

Daily Analysis Runlog For Sequence/QC Batch ID # LB95558

Review By		Review On				
SubDirectory		LB95558		Test : Cyanide		
STD. NAME		STD REF.#				
ICAL Standard		WP64725,WP64726,WP64727,WP64728,WP64729,WP64730,WP64731				
ICV Standard		W1542				
CCV Standard		WP64732				
ICSA Standard		N/A				
CRI Standard		N/A				
LCS Standard		WP62802				
Chk Standard		WP64734,WP64695,WP64696				

Sr#	SampleId	ClientID	QcType	Date	Comment	Status
1	0.0PPBCN	0.0PPBCN	CAL1	05/23/18 09:29		OK
2	5.0PPBCN	5.0PPBCN	CAL2	05/23/18 09:29		OK
3	10PPBCN	10PPBCN	CAL3	05/23/18 09:29		OK
4	50PPBCN	50PPBCN	CAL4	05/23/18 09:29		OK
5	100PPBCN	100PPBCN	CAL5	05/23/18 09:29		OK
6	250PPBCN	250PPBCN	CAL6	05/23/18 09:29		OK
7	500PPBCN	500PPBCN	CAL7	05/23/18 09:29		OK
8	ICV1	ICV1	ICV	05/23/18 12:32		OK
9	ICB1	ICB1	ICB	05/23/18 12:32		OK
10	CCV1	CCV1	CCV	05/23/18 12:32		OK
11	CCB1	CCB1	CCB	05/23/18 12:32		OK
12	PB109593BL	PB109593BL	MB	05/23/18 12:32		OK
13	PB109593BS	PB109593BS	LCS	05/23/18 12:33		OK
14	LOWPB109593	LOWPB109593	SAM	05/23/18 12:33		OK
15	HIGHPB109593	HIGHPB109593	SAM	05/23/18 12:33		OK
16	J3078-02	PILE-1-1	SAM	05/23/18 12:33		OK
17	J3078-02DUP	PILE-1-1DUP	DUP	05/23/18 12:33		OK
18	J3078-02MS	PILE-1-1MS	MS	05/23/18 12:33		OK
19	J3078-02MSD	PILE-1-1MSD	MSD	05/23/18 12:40		OK
20	J3078-05	PILE-1-2	SAM	05/23/18 12:40		OK
21	J3078-08	PILE-1-3	SAM	05/23/18 12:40		OK

Daily Analysis Runlog For Sequence/QC Batch ID # LB95558

Review By			Review On			
SubDirectory		LB95558		Test : Cyanide		
STD. NAME		STD REF.#				
ICAL Standard		WP64725,WP64726,WP64727,WP64728,WP64729,WP64730,WP64731				
ICV Standard		W1542				
CCV Standard		WP64732				
ICSA Standard		N/A				
CRI Standard		N/A				
LCS Standard		WP62802				
Chk Standard		WP64734,WP64695,WP64696				
22	CCV2	CCV2	CCV	05/23/18 12:40		OK
23	CCB2	CCB2	CCB	05/23/18 12:40		OK
24	J3078-11	PILE-1-4	SAM	05/23/18 12:40		OK
25	J3078-14	PILE-2	SAM	05/23/18 12:40		OK
26	PB109592BL	PB109592BL	MB	05/23/18 12:40		OK
27	PB109592BS	PB109592BS	LCS	05/23/18 12:40		OK
28	J2669-09	SU-02-052218	SAM	05/23/18 12:40		OK
29	J2669-09DUP	SU-02-052218DUP	DUP	05/23/18 12:40		OK
30	J2669-09MS	SU-02-052218MS	MS	05/23/18 12:48		OK
31	J2669-09MSD	SU-02-052218MSD	MSD	05/23/18 12:48		OK
32	J3060-01	TP-3-WC-1	SAM	05/23/18 12:48		OK
33	J3060-03	TP-3-WC-2	SAM	05/23/18 12:48		OK
34	CCV3	CCV3	CCV	05/23/18 12:48		OK
35	CCB3	CCB3	CCB	05/23/18 12:48		OK
36	J3060-05	TP-3-WC-3	SAM	05/23/18 12:48		OK
37	J3074-01	FK-BPM-02-005-ABC	SAM	05/23/18 12:48		OK
38	J3075-01	RO-4-1	SAM	05/23/18 12:48		OK
39	CCV4	CCV4	CCV	05/23/18 12:48		OK
40	CCB4	CCB4	CCB	05/23/18 12:48		OK



