

Daily Analysis Runlog For Sequence/QC Batch ID # LB87751

Review By		Review On				
SubDirectory		LB87751		Test : Cyanide		
STD. NAME		STD REF.#				
ICAL Standard		WP55268,WP55269,WP55270,WP55271,WP55272,WP55273,WP55274				
ICV Standard		W1541				
CCV Standard		WP55275				
ICSA Standard		N/A				
CRI Standard		N/A				
LCS Standard		WP54521				
Chk Standard		WP55277,WP51626,WP51276				

Sr#	SampleId	ClientID	QcType	Date	Comment	Status
1	0.0PPBCN	0.0PPBCN	CAL1	05/30/17 09:36		OK
2	5.0PPBCN	5.0PPBCN	CAL2	05/30/17 09:36		OK
3	10PPBCN	10PPBCN	CAL3	05/30/17 09:36		OK
4	50PPBCN	50PPBCN	CAL4	05/30/17 09:36		OK
5	100PPBCN	100PPBCN	CAL5	05/30/17 09:36		OK
6	250PPBCN	250PPBCN	CAL6	05/30/17 09:36		OK
7	500PPBCN	500PPBCN	CAL7	05/30/17 09:36		OK
8	ICV1	ICV1	ICV	05/30/17 10:18		OK
9	ICB1	ICB1	ICB	05/30/17 10:18		OK
10	CCV1	CCV1	CCV	05/30/17 10:19		OK
11	CCB1	CCB1	CCB	05/30/17 10:19		OK
12	PB99328BL	PB99328BL	MB	05/30/17 10:19		OK
13	PB99328BS	PB99328BS	LCS	05/30/17 10:19		OK
14	LOWPB99328	LOWPB99328	SAM	05/30/17 10:19		OK
15	HIGHPB99328	HIGHPB99328	SAM	05/30/17 10:19		OK
16	I3341-01	NM11-COMP-0-6	SAM	05/30/17 10:19		OK
17	I3341-01DUP	NM11-COMP-0-6DUP	DUP	05/30/17 10:19		OK
18	I3341-01MS	NM11-COMP-0-6MS	MS	05/30/17 10:19		OK
19	I3341-01MSD	NM11-COMP-0-6MSD	MSD	05/30/17 10:26		OK
20	I3341-02	NM11-COMP-6-18	SAM	05/30/17 10:26		OK
21	I3341-03	NM14-COMP-0-6	SAM	05/30/17 10:26		OK

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SubDirectory		LB87751		Test : Cyanide		
STD. NAME		STD REF.#				
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ICV Standard		W1541				
CCV Standard		WP55275				
ICSA Standard		N/A				
CRI Standard		N/A				
LCS Standard		WP54521				
Chk Standard		WP55277,WP51626,WP51276				
22	CCV2	CCV2	CCV	05/30/17 10:26		OK
23	CCB2	CCB2	CCB	05/30/17 10:26		OK
24	I3341-04	NM14-COMP-6-18	SAM	05/30/17 10:26		OK
25	I3341-05	NM1-COMP-0-6	SAM	05/30/17 10:26		OK
26	I3341-06	NM1-COMP-6-18	SAM	05/30/17 10:26		OK
27	I3341-09	NM9-COMP-6-18	SAM	05/30/17 10:26		OK
28	I3341-10	NM9-COMP-0-6	SAM	05/30/17 10:26		OK
29	I3348-01	VNJ-225/289/330/133	SAM	05/30/17 10:26		OK
30	I3366-01	FK-PS-01-004	SAM	05/30/17 10:34		OK
31	PB99329BL	PB99329BL	MB	05/30/17 10:34		OK
32	PB99329BS	PB99329BS	LCS	05/30/17 10:34		OK
33	I3371-01	A598	SAM	05/30/17 10:34		OK
34	CCV3	CCV3	CCV	05/30/17 10:34		OK
35	CCB3	CCB3	CCB	05/30/17 10:34		OK
36	I3371-01DUP	A598DUP	DUP	05/30/17 10:34		OK
37	I3371-01MS	A598MS	MS	05/30/17 10:34		OK
38	I3371-01MSD	A598MSD	MSD	05/30/17 10:34		OK
39	CCV4	CCV4	CCV	05/30/17 10:34		OK
40	CCB4	CCB4	CCB	05/30/17 10:34		OK



