

Daily Analysis Runlog For Sequence/QC Batch ID # LB95062

Review By		Review On				
SubDirectory		LB95062		Test : Cyanide		
STD. NAME		STD REF.#				
ICAL Standard		WP64147,WP64149,WP64151,WP64154,WP64156,WP64158,WP64160				
ICV Standard		W1542				
CCV Standard		WP64163				
ICSA Standard		N/A				
CRI Standard		N/A				
LCS Standard		WP62802				
Chk Standard		WP64165,WP59958,WP60878				
Sr#	SampleID	ClientID	QcType	Date	Comment	Status
1	0.0PPBCN	0.0PPBCN	CAL1	05/02/18 14:18		OK
2	5.0PPBCN	5.0PPBCN	CAL2	05/02/18 14:18		OK
3	10PPBCN	10PPBCN	CAL3	05/02/18 14:18		OK
4	50PPBCN	50PPBCN	CAL4	05/02/18 14:18		OK
5	100PPBCN	100PPBCN	CAL5	05/02/18 14:18		OK
6	250PPBCN	250PPBCN	CAL6	05/02/18 14:18		OK
7	500PPBCN	500PPBCN	CAL7	05/02/18 14:18		OK
8	ICV1	ICV1	ICV	05/02/18 15:00		OK
9	ICB1	ICB1	ICB	05/02/18 15:00		OK
10	CCV1	CCV1	CCV	05/02/18 15:00		OK
11	CCB1	CCB1	CCB	05/02/18 15:00		OK
12	PB108822BL	PB108822BL	MB	05/02/18 15:00		OK
13	PB108822BS	PB108822BS	LCS	05/02/18 15:00		OK
14	HIGHPB108822	HIGHPB108822	SAM	05/02/18 15:00		OK
15	J2665-01	ES-RO-124030	SAM	05/02/18 15:00		OK
16	J2665-01DUP	ES-RO-124030DUP	DUP	05/02/18 15:00		OK
17	J2665-01MS	ES-RO-124030MS	MS	05/02/18 15:01		OK
18	J2665-01MSD	ES-RO-124030MSD	MSD	05/02/18 15:08		OK
19	J2665-09	ES-RT-1871	SAM	05/02/18 15:08		OK
20	CCV2	CCV2	CCV	05/02/18 15:08		OK
21	CCB2	CCB2	CCB	05/02/18 15:08		OK

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SubDirectory		LB95062		Test : Cyanide		
STD. NAME		STD REF.#				
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ICV Standard		W1542				
CCV Standard		WP64163				
ICSA Standard		N/A				
CRI Standard		N/A				
LCS Standard		WP62802				
Chk Standard		WP64165,WP59958,WP60878				
22	J2667-02	285-147-7212002-RE	SAM	05/02/18 15:08		OK
23	J2667-05	155-348-281	SAM	05/02/18 15:08		OK
24	J2667-08	137-132-165	SAM	05/02/18 15:08		OK
25	PB108823BL	PB108823BL	MB	05/02/18 15:08		OK
26	PB108823BS	PB108823BS	LCS	05/02/18 15:08		OK
27	J2667-11	GROUNDWATER	SAM	05/02/18 15:08		OK
28	J2667-11DUP	GROUNDWATERDU	DUP	05/02/18 15:15		OK
29	J2667-11MS	GROUNDWATERMS	MS	05/02/18 15:15		OK
30	J2667-11MSD	GROUNDWATERMS	MSD	05/02/18 15:15		OK
31	DRUM-I	DRUM-I	SAM	05/02/18 15:15		OK
32	CCV3	CCV3	CCV	05/02/18 15:15		OK
33	CCB3	CCB3	CCB	05/02/18 15:15		OK
34	J2665-05	ES-RT-2655	SAM	05/02/18 15:59		OK
35	LOWPB108822	LOWPB108822	SAM	05/02/18 16:43		OK
36	CCV4	CCV4	CCV	05/02/18 17:01		OK
37	CCB4	CCB4	CCB	05/02/18 17:01		OK

Report of Analysis

Client:		Date Collected:	
Project:	LB95062	Date Received:	
Client Sample ID:	DRUM-I	SDG No.:	LB95062
Lab Sample ID:	DRUM-I	Matrix:	Solid
Level (low/med):	low	% Solid:	100

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.33		1	0.00066		0.005	mg/Kg		05/02/2018	9012B



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Report of Analysis

Client:		Date Collected:	
Project:	LB95062	Date Received:	
Client Sample ID:	HIGHPB108822	SDG No.:	LB95062
Lab Sample ID:	HIGHPB108822	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		05/02/2018	9012B



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Report of Analysis

Client:		Date Collected:	5/1/2018 12:00:00 AM
Project:	LB95062	Date Received:	5/1/2018 12:00:00 AM
Client Sample ID:	ES-RO-124030	SDG No.:	LB95062
Lab Sample ID:	J2665-01	Matrix:	Solid
Level (low/med):	low	% Solid:	75.7

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.1	J	1	0.042		0.32	mg/Kg	05/02/2018	05/02/2018	9012B



