHEM

Case No.: LB90604

SAS No.: LB90604

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	241	250	96	0	85 - 115	CN	10/05/2017	16:07	LB90604
CCV002	Cyanide	244	250	98	0	85 - 115	CN	10/05/2017	16:30	LB90604
CCV003	Cyanide	250	250	100	0	85 - 115	CN	10/05/2017	17:21	LB90604



Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB90604 **SDG No.:** LB90604
Contract: **Lab Code:** CHEM **Case No.:** LB90604 **SAS No.:** LB90604

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB	Cyanide	0.2	+/-10.0	U	5.0	10.0	CN	10/05/2017	16:07	LB90604



Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB90604

SDG No.: LB90604

Contract:

Lab Code: CHEM

Case No.: LB90604

SAS No.: LB90604

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB001	Cyanide	1.0	+/-10.0	U	5.0	10.0	CN	10/05/2017	16:07	LB90604
CCB002	Cyanide	1.4	+/-10.0	U	5.0	10.0	CN	10/05/2017	16:30	LB90604
CCB003	Cyanide	0.75	+/-10.0	U	5.0	10.0	CN	10/05/2017	17:21	LB90604



Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB90604

SDG No.: LB90604

Contract: Lab Code: CHEM

Case No.: LB90604

SAS No.: LB90604

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: LB90604

SDG No.: LB90604

Instrument: CN

Sample ID	Analyte	Result (mg/kg)	Acceptance Limit	Conc Qual	LOD mg/kg	CRQL mg/kg	M	Analysis Date	Analysis Time	Run
PB102950BL		SOLID		Batch Number:	PB102950			Prep Date:	10/05/2017	
	Cyanide	0.017	<0.49	U	0.012	0.49	CN	10/05/2017	16:07	LB90604
Sample ID	Analyte	Result (mg/kg)	Acceptance Limit	Conc Qual	LOD mg/kg	CRQL mg/kg	M	Analysis Date	Analysis Time	Run
PB102957BL		SOLID		Batch Number:	PB102957			Prep Date:	10/05/2017	
	Cyanide	0.035	<0.48	U	0.012	0.48	CN	10/05/2017	16:22	LB90604
Sample ID	Analyte	Result (ug/L)	Acceptance Limit	Conc Qual	LOD ug/L	CRQL ug/L	M	Analysis Date	Analysis Time	Run
PB102958BL		WATER		Batch Number:	PB102958			Prep Date:	10/05/2017	
	Cyanide	0.19	<10	U	5.0	10	CN	10/05/2017	16:30	LB90604



metals
- 5a -
MATRIX SPIKE SUMMARY

client: LB90604 level: low sdg no.: LB90604
contract: lab code: CHEM case no.: LB90604 sas no.: LB90604
matrix: Solid sample id: I5652-03 client id: B-59(FILL)-100317S
Percent Solids for Sample: 96.2 Spiked ID: I5652-05 Percent Solids for Spike Sample: 96.2

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Cyanide	mg/kg	75 - 125	4.5		0.19	J	5	87		CN



metals
- 5a -
MATRIX SPIKE SUMMARY

client: LB90604 level: low sdg no.: LB90604
contract: lab code: CHEM case no.: LB90604 sas no.: LB90604
matrix: Solid sample id: I5693-01 client id: B-55(0.5-1.5)-100317S
Percent Solids for Sample: 91 Spiked ID: I5693-01S Percent Solids for Spike Sample: 91

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Cyanide	mg/kg	75 - 125	4.6		0.065	J	5.3	85		CN



metals
- 5a -
MATRIX SPIKE SUMMARY

client: LB90604 level: low sdg no.: LB90604
contract: lab code: CHEM case no.: LB90604 sas no.: LB90604
matrix: WATER sample id: I5693-09 client id: EQB-2-100417S
Percent Solids for Sample: 0 Spiked ID: I5693-09S 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	86.1		10.0	U	100	86		CN

Metals

- 6 -

DUPLICATE SAMPLE SUMMARY

Client: LB90604 **Level:** LOW **SDG No.:** LB90604
Contract: **Lab Code:** CHEM **Case No.:** LB90604 **SAS No.:** LB90604
Matrix: Solid **Sample ID:** I5652-03 **Client ID:** B-59(FILL)-100317D
Percent Solids for Sample: 96.2 **Duplicate ID** I5652-04 **Percent Solids for Spike Sample:** 96.2

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Cyanide	mg/kg	20	0.19	J	0.18	J	5		CN

Metals

- 6 -

DUPLICATE SAMPLE SUMMARY

Client: LB90604 **Level:** LOW **SDG No.:** LB90604
Contract: **Lab Code:** CHEM **Case No.:** LB90604 **SAS No.:** LB90604
Matrix: Solid **Sample ID:** I5693-01 **Client ID:** B-55(0.5-1.5)-100317D
Percent Solids for Sample: 91 **Duplicate ID** I5693-01D **Percent Solids for Spike Sample:** 91

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Cyanide	mg/kg	20	0.065	J	0.084	J	26		CN



Metals

- 6 -

DUPLICATE SAMPLE SUMMARY

Client: LB90604 Level: LOW SDG No.: LB90604
Contract: Lab Code: CHEM Case No.: LB90604 SAS No.: LB90604
Matrix: WATER Sample ID: I5693-09 Client ID: EQB-2-100417D
Percent Solids for Sample: 0 Duplicate ID I5693-09D 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	0.46	U			CN

“A control limit of $\pm 20\%$ RPD for each matrix applies for sample values greater than 10 times Detection Limit”