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Report of Analysis

Client:		Date Collected:	
Project:	LB87751	Date Received:	
Client Sample ID:	HIGHPB99328	SDG No.:	LB87751
Lab Sample ID:	HIGHPB99328	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		05/30/2017	9012B



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Report of Analysis

Client:		Date Collected:	5/24/2017 12:00:00 AM
Project:	LB87751	Date Received:	5/24/2017 12:00:00 AM
Client Sample ID:	NM11-COMP-0-6	SDG No.:	LB87751
Lab Sample ID:	I3341-01	Matrix:	Solid
Level (low/med):	low	% Solid:	80

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.00081	U	1	0.04		0.3	mg/Kg	05/26/2017	05/30/2017	9012B



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Report of Analysis

Client:		Date Collected:	5/24/2017 12:00:00 AM
Project:	LB87751	Date Received:	5/24/2017 12:00:00 AM
Client Sample ID:	NM11-COMP-6-18	SDG No.:	LB87751
Lab Sample ID:	I3341-02	Matrix:	Solid
Level (low/med):	low	% Solid:	87.8

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.00042	U	1	0.036		0.27	mg/Kg	05/26/2017	05/30/2017	9012B



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Report of Analysis

Client:		Date Collected:	5/23/2017 12:00:00 AM
Project:	LB87751	Date Received:	5/24/2017 12:00:00 AM
Client Sample ID:	NM14-COMP-0-6	SDG No.:	LB87751
Lab Sample ID:	I3341-03	Matrix:	Solid
Level (low/med):	low	% Solid:	79.7

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.059	J	1	0.039		0.3	mg/Kg	05/26/2017	05/30/2017	9012B



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Report of Analysis

Client:		Date Collected:	5/23/2017 12:00:00 AM
Project:	LB87751	Date Received:	5/24/2017 12:00:00 AM
Client Sample ID:	NM14-COMP-6-18	SDG No.:	LB87751
Lab Sample ID:	I3341-04	Matrix:	Solid
Level (low/med):	low	% Solid:	85.8

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.0056	U	1	0.037		0.28	mg/Kg	05/26/2017	05/30/2017	9012B



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Report of Analysis

Client:		Date Collected:	5/23/2017 12:00:00 AM
Project:	LB87751	Date Received:	5/24/2017 12:00:00 AM
Client Sample ID:	NM1-COMP-0-6	SDG No.:	LB87751
Lab Sample ID:	I3341-05	Matrix:	Solid
Level (low/med):	low	% Solid:	71.9

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.22	J	1	0.045		0.34	mg/Kg	05/26/2017	05/30/2017	9012B



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Report of Analysis

Client:		Date Collected:	5/23/2017 12:00:00 AM
Project:	LB87751	Date Received:	5/24/2017 12:00:00 AM
Client Sample ID:	NM1-COMP-6-18	SDG No.:	LB87751
Lab Sample ID:	I3341-06	Matrix:	Solid
Level (low/med):	low	% Solid:	85.1

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.011	U	1	0.038		0.29	mg/Kg	05/26/2017	05/30/2017	9012B



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Report of Analysis

Client:		Date Collected:	5/24/2017 12:00:00 AM
Project:	LB87751	Date Received:	5/24/2017 12:00:00 AM
Client Sample ID:	NM9-COMP-6-18	SDG No.:	LB87751
Lab Sample ID:	I3341-09	Matrix:	Solid
Level (low/med):	low	% Solid:	88.5

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.021	U	1	0.036		0.27	mg/Kg	05/26/2017	05/30/2017	9012B



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Report of Analysis

Client:		Date Collected:	5/24/2017 12:00:00 AM
Project:	LB87751	Date Received:	5/24/2017 12:00:00 AM
Client Sample ID:	NM9-COMP-0-6	SDG No.:	LB87751
Lab Sample ID:	I3341-10	Matrix:	Solid
Level (low/med):	low	% Solid:	82.2

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	-0.014	U	1	0.039		0.29	mg/Kg	05/26/2017	05/30/2017	9012B