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Report of Analysis

Client:		Date Collected:	5/1/2018 12:00:00 AM
Project:	LB95062	Date Received:	5/1/2018 12:00:00 AM
Client Sample ID:	ES-RT-2655	SDG No.:	LB95062
Lab Sample ID:	J2665-05	Matrix:	Solid
Level (low/med):	low	% Solid:	75.7

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.12	J	1	0.041		0.31	mg/Kg	05/02/2018	05/02/2018	9012B



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Report of Analysis

Client:		Date Collected:	5/1/2018 12:00:00 AM
Project:	LB95062	Date Received:	5/1/2018 12:00:00 AM
Client Sample ID:	ES-RT-1871	SDG No.:	LB95062
Lab Sample ID:	J2665-09	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	0.13	J	1	0.038		0.29	mg/Kg	05/02/2018	05/02/2018	9012B



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Report of Analysis

Client:		Date Collected:	5/1/2018 12:00:00 AM
Project:	LB95062	Date Received:	5/1/2018 12:00:00 AM
Client Sample ID:	285-147-7212002-RB26667	SDG No.:	LB95062
Lab Sample ID:	J2667-02	Matrix:	Solid
Level (low/med):	low	% Solid:	96.1

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.084	J	1	0.032		0.24	mg/Kg	05/02/2018	05/02/2018	9012B



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Report of Analysis

Client:		Date Collected:	5/1/2018 12:00:00 AM
Project:	LB95062	Date Received:	5/1/2018 12:00:00 AM
Client Sample ID:	155-348-281	SDG No.:	LB95062
Lab Sample ID:	J2667-05	Matrix:	Solid
Level (low/med):	low	% Solid:	94.3

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.12	J	1	0.034		0.25	mg/Kg	05/02/2018	05/02/2018	9012B



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Report of Analysis

Client:		Date Collected:	5/1/2018 12:00:00 AM
Project:	LB95062	Date Received:	5/1/2018 12:00:00 AM
Client Sample ID:	137-132-165	SDG No.:	LB95062
Lab Sample ID:	J2667-08	Matrix:	Solid
Level (low/med):	low	% Solid:	93.7

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.057	J	1	0.033		0.25	mg/Kg	05/02/2018	05/02/2018	9012B



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Report of Analysis

Client:		Date Collected:	5/1/2018 12:00:00 AM
Project:	LB95062	Date Received:	5/1/2018 12:00:00 AM
Client Sample ID:	GROUNDWATER	SDG No.:	LB95062
Lab Sample ID:	J2667-11	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	0.00089	U	1	0.003		0.005	mg/L	05/02/2018	05/02/2018	9012B



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Report of Analysis

Client:		Date Collected:	
Project:	LB95062	Date Received:	
Client Sample ID:	LOWPB108822	SDG No.:	LB95062
Lab Sample ID:	LOWPB108822	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		05/02/2018	9012B



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Report of Analysis

Client:		Date Collected:	
Project:	LB95062	Date Received:	
Client Sample ID:	LOWPB108822	SDG No.:	LB95062
Lab Sample ID:	LOWPB108822	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



GENCHEM

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: LB95062

SDG No.: LB95062

Contract: _____ Lab Code: CHEM

Case No.: LB95062

SAS No.: LB95062

Initial Calibration Source: _____

Continuing Calibration Source: _____

Sample ID	Analyte	Result mg/L	True Value	% Recovery	Qual	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV1	Cyanide	0.24	0.25	96		90 - 110		05/02/2018	15:00	lb95062
CCV2	Cyanide	0.24	0.25	96		90 - 110		05/02/2018	15:08	lb95062
CCV3	Cyanide	0.24	0.25	96		90 - 110		05/02/2018	15:15	lb95062
CCV4	Cyanide	0.26	0.25	104		90 - 110		05/02/2018	17:01	lb95062



GENCHEM

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB95062 **SDG No.:** LB95062
Contract: **Lab Code:** CHEM **Case No.:** LB95062 **SAS No.:** LB95062

Sample ID	Analyte	Result mg/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB1	Cyanide	0.0001	+/-0.005	U		0.005		05/02/2018	15:00	lb95062



GENCHEM

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB95062

SDG No.: LB95062

Contract:

Lab Code: CHEM

Case No.: LB95062

SAS No.: LB95062

Sample ID	Analyte	Result mg/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB1	Cyanide	0.00029	+/-0.005	U		0.005		05/02/2018	15:00	lb95062
CCB2	Cyanide	-0.00026	+/-0.005	U		0.005		05/02/2018	15:08	lb95062
CCB3	Cyanide	0.00036	+/-0.005	U		0.005		05/02/2018	15:15	lb95062
CCB4	Cyanide	0.00028	+/-0.005	U		0.005		05/02/2018	17:01	lb95062



