

Daily Analysis Runlog For Sequence/QC Batch ID # LB85963

Review By		Review On				
SubDirectory		LB85963		Test : Cyanide		
STD. NAME		STD REF.#				
ICAL Standard		WP53100,WP53101,WP53102,WP53103,WP53104,WP53105,WP53106,WP53107				
ICV Standard		W1540				
CCV Standard		WP53109				
ICSA Standard						
CRI Standard						
LCS Standard		WP51099				
Chk Standard		WP53108,WP51626,WP51276				
Sr#	SampleID	ClientID	QcType	Date	Comment	Status
1	0.0PPBCN	0.0PPBCN	CAL1	02/22/17 13:22		OK
2	5.0PPBCN	5.0PPBCN	CAL2	02/22/17 13:23		OK
3	10PPBCN	10PPBCN	CAL3	02/22/17 13:23		OK
4	50PPBCN	50PPBCN	CAL4	02/22/17 13:23		OK
5	100PPBCN	100PPBCN	CAL5	02/22/17 13:23		OK
6	250PPBCN	250PPBCN	CAL6	02/22/17 13:23		OK
7	500PPBCN	500PPBCN	CAL7	02/22/17 13:23		OK
8	ICV1	ICV1	ICV	02/22/17 13:56		OK
9	ICB1	ICB1	ICB	02/22/17 13:56		OK
10	CCV1	CCV1	CCV	02/22/17 13:56		OK
11	CCB1	CCB1	CCB	02/22/17 13:56		OK
12	PB97110BL	PB97110BL	MB	02/22/17 13:56		OK
13	PB97110BS	PB97110BS	LCS	02/22/17 13:56		OK
14	LOWPB97110	LOWPB97110	SAM	02/22/17 13:56		OK
15	HIGHPB97110	HIGHPB97110	SAM	02/22/17 13:56		OK
16	I1929-01	GRIT-STOCKPILE	SAM	02/22/17 13:56		OK
17	I1929-01DUP	GRIT-STOCKPILEDU	DUP	02/22/17 13:56		OK
18	I1929-01MS	GRIT-STOCKPILEMS	MS	02/22/17 13:56	Recovery fail	OK
19	I1929-01MSD	GRIT-STOCKPILEMS	MSD	02/22/17 14:03	Recovery fail	OK
20	I1931-01	P-2	SAM	02/22/17 14:03		OK
21	I1931-03	P-3	SAM	02/22/17 14:03		OK

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SubDirectory		Test : Cyanide				
LB85963						

STD. NAME	STD REF.#
ICAL Standard	WP53100,WP53101,WP53102,WP53103,WP53104,WP53105,WP53106,WP53107
ICV Standard	W1540
CCV Standard	WP53109
ICSA Standard	
CRI Standard	
LCS Standard	WP51099
Chk Standard	WP53108,WP51626,WP51276

#	Sample	Standard	Method	Time	Result	Status
22	CCV2	CCV2	CCV	02/22/17 14:03		OK
23	CCB2	CCB2	CCB	02/22/17 14:03		OK
24	I1931-05	P-4	SAM	02/22/17 14:03		OK
25	I1931-07	P-5	SAM	02/22/17 14:03		OK
26	I1931-09	P-6	SAM	02/22/17 14:03		OK
27	I1931-11	P-7	SAM	02/22/17 14:03		OK
28	CCV3	CCV3	CCV	02/22/17 14:03		OK
29	CCB3	CCB3	CCB	02/22/17 14:04		OK
30	I1929-01A	GRIT-STOCKPILEA	PS	02/22/17 14:33		OK
31	CCV4	CCV4	CCV	02/22/17 14:33		OK
32	CCB4	CCB4	CCB	02/22/17 14:33		OK



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Report of Analysis

Client:		Date Collected:	
Project:	LB85963	Date Received:	
Client Sample ID:	HIGHPB97110	SDG No.:	LB85963
Lab Sample ID:	HIGHPB97110	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	0.49		1	0.003		0.005	mg/L		02/22/2017	9012B

Report of Analysis

Client:		Date Collected:	2/20/2017 12:00:00 AM
Project:	LB85963	Date Received:	2/21/2017 12:00:00 AM
Client Sample ID:	GRIT-STOCKPILE	SDG No.:	LB85963
Lab Sample ID:	I1929-01	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	0.77		1	0.047		0.35	mg/Kg	02/22/2017	02/22/2017	9012B