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Report of Analysis

Client:		Date Collected:	5/24/2017 12:00:00 AM
Project:	LB87751	Date Received:	5/24/2017 12:00:00 AM
Client Sample ID:	VNJ-225/289/330/139/15532/VNJ-230	SDG No.:	LB87751
Lab Sample ID:	I3348-01	Matrix:	Solid
Level (low/med):	low	% Solid:	81.4

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.031	U	1	0.039		0.3	mg/Kg	05/26/2017	05/30/2017	9012B



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Report of Analysis

Client:		Date Collected:	5/25/2017 12:00:00 AM
Project:	LB87751	Date Received:	5/25/2017 12:00:00 AM
Client Sample ID:	FK-PS-01-004	SDG No.:	LB87751
Lab Sample ID:	I3366-01	Matrix:	Solid
Level (low/med):	low	% Solid:	88.5

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.0049	U	1	0.035		0.27	mg/Kg	05/26/2017	05/30/2017	9012B



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Report of Analysis

Client:		Date Collected:	5/25/2017 12:00:00 AM
Project:	LB87751	Date Received:	5/25/2017 12:00:00 AM
Client Sample ID:	A598	SDG No.:	LB87751
Lab Sample ID:	I3371-01	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	0.00041	U	1	0.003		0.005	mg/L	05/26/2017	05/30/2017	9012B



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Report of Analysis

Client:		Date Collected:	
Project:	LB87751	Date Received:	
Client Sample ID:	LOWPB99328	SDG No.:	LB87751
Lab Sample ID:	LOWPB99328	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		05/30/2017	9012B



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Report of Analysis

Client:		Date Collected:	
Project:	LB87751	Date Received:	
Client Sample ID:	LOWPB99328	SDG No.:	LB87751
Lab Sample ID:	LOWPB99328	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: LB87751

SDG No.: LB87751

Contract: _____ Lab Code: CHEM

Case No.: LB87751 SAS No.: LB87751

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	0.098	0.099	99	0	85 - 115		05/30/2017	10:18	LB87751



GENCHEM

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: LB87751

SDG No.: LB87751

Contract: _____ Lab Code: CHEM

Case No.: LB87751

SAS No.: LB87751

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	0.25	0.25	100	0	90 - 110		05/30/2017	10:19	LB87751
CCV2	Cyanide	0.24	0.25	96	0	90 - 110		05/30/2017	10:26	LB87751
CCV3	Cyanide	0.24	0.25	96	0	90 - 110		05/30/2017	10:34	LB87751
CCV4	Cyanide	0.25	0.25	100	0	90 - 110		05/30/2017	10:34	LB87751



GENCHEM

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB87751 **SDG No.:** LB87751
Contract: **Lab Code:** CHEM **Case No.:** LB87751 **SAS No.:** LB87751

Sample ID	Analyte	Result mg/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB1	Cyanide	0.00014	+/-0.005	U		0.005		05/30/2017	10:18	LB87751

Sample ID	Analyte	Result mg/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB1	Cyanide	0.00017	+/-0.005	U		0.005		05/30/2017	10:19	LB87751
CCB2	Cyanide	0.0002	+/-0.005	U		0.005		05/30/2017	10:26	LB87751
CCB3	Cyanide	0.0001	+/-0.005	U		0.005		05/30/2017	10:34	LB87751
CCB4	Cyanide	0.00036	+/-0.005	U		0.005		05/30/2017	10:34	LB87751



GENCHEM

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB87751

SDG No.: LB87751

Contract: Lab Code: CHEM

Case No.: LB87751

SAS No.: LB87751

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: LB87751

SDG No.: LB87751

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
PB99328BL	Cyanide	SOLID		Batch Number:		PB99328		Prep Date:	05/26/2017	
		-0.009	<0.25	U		0.25		05/30/2017	10:19	LB87751
Sample ID	Analyte	Result (mg/L)	Acceptance Limit	Conc Qual	LOD mg/L	CRQL mg/L	M	Analysis Date	Analysis Time	Run
PB99329BL	Cyanide	WATER		Batch Number:		PB99329		Prep Date:	05/26/2017	
		0	<0.005	U		0.005		05/30/2017	10:34	LB87751



