

Daily Analysis Runlog For Sequence/QC Batch ID # LB90358

Review By

Review On

SubDirectory

LB90358

Test :

Cyanide

STD. NAME		STD REF.#				
ICAL Standard		wp58326,wp58327,wp58328,wp58329,wp58330,wo58331,wp58324				
ICV Standard		wp58333				
CCV Standard		wp58332				
ICSA Standard		N/A				
CRI Standard		N/A				
LCS Standard		N/A				
Chk Standard		wp58334,wp55355,wp55836				

Sr#	SampleID	ClientID	QcType	Date	Comment	Status
1	0.0PPBCN	0.0PPBCN	CAL1	09/27/17 12:46		OK
2	5.0PPBCN	5.0PPBCN	CAL2	09/27/17 12:46		OK
3	10PPBCN	10PPBCN	CAL3	09/27/17 12:46		OK
4	50PPBCN	50PPBCN	CAL4	09/27/17 12:46		OK
5	100PPBCN	100PPBCN	CAL5	09/27/17 12:46		OK
6	250PPBCN	250PPBCN	CAL6	09/27/17 12:46		OK
7	500PPBCN	500PPBCN	CAL7	09/27/17 12:46		OK
8	ICV1	ICV1	ICV	09/27/17 13:43		OK
9	ICB1	ICB1	ICB	09/27/17 13:43		OK
10	CCV1	CCV1	CCV	09/27/17 13:43		OK
11	CCB1	CCB1	CCB	09/27/17 13:43		OK
12	PB102656BL	PB102656BL	MB	09/27/17 13:43		OK
13	PB102656BS	PB102656BS	LCS	09/27/17 13:43		OK
14	LOWPB102656	LOWPB102656	SAM	09/27/17 13:50		OK
15	HIGHPB102656	HIGHPB102656	SAM	09/27/17 13:50		OK
16	I5433-01	FK-BPM-01-G7-G8-C	SAM	09/27/17 13:50		OK
17	I5433-01DUP	FK-BPM-01-G7-G8-C	DUP	09/27/17 13:50		OK
18	I5433-01MS	FK-BPM-01-G7-G8-C	MS	09/27/17 13:50		OK
19	I5433-01MSD	FK-BPM-01-G7-G8-C	MSD	09/27/17 13:50		OK
20	I5434-12	UT5400533	SAM	09/27/17 13:50		OK
21	I5434-13	UT5400534	SAM	09/27/17 13:50		OK

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Review By		Review On				
SubDirectory		LB90358		Test : Cyanide		
STD. NAME		STD REF.#				
ICAL Standard		wp58326,wp58327,wp58328,wp58329,wp58330,wo58331,wp58324				
ICV Standard		wp58333				
CCV Standard		wp58332				
ICSA Standard		N/A				
CRI Standard		N/A				
LCS Standard		N/A				
Chk Standard		wp58334,wp55355,wp55836				
22	CCV2	CCV2	CCV	09/27/17 13:50		OK
23	CCB2	CCB2	CCB	09/27/17 13:58		OK
24	I5434-14	UT5400535	SAM	09/27/17 13:58		OK
25	I5434-15	UT5400536	SAM	09/27/17 13:58		OK
26	I5436-01	OILY-GRAVEL	SAM	09/27/17 13:58		OK
27	I5444-01	BU-02-092617	SAM	09/27/17 13:58		OK
28	I5444-04	BU-03-092617	SAM	09/27/17 13:58		OK
29	I5445-01	AU-05-092617-A	SAM	09/27/17 13:58		OK
30	I5445-04	AU-05-092617-B	SAM	09/27/17 13:58		OK
31	I5445-07	AU-05-092617-C	SAM	09/27/17 13:58		OK
32	I5446-01	CC-1	SAM	09/27/17 13:58		OK
33	CCV3	CCV3	CCV	09/27/17 13:58		OK
34	CCB3	CCB3	CCB	09/27/17 14:00		OK



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Report of Analysis

Client:		Date Collected:	
Project:	LB90358	Date Received:	
Client Sample ID:	HIGHPB102656	SDG No.:	LB90358
Lab Sample ID:	HIGHPB102656	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	0.48		1	0.003		0.005	mg/L		09/27/2017	9012B



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Report of Analysis

Client:		Date Collected:	9/26/2017 12:00:00 AM
Project:	LB90358	Date Received:	9/26/2017 12:00:00 AM
Client Sample ID:	FK-BPM-01-G7-G8-G9-G10	SDG No.:	LB90358
Lab Sample ID:	I5433-01	Matrix:	Solid
Level (low/med):	low	% Solid:	91.5

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	-0.014	U	1	0.035		0.27	mg/Kg	09/27/2017	09/27/2017	9012B