GENCHEM

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB95062

SDG No.: LB95062

Contract: Lab Code: CHEM

Case No.: LB95062

SAS No.: LB95062

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

Client: LB95062

SDG No.: LB95062

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
PB108822BL	Cyanide	SOLID		Batch Number:		PB108822		Prep Date:	05/02/2018	
		0.018	<0.25	U		0.25		05/02/2018	15:00	lb95062
Sample ID	Analyte	Result (mg/L)	Acceptance Limit	Conc Qual	LOD mg/L	CRQL mg/L	M	Analysis Date	Analysis Time	Run
PB108823BL	Cyanide	WATER		Batch Number:		PB108823		Prep Date:	05/02/2018	
		0.00037	<0.005	U		0.005		05/02/2018	15:08	lb95062



GENCHEM
- 5a -
MATRIX SPIKE SUMMARY

client: LB95062 level: low sdg no.: LB95062
contract: lab code: CHEM case no.: LB95062 sas no.: LB95062
matrix: Solid sample id: J2665-01 client id: ES-RO-124030MS
Percent Solids for Sample: 75.7 Spiked ID: J2665-01MS Percent Solids for Spike Sample: 75.7

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Cyanide	mg/Kg	75 - 125	2.4		0.1	J	2.6	88		



GENCHEM
- 5a -
MATRIX SPIKE DUPLICATE SUMMARY

client: LB95062 level: low sdg no.: LB95062
contract: lab code: CHEM case no.: LB95062 sas no.: LB95062
matrix: Solid sample id: J2665-01 client id: ES-RO-124030MSD
Percent Solids for Sample: 75.7 Spiked ID: J2665-01MSD Percent Solids for Spike Sample: 75.7

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Cyanide	mg/Kg	75 - 125	2.4		0.1	J	2.6	88		



GENCHEM
- 5a -
MATRIX SPIKE SUMMARY

client: LB95062 level: low sdg no.: LB95062
contract: lab code: CHEM case no.: LB95062 sas no.: LB95062
matrix: WATER sample id: J2667-11 client id: GROUNDWATERMS
Percent Solids for Sample: 0 Spiked ID: J2667-11MS Percent Solids for Spike Sample: 0

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Cyanide	mg/L	75 - 125	0.035		0.003	U	0.04	87.5		



GENCHEM
- 5a -
MATRIX SPIKE DUPLICATE SUMMARY

client: LB95062 level: low sdg no.: LB95062
contract: lab code: CHEM case no.: LB95062 sas no.: LB95062
matrix: WATER sample id: J2667-11 client id: GROUNDWATERMSD
Percent Solids for Sample: 0 Spiked ID: J2667-11MSD Percent Solids for Spike Sample: 0

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Cyanide	mg/L	75 - 125	0.034		0.003	U	0.04	85		

GENCHEM

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DUPLICATE SAMPLE SUMMARY

Client: LB95062 **Level:** LOW **SDG No.:** LB95062
Contract: **Lab Code:** CHEM **Case No.:** LB95062 **SAS No.:** LB95062
Matrix: Solid **Sample ID:** J2665-01 **Client ID:** ES-RO-124030DUP
Percent Solids for Sample: 75.7 **Duplicate ID** J2665-01DUP **Percent Solids for Spike Sample:** 75.7

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Cyanide	mg/Kg	20	0.1	J	0.073	J	31	*	

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- 6 -

DUPLICATE SAMPLE SUMMARY

Client: LB95062 **Level:** LOW **SDG No.:** LB95062
Contract: **Lab Code:** CHEM **Case No.:** LB95062 **SAS No.:** LB95062
Matrix: Solid **Sample ID:** J2665-01MS **Client ID:** ES-RO-124030MSD
Percent Solids for Sample: 75.7 **Duplicate ID** J2665-01MSD **Percent Solids for Spike Sample:** 75.7

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Cyanide	mg/Kg	20	2.4		2.4		0		



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DUPLICATE SAMPLE SUMMARY

Client: LB95062 **Level:** LOW **SDG No.:** LB95062
Contract: **Lab Code:** CHEM **Case No.:** LB95062 **SAS No.:** LB95062
Matrix: WATER **Sample ID:** J2667-11 **Client ID:** GROUNDWATERDUP
Percent Solids for Sample: 0 **Duplicate ID** J2667-11DUP **Percent Solids for Spike Sample:** 0

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Cyanide	mg/L	20	0.003	U	0.00097	U			

GENCHEM

- 6 -

DUPLICATE SAMPLE SUMMARY

Client: LB95062 **Level:** LOW **SDG No.:** LB95062
Contract: **Lab Code:** CHEM **Case No.:** LB95062 **SAS No.:** LB95062
Matrix: WATER **Sample ID:** J2667-11MS **Client ID:** GROUNDWATERMSD
Percent Solids for Sample: 0 **Duplicate ID** J2667-11MSD **Percent Solids for Spike Sample:** 0

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Cyanide	mg/L	20	0.035		0.034		3		



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LABORATORY CONTROL SAMPLE SUMMARY

Client: LB95062

SDG No.: LB95062

Contract:

Lab Code: CHEM

Case No.: LB95062

SAS No.: LB95062

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB108823BS Cyanide	mg/L	0.1	0.098		98	85 - 115	