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Report of Analysis

Client:		Date Collected:	2/21/2017 12:00:00 AM
Project:	LB85963	Date Received:	2/21/2017 12:00:00 AM
Client Sample ID:	P-2	SDG No.:	LB85963
Lab Sample ID:	I1931-01	Matrix:	Solid
Level (low/med):	low	% Solid:	94

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.12	J	1	0.035		0.27	mg/Kg	02/22/2017	02/22/2017	9012B



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Report of Analysis

Client:		Date Collected:	2/21/2017 12:00:00 AM
Project:	LB85963	Date Received:	2/21/2017 12:00:00 AM
Client Sample ID:	P-3	SDG No.:	LB85963
Lab Sample ID:	I1931-03	Matrix:	Solid
Level (low/med):	low	% Solid:	94.2

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.17	J	1	0.033		0.25	mg/Kg	02/22/2017	02/22/2017	9012B



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Report of Analysis

Client:		Date Collected:	2/21/2017 12:00:00 AM
Project:	LB85963	Date Received:	2/21/2017 12:00:00 AM
Client Sample ID:	P-4	SDG No.:	LB85963
Lab Sample ID:	I1931-05	Matrix:	Solid
Level (low/med):	low	% Solid:	94

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.11	J	1	0.034		0.26	mg/Kg	02/22/2017	02/22/2017	9012B



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Report of Analysis

Client:		Date Collected:	2/21/2017 12:00:00 AM
Project:	LB85963	Date Received:	2/21/2017 12:00:00 AM
Client Sample ID:	P-5	SDG No.:	LB85963
Lab Sample ID:	I1931-07	Matrix:	Solid
Level (low/med):	low	% Solid:	94.5

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.44		1	0.032		0.24	mg/Kg	02/22/2017	02/22/2017	9012B

Report of Analysis

Client:		Date Collected:	2/21/2017 12:00:00 AM
Project:	LB85963	Date Received:	2/21/2017 12:00:00 AM
Client Sample ID:	P-6	SDG No.:	LB85963
Lab Sample ID:	I1931-09	Matrix:	Solid
Level (low/med):	low	% Solid:	93

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.11	J	1	0.033		0.25	mg/Kg	02/22/2017	02/22/2017	9012B



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Report of Analysis

Client:		Date Collected:	2/21/2017 12:00:00 AM
Project:	LB85963	Date Received:	2/21/2017 12:00:00 AM
Client Sample ID:	P-7	SDG No.:	LB85963
Lab Sample ID:	I1931-11	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	0.073	J	1	0.034		0.25	mg/Kg	02/22/2017	02/22/2017	9012B



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Report of Analysis

Client:		Date Collected:	
Project:	LB85963	Date Received:	
Client Sample ID:	LOWPB97110	SDG No.:	LB85963
Lab Sample ID:	LOWPB97110	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	0.01		1	0.003		0.005	mg/L		02/22/2017	9012B



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Report of Analysis

Client:		Date Collected:	
Project:	LB85963	Date Received:	
Client Sample ID:	LOWPB97110	SDG No.:	LB85963
Lab Sample ID:	LOWPB97110	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

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: LB85963

SDG No.: LB85963

Contract: _____ **Lab Code:** CHEM

Case No.: LB85963

SAS No.: LB85963

Initial Calibration Source: _____

Continuing Calibration Source: _____

Sample ID	Analyte	Result mg/L	True Value	% Recovery	% RSD	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
ICV1	Cyanide	0.095	0.099	96	0	85 - 115		02/22/2017	13:56	LB85963

Metals**- 2a -****INITIAL AND CONTINUING CALIBRATION VERIFICATION****Client:** LB85963**SDG No.:** LB85963**Contract:** _____ **Lab Code:** CHEM**Case No.:** LB85963**SAS No.:** LB85963**Initial Calibration Source:** _____**Continuing Calibration Source:** _____