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Report of Analysis

Client:		Date Collected:	
Project:	LB95558	Date Received:	
Client Sample ID:	HIGHPB109593	SDG No.:	LB95558
Lab Sample ID:	HIGHPB109593	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	0.5		1	0.003		0.005	mg/L		05/23/2018	9012B



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Report of Analysis

Client:		Date Collected:	5/22/2018 12:00:00 AM
Project:	LB95558	Date Received:	5/22/2018 12:00:00 AM
Client Sample ID:	SU-02-052218	SDG No.:	LB95558
Lab Sample ID:	J2669-09	Matrix:	Solid
Level (low/med):	low	% Solid:	89.4

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.11	J	1	0.036		0.27	mg/Kg	05/23/2018	05/23/2018	9012B

Report of Analysis

Client:		Date Collected:	5/21/2018 12:00:00 AM
Project:	LB95558	Date Received:	5/22/2018 12:00:00 AM
Client Sample ID:	TP-3-WC-1	SDG No.:	LB95558
Lab Sample ID:	J3060-01	Matrix:	Solid
Level (low/med):	low	% Solid:	78.4

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.074	J	1	0.04		0.3	mg/Kg	05/23/2018	05/23/2018	9012B



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Report of Analysis

Client:		Date Collected:	5/21/2018 12:00:00 AM
Project:	LB95558	Date Received:	5/22/2018 12:00:00 AM
Client Sample ID:	TP-3-WC-2	SDG No.:	LB95558
Lab Sample ID:	J3060-03	Matrix:	Solid
Level (low/med):	low	% Solid:	81.1

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.071	J	1	0.039		0.29	mg/Kg	05/23/2018	05/23/2018	9012B



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Report of Analysis

Client:		Date Collected:	5/21/2018 12:00:00 AM
Project:	LB95558	Date Received:	5/22/2018 12:00:00 AM
Client Sample ID:	TP-3-WC-3	SDG No.:	LB95558
Lab Sample ID:	J3060-05	Matrix:	Solid
Level (low/med):	low	% Solid:	85.2

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.088	J	1	0.037		0.28	mg/Kg	05/23/2018	05/23/2018	9012B



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Report of Analysis

Client:		Date Collected:	5/22/2018 12:00:00 AM
Project:	LB95558	Date Received:	5/22/2018 12:00:00 AM
Client Sample ID:	FK-BPM-02-005-ABCD	SDG No.:	LB95558
Lab Sample ID:	J3074-01	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	0.035		0.26	mg/Kg	05/23/2018	05/23/2018	9012B



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Report of Analysis

Client:		Date Collected:	5/22/2018 12:00:00 AM
Project:	LB95558	Date Received:	5/22/2018 12:00:00 AM
Client Sample ID:	RO-4-1	SDG No.:	LB95558
Lab Sample ID:	J3075-01	Matrix:	Solid
Level (low/med):	low	% Solid:	95.8

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.074	J	1	0.032		0.25	mg/Kg	05/23/2018	05/23/2018	9012B



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Report of Analysis

Client:		Date Collected:	5/22/2018 12:00:00 AM
Project:	LB95558	Date Received:	5/22/2018 12:00:00 AM
Client Sample ID:	PILE-1-1	SDG No.:	LB95558
Lab Sample ID:	J3078-02	Matrix:	Solid
Level (low/med):	low	% Solid:	93.3

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.18	J	1	0.034		0.26	mg/Kg	05/23/2018	05/23/2018	9012B



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Report of Analysis

Client:		Date Collected:	5/22/2018 12:00:00 AM
Project:	LB95558	Date Received:	5/22/2018 12:00:00 AM
Client Sample ID:	PILE-1-2	SDG No.:	LB95558
Lab Sample ID:	J3078-05	Matrix:	Solid
Level (low/med):	low	% Solid:	93.1

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.14	J	1	0.034		0.26	mg/Kg	05/23/2018	05/23/2018	9012B



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Report of Analysis

Client:		Date Collected:	5/22/2018 12:00:00 AM
Project:	LB95558	Date Received:	5/22/2018 12:00:00 AM
Client Sample ID:	PILE-1-3	SDG No.:	LB95558
Lab Sample ID:	J3078-08	Matrix:	Solid
Level (low/med):	low	% Solid:	93.2