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Report of Analysis

Client:		Date Collected:	9/25/2017 12:00:00 AM
Project:	LB90358	Date Received:	9/26/2017 12:00:00 AM
Client Sample ID:	UT5400533	SDG No.:	LB90358
Lab Sample ID:	I5434-12	Matrix:	Solid
Level (low/med):	low	% Solid:	86.2

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.0044	U	1	0.037		0.28	mg/Kg	09/27/2017	09/27/2017	9012B



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Report of Analysis

Client:		Date Collected:	9/25/2017 12:00:00 AM
Project:	LB90358	Date Received:	9/26/2017 12:00:00 AM
Client Sample ID:	UT5400534	SDG No.:	LB90358
Lab Sample ID:	I5434-13	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	-0.014	U	1	0.036		0.28	mg/Kg	09/27/2017	09/27/2017	9012B



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Report of Analysis

Client:		Date Collected:	9/25/2017 12:00:00 AM
Project:	LB90358	Date Received:	9/26/2017 12:00:00 AM
Client Sample ID:	UT5400535	SDG No.:	LB90358
Lab Sample ID:	I5434-14	Matrix:	Solid
Level (low/med):	low	% Solid:	87.7

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.031	U	1	0.036		0.27	mg/Kg	09/27/2017	09/27/2017	9012B



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Report of Analysis

Client:		Date Collected:	9/25/2017 12:00:00 AM
Project:	LB90358	Date Received:	9/26/2017 12:00:00 AM
Client Sample ID:	UT5400536	SDG No.:	LB90358
Lab Sample ID:	I5434-15	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	-0.011	U	1	0.036		0.27	mg/Kg	09/27/2017	09/27/2017	9012B



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Report of Analysis

Client:		Date Collected:	9/26/2017 12:00:00 AM
Project:	LB90358	Date Received:	9/26/2017 12:00:00 AM
Client Sample ID:	OILY-GRAVEL	SDG No.:	LB90358
Lab Sample ID:	I5436-01	Matrix:	Solid
Level (low/med):	low	% Solid:	98.6

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	-0.021	U	1	0.032		0.25	mg/Kg	09/27/2017	09/27/2017	9012B

Report of Analysis

Client:		Date Collected:	9/26/2017 12:00:00 AM
Project:	LB90358	Date Received:	9/26/2017 12:00:00 AM
Client Sample ID:	BU-02-092617	SDG No.:	LB90358
Lab Sample ID:	I5444-01	Matrix:	Solid
Level (low/med):	low	% Solid:	89.6

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	09/27/2017	09/27/2017	9012B



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Report of Analysis

Client:		Date Collected:	9/26/2017 12:00:00 AM
Project:	LB90358	Date Received:	9/26/2017 12:00:00 AM
Client Sample ID:	BU-03-092617	SDG No.:	LB90358
Lab Sample ID:	I5444-04	Matrix:	Solid
Level (low/med):	low	% Solid:	97.1

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	-0.014	U	1	0.033		0.25	mg/Kg	09/27/2017	09/27/2017	9012B



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Report of Analysis

Client:		Date Collected:	9/26/2017 12:00:00 AM
Project:	LB90358	Date Received:	9/26/2017 12:00:00 AM
Client Sample ID:	AU-05-092617-A	SDG No.:	LB90358
Lab Sample ID:	I5445-01	Matrix:	Solid
Level (low/med):	low	% Solid:	91.7

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.00023	U	1	0.035		0.26	mg/Kg	09/27/2017	09/27/2017	9012B



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Report of Analysis

Client:		Date Collected:	9/26/2017 12:00:00 AM
Project:	LB90358	Date Received:	9/26/2017 12:00:00 AM
Client Sample ID:	AU-05-092617-B	SDG No.:	LB90358
Lab Sample ID:	I5445-04	Matrix:	Solid
Level (low/med):	low	% Solid:	94.7

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.068	J	1	0.034		0.26	mg/Kg	09/27/2017	09/27/2017	9012B



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Report of Analysis

Client:		Date Collected:	9/26/2017 12:00:00 AM
Project:	LB90358	Date Received:	9/26/2017 12:00:00 AM
Client Sample ID:	AU-05-092617-C	SDG No.:	LB90358
Lab Sample ID:	I5445-07	Matrix:	Solid
Level (low/med):	low	% Solid:	96.9

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.063	J	1	0.033		0.25	mg/Kg	09/27/2017	09/27/2017	9012B



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Report of Analysis

Client:		Date Collected:	9/26/2017 12:00:00 AM
Project:	LB90358	Date Received:	9/26/2017 12:00:00 AM
Client Sample ID:	CC-1	SDG No.:	LB90358
Lab Sample ID:	I5446-01	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	0.5		1	0.034		0.26	mg/Kg	09/27/2017	09/27/2017	9012B