GENCHEM
- 5a -
MATRIX SPIKE SUMMARY

client: LB87751 level: low sdg no.: LB87751
contract: lab code: CHEM case no.: LB87751 sas no.: LB87751
matrix: Solid sample id: I3341-01 client id: NM11-COMP-0-6MS
Percent Solids for Sample: 80 Spiked ID: I3341-01MS Percent Solids for Spike Sample: 80

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Cyanide	mg/Kg	75 - 125	1.6		0.04	U	2.4	66.7	*	



GENCHEM
- 5a -
MATRIX SPIKE DUPLICATE SUMMARY

client: LB87751 level: low sdg no.: LB87751
contract: lab code: CHEM case no.: LB87751 sas no.: LB87751
matrix: Solid sample id: I3341-01 client id: NM11-COMP-0-6MSD
Percent Solids for Sample: 80 Spiked ID: I3341-01MSD Percent Solids for Spike Sample: 80

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Cyanide	mg/Kg	75 - 125	1.6		0.04	U	2.4	66.7	*	



GENCHEM
- 5a -
MATRIX SPIKE SUMMARY

client: LB87751 level: low sdg no.: LB87751
contract: lab code: CHEM case no.: LB87751 sas no.: LB87751
matrix: WATER sample id: I3371-01 client id: A598MS
Percent Solids for Sample: 0 Spiked ID: I3371-01MS 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	0.034		0.003	U	0.04	85		



GENCHEM
- 5a -
MATRIX SPIKE DUPLICATE SUMMARY

client: LB87751 level: low sdg no.: LB87751
contract: lab code: CHEM case no.: LB87751 sas no.: LB87751
matrix: WATER sample id: I3371-01 client id: A598MSD
Percent Solids for Sample: 0 Spiked ID: I3371-01MSD 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: LB87751 **Level:** LOW **SDG No.:** LB87751
Contract: **Lab Code:** CHEM **Case No.:** LB87751 **SAS No.:** LB87751
Matrix: Solid **Sample ID:** I3341-01 **Client ID:** NM11-COMP-0-6DUP
Percent Solids for Sample: 80 **Duplicate ID** I3341-01DUP **Percent Solids for Spike Sample:** 80

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Cyanide	mg/Kg	20	0.04	U	-0.035	U			

GENCHEM

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DUPLICATE SAMPLE SUMMARY

Client: LB87751 Level: LOW SDG No.: LB87751
Contract: _____ Lab Code: CHEM Case No.: LB87751 SAS No.: LB87751
Matrix: Solid Sample ID: I3341-01MS Client ID: NM11-COMP-0-6MSD
Percent Solids for Sample: 80 Duplicate ID I3341-01MSD Percent Solids for Spike Sample: 80

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Cyanide	mg/Kg	20	1.6		1.6		0		

GENCHEM

- 6 -

DUPLICATE SAMPLE SUMMARY

Client: LB87751 **Level:** LOW **SDG No.:** LB87751
Contract: **Lab Code:** CHEM **Case No.:** LB87751 **SAS No.:** LB87751
Matrix: WATER **Sample ID:** I3371-01 **Client ID:** A598DUP
Percent Solids for Sample: 0 **Duplicate ID** I3371-01DUP **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	0.00036	U			

GENCHEM

- 6 -

DUPLICATE SAMPLE SUMMARY

Client: LB87751 **Level:** LOW **SDG No.:** LB87751
Contract: **Lab Code:** CHEM **Case No.:** LB87751 **SAS No.:** LB87751
Matrix: WATER **Sample ID:** I3371-01MS **Client ID:** A598MSD
Percent Solids for Sample: 0 **Duplicate ID** I3371-01MSD **Percent Solids for Spike Sample:** 0

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Cyanide	mg/L	20	0.034		0.034		0		



GENCHEM

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LABORATORY CONTROL SAMPLE SUMMARY

Client: LB87751

SDG No.: LB87751

Contract:

Lab Code: CHEM

Case No.: LB87751

SAS No.: LB87751

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB99328BS Cyanide	mg/Kg	4.9	4.8		98	85 - 115	



GENCHEM

- 7 -

LABORATORY CONTROL SAMPLE SUMMARY

Client: LB87751

SDG No.: LB87751

Contract:

Lab Code: CHEM

Case No.: LB87751

SAS No.: LB87751

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB99329BS Cyanide	mg/L	0.1	0.098		98	85 - 115	