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.056	J	1	0.034		0.26	mg/Kg	05/23/2018	05/23/2018	9012B



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Report of Analysis

Client:		Date Collected:	5/22/2018 12:00:00 AM
Project:	LB95558	Date Received:	5/22/2018 12:00:00 AM
Client Sample ID:	PILE-1-4	SDG No.:	LB95558
Lab Sample ID:	J3078-11	Matrix:	Solid
Level (low/med):	low	% Solid:	92.9

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	05/23/2018	05/23/2018	9012B



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Report of Analysis

Client:		Date Collected:	5/22/2018 12:00:00 AM
Project:	LB95558	Date Received:	5/22/2018 12:00:00 AM
Client Sample ID:	PILE-2	SDG No.:	LB95558
Lab Sample ID:	J3078-14	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	0.17	J	1	0.037		0.28	mg/Kg	05/23/2018	05/23/2018	9012B



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Report of Analysis

Client:		Date Collected:	
Project:	LB95558	Date Received:	
Client Sample ID:	LOWPB109593	SDG No.:	LB95558
Lab Sample ID:	LOWPB109593	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	0.011		1	0.003		0.005	mg/L		05/23/2018	9012B



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Report of Analysis

Client:		Date Collected:	
Project:	LB95558	Date Received:	
Client Sample ID:	LOWPB109593	SDG No.:	LB95558
Lab Sample ID:	LOWPB109593	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: LB95558

SDG No.: LB95558

Contract: _____

Lab Code: CHEM

Case No.: LB95558

SAS No.: LB95558

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
ICV1	Cyanide	0.089	0.099	89.9		85 - 115		05/23/2018	12:32	LB95558



GENCHEM

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: LB95558

SDG No.: LB95558

Contract: _____ Lab Code: CHEM

Case No.: LB95558

SAS No.: LB95558

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		05/23/2018	12:32	LB95558
CCV2	Cyanide	0.24	0.25	96		90 - 110		05/23/2018	12:40	LB95558
CCV3	Cyanide	0.25	0.25	100		90 - 110		05/23/2018	12:48	LB95558
CCV4	Cyanide	0.24	0.25	96		90 - 110		05/23/2018	12:48	LB95558



GENCHEM

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB95558 **SDG No.:** LB95558
Contract: **Lab Code:** CHEM **Case No.:** LB95558 **SAS No.:** LB95558

Sample ID	Analyte	Result mg/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB1	Cyanide	0.0014	+/-0.005	U		0.005		05/23/2018	12:32	LB95558

Sample ID	Analyte	Result mg/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB1	Cyanide	0.0013	+/-0.005	U		0.005		05/23/2018	12:32	LB95558
CCB2	Cyanide	0.0022	+/-0.005	U		0.005		05/23/2018	12:40	LB95558
CCB3	Cyanide	0.00099	+/-0.005	U		0.005		05/23/2018	12:48	LB95558
CCB4	Cyanide	0.0011	+/-0.005	U		0.005		05/23/2018	12:48	LB95558



GENCHEM

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB95558

SDG No.: LB95558

Contract: Lab Code: CHEM

Case No.: LB95558

SAS No.: LB95558

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: LB95558

SDG No.: LB95558

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
PB109592BL	Cyanide	SOLID		Batch Number:		PB109592		Prep Date:	05/23/2018	
		0.042	<0.25	J		0.25		05/23/2018	12:40	LB95558
Sample ID	Analyte	Result (mg/Kg)	Acceptance Limit	Conc Qual	LOD mg/Kg	CRQL mg/Kg	M	Analysis Date	Analysis Time	Run
PB109593BL	Cyanide	SOLID		Batch Number:		PB109593		Prep Date:	05/23/2018	
		0.051	<0.25	J		0.25		05/23/2018	12:32	LB95558



GENCHEM
- 5a -
MATRIX SPIKE SUMMARY

client: LB95558 level: low sdg no.: LB95558
contract: lab code: CHEM case no.: LB95558 sas no.: LB95558
matrix: Solid sample id: J2669-09 client id: SU-02-052218MS
Percent Solids for Sample: 89.4 Spiked ID: J2669-09MS Percent Solids for Spike Sample: 89.4