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Report of Analysis

Client:		Date Collected:	
Project:	LB90358	Date Received:	
Client Sample ID:	LOWPB102656	SDG No.:	LB90358
Lab Sample ID:	LOWPB102656	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	0.0095		1	0.003		0.005	mg/L		09/27/2017	9012B



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Report of Analysis

Client:		Date Collected:	
Project:	LB90358	Date Received:	
Client Sample ID:	LOWPB102656	SDG No.:	LB90358
Lab Sample ID:	LOWPB102656	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

Sample ID	Analyte	Result	True Value	% Recovery	% RSD	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
		mg/L								
ICV1	Cyanide	0.096	0.099	97	0	85 - 115		09/27/2017	13:43	LB90358



GENCHEM

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: LB90358

SDG No.: LB90358

Contract: _____ Lab Code: CHEM

Case No.: LB90358

SAS No.: LB90358

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		09/27/2017	13:43	LB90358
CCV2	Cyanide	0.24	0.25	96	0	90 - 110		09/27/2017	13:50	LB90358
CCV3	Cyanide	0.24	0.25	96	0	90 - 110		09/27/2017	13:58	LB90358



GENCHEM

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB90358 **SDG No.:** LB90358
Contract: **Lab Code:** CHEM **Case No.:** LB90358 **SAS No.:** LB90358

Sample ID	Analyte	Result mg/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB1	Cyanide	-0.00012	+/-0.005	U		0.005		09/27/2017	13:43	LB90358

Sample ID	Analyte	Result mg/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB1	Cyanide	-0.00057	+/-0.005	U		0.005		09/27/2017	13:43	LB90358
CCB2	Cyanide	0.0006	+/-0.005	U		0.005		09/27/2017	13:58	LB90358
CCB3	Cyanide	-0.00026	+/-0.005	U		0.005		09/27/2017	14:00	LB90358



GENCHEM

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB90358

SDG No.: LB90358

Contract: Lab Code: CHEM

Case No.: LB90358

SAS No.: LB90358

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: LB90358

SDG No.: LB90358

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
PB102656BL	Cyanide	SOLID -0.022	<0.24	Batch Number: U		PB102656 0.24		Prep Date: 09/27/2017	09/27/2017 13:43	LB90358



GENCHEM
- 5a -
MATRIX SPIKE SUMMARY

client: LB90358 level: low sdg no.: LB90358
contract: lab code: CHEM case no.: LB90358 sas no.: LB90358
matrix: Solid sample id: I5433-01 client id: FK-BPM-01-G7-G8-G9-G10MS
Percent Solids for Sample: 91.5 Spiked ID: I5433-01MS Percent Solids for Spike Sample: 91.5

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Cyanide	mg/Kg	75 - 125	1.7		0.035	U	2.1	81		



GENCHEM
- 5a -
MATRIX SPIKE DUPLICATE SUMMARY

client: LB90358 level: low sdg no.: LB90358
contract: lab code: CHEM case no.: LB90358 sas no.: LB90358
matrix: Solid sample id: I5433-01 client id: FK-BPM-01-G7-G8-G9-G10MSD
Percent Solids for Sample: 91.5 Spiked ID: I5433-01MSD Percent Solids for Spike Sample: 91.5

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Cyanide	mg/Kg	75 - 125	1.7		0.035	U	2.1	81		

GENCHEM

- 6 -

DUPLICATE SAMPLE SUMMARY

Client: LB90358 **Level:** LOW **SDG No.:** LB90358
Contract: **Lab Code:** CHEM **Case No.:** LB90358 **SAS No.:** LB90358
Matrix: Solid **Sample ID:** I5433-01 **Client ID:** FK-BPM-01-G7-G8-G9-G10DUP
Percent Solids for Sample: 91.5 **Duplicate ID** I5433-01DUP **Percent Solids for Spike Sample:** 91.5

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Cyanide	mg/Kg	20	0.035	U	-0.034	U			

GENCHEM

- 6 -

DUPLICATE SAMPLE SUMMARY

Client: LB90358 **Level:** LOW **SDG No.:** LB90358
Contract: **Lab Code:** CHEM **Case No.:** LB90358 **SAS No.:** LB90358
Matrix: Solid **Sample ID:** I5433-01MS **Client ID:** FK-BPM-01-G7-G8-G9-G10MSD
Percent Solids for Sample: 91.5 **Duplicate ID** I5433-01MSD **Percent Solids for Spike Sample:** 91.5

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Cyanide	mg/Kg	20	1.7		1.7		0		



GENCHEM

- 7 -

LABORATORY CONTROL SAMPLE SUMMARY

Client: LB90358

SDG No.: LB90358

Contract:

Lab Code: CHEM

Case No.: LB90358

SAS No.: LB90358

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB102656BS Cyanide	mg/Kg	4.9	4.6		93.9	85 - 115	