Sample ID	Analyte	Result mg/L	True Value	% Recovery	% RSD	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV1	Cyanide	0.24	0.25	96	0	90 - 110		02/22/2017	13:56	LB85963
CCV2	Cyanide	0.24	0.25	96	0	90 - 110		02/22/2017	14:03	LB85963
CCV3	Cyanide	0.24	0.25	96	0	90 - 110		02/22/2017	14:03	LB85963
CCV4	Cyanide	0.25	0.25	100	0	90 - 110		02/22/2017	14:33	LB85963



Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB85963 **SDG No.:** LB85963
Contract: **Lab Code:** CHEM **Case No.:** LB85963 **SAS No.:** LB85963

Sample ID	Analyte	Result mg/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB1	Cyanide	-0.00013	+/-0.005	U		0.005		02/22/2017	13:56	LB85963



Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB85963

SDG No.: LB85963

Contract:

Lab Code: CHEM

Case No.: LB85963

SAS No.: LB85963

Sample ID	Analyte	Result mg/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB1	Cyanide	-0.00028	+/-0.005	U		0.005		02/22/2017	13:56	LB85963
CCB2	Cyanide	-0.0000748	+/-0.005	U		0.005		02/22/2017	14:03	LB85963
CCB3	Cyanide	0.00022	+/-0.005	U		0.005		02/22/2017	14:04	LB85963
CCB4	Cyanide	0.00018	+/-0.005	U		0.005		02/22/2017	14:33	LB85963



Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB85963

SDG No.: LB85963

Contract: Lab Code: CHEM

Case No.: LB85963

SAS No.: LB85963

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

Client: LB85963

SDG No.: LB85963

Instrument: Konelab 20

Sample ID	Analyte	Result (mg/Kg)	Acceptance Limit	Conc Qual	LOD mg/Kg	CRQL mg/Kg	M	Analysis Date	Analysis Time	Run
PB97110BL	Cyanide	SOLID 0.002	<0.25	Batch Number: U		PB97110 0.25		Prep Date: 02/22/2017	02/22/2017 13:56	LB85963



metals
- 5a -
MATRIX SPIKE SUMMARY

client: LB85963 level: low sdg no.: LB85963
contract: lab code: CHEM case no.: LB85963 sas no.: LB85963
matrix: Solid sample id: I1929-01 client id: GRIT-STOCKPILEMS
Percent Solids for Sample: 65.7 Spiked ID: I1929-01MS Percent Solids for Spike Sample: 65.7

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Cyanide	mg/Kg	75 - 125	2.8		0.77		2.8	73	*	

metals
- 5a -
MATRIX SPIKE DUPLICATE SUMMARY

client: LB85963 level: low sdg no.: LB85963
contract: lab code: CHEM case no.: LB85963 sas no.: LB85963
matrix: Solid sample id: I1929-01 client id: GRIT-STOCKPILEMSD
Percent Solids for Sample: 65.7 Spiked ID: I1929-01MSD Percent Solids for Spike Sample: 65.7

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Cyanide	mg/Kg	75 - 125	2.7		0.77		2.9	67	*	

Metals

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DUPLICATE SAMPLE SUMMARY

Client: LB85963 **Level:** LOW **SDG No.:** LB85963
Contract: **Lab Code:** CHEM **Case No.:** LB85963 **SAS No.:** LB85963
Matrix: Solid **Sample ID:** I1929-01 **Client ID:** GRIT-STOCKPILEDUP
Percent Solids for Sample: 65.7 **Duplicate ID** I1929-01DUP **Percent Solids for Spike Sample:** 65.7

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Cyanide	mg/Kg	20	0.77		0.82		6		

Metals

- 6 -

DUPLICATE SAMPLE SUMMARY

Client: LB85963 **Level:** LOW **SDG No.:** LB85963
Contract: **Lab Code:** CHEM **Case No.:** LB85963 **SAS No.:** LB85963
Matrix: Solid **Sample ID:** I1929-01MS **Client ID:** GRIT-STOCKPILEMSD
Percent Solids for Sample: 65.7 **Duplicate ID** I1929-01MSD **Percent Solids for Spike Sample:** 65.7

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Cyanide	mg/Kg	20	2.8		2.7		4		

Metals

- 7 -

LABORATORY CONTROL SAMPLE SUMMARY

Client: LB85963

SDG No.: LB85963

Contract:

Lab Code: CHEM

Case No.: LB85963

SAS No.: LB85963

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB97110BS Cyanide	mg/Kg	5	4.8		96	85 - 115	