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Cyanide	mg/Kg	75 - 125	2.1		0.11	J	2.2	90		



GENCHEM
- 5a -
MATRIX SPIKE DUPLICATE SUMMARY

client: LB95558 level: low sdg no.: LB95558
contract: lab code: CHEM case no.: LB95558 sas no.: LB95558
matrix: Solid sample id: J2669-09 client id: SU-02-052218MSD
Percent Solids for Sample: 89.4 Spiked ID: J2669-09MSD Percent Solids for Spike Sample: 89.4

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Cyanide	mg/Kg	75 - 125		2	0.11	J	2.2	86		



GENCHEM
- 5a -
MATRIX SPIKE SUMMARY

client: LB95558 level: low sdg no.: LB95558
contract: lab code: CHEM case no.: LB95558 sas no.: LB95558
matrix: Solid sample id: J3078-02 client id: PILE-1-1MS
Percent Solids for Sample: 93.3 Spiked ID: J3078-02MS Percent Solids for Spike Sample: 93.3

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Cyanide	mg/Kg	75 - 125	2.1		0.18	J	2.1	91		



GENCHEM
- 5a -
MATRIX SPIKE DUPLICATE SUMMARY

client: LB95558 level: low sdg no.: LB95558
contract: lab code: CHEM case no.: LB95558 sas no.: LB95558
matrix: Solid sample id: J3078-02 client id: PILE-1-1MSD
Percent Solids for Sample: 93.3 Spiked ID: J3078-02MSD Percent Solids for Spike Sample: 93.3

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Cyanide	mg/Kg	75 - 125	2.1		0.18	J	2.1	91		

GENCHEM

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DUPLICATE SAMPLE SUMMARY

Client: LB95558 **Level:** LOW **SDG No.:** LB95558
Contract: **Lab Code:** CHEM **Case No.:** LB95558 **SAS No.:** LB95558
Matrix: Solid **Sample ID:** J2669-09 **Client ID:** SU-02-052218DUP
Percent Solids for Sample: 89.4 **Duplicate ID** J2669-09DUP **Percent Solids for Spike Sample:** 89.4

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Cyanide	mg/Kg	20	0.11	J	0.12	J	9		

GENCHEM

- 6 -

DUPLICATE SAMPLE SUMMARY

Client: LB95558 **Level:** LOW **SDG No.:** LB95558
Contract: **Lab Code:** CHEM **Case No.:** LB95558 **SAS No.:** LB95558
Matrix: Solid **Sample ID:** J2669-09MS **Client ID:** SU-02-052218MSD
Percent Solids for Sample: 89.4 **Duplicate ID** J2669-09MSD **Percent Solids for Spike Sample:** 89.4

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Cyanide	mg/Kg	20	2.1			2	5		

GENCHEM**- 6 -****DUPLICATE SAMPLE SUMMARY**

Client: LB95558 **Level:** LOW **SDG No.:** LB95558
Contract: **Lab Code:** CHEM **Case No.:** LB95558 **SAS No.:** LB95558
Matrix: Solid **Sample ID:** J3078-02 **Client ID:** PILE-1-1DUP
Percent Solids for Sample: 93.3 **Duplicate ID** J3078-02DUP **Percent Solids for Spike Sample:** 93.3

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Cyanide	mg/Kg	20	0.18	J	0.096	J	61	*	

GENCHEM

- 6 -

DUPLICATE SAMPLE SUMMARY

Client: LB95558 **Level:** LOW **SDG No.:** LB95558
Contract: **Lab Code:** CHEM **Case No.:** LB95558 **SAS No.:** LB95558
Matrix: Solid **Sample ID:** J3078-02MS **Client ID:** PILE-1-1MSD
Percent Solids for Sample: 93.3 **Duplicate ID** J3078-02MSD **Percent Solids for Spike Sample:** 93.3

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Cyanide	mg/Kg	20	2.1		2.1		0		



GENCHEM

- 7 -

LABORATORY CONTROL SAMPLE SUMMARY

Client: LB95558

SDG No.: LB95558

Contract:

Lab Code: CHEM

Case No.: LB95558

SAS No.: LB95558

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB109592BS Cyanide	mg/Kg	4.9	4.4		89.8	85 - 115	

