

Daily Analysis Runlog For Sequence/QC Batch ID # LB89021

Review By		Review On				
SubDirectory		LB89021		Test : Cyanide		
STD. NAME		STD REF.#				
ICAL Standard		WP56672,WP56673,WP56674,WP56675,WP56676,WP56677,WP56678,WP56679				
ICV Standard		W1541				
CCV Standard		WP56681				
ICSA Standard		N/A				
CRI Standard		N/A				
LCS Standard		WP54521				
Chk Standard		WP56680,WP55355,WP55836				
Sr#	SampleID	ClientID	QcType	Date	Comment	Status
1	0.0PPBCN	0.0PPBCN	CAL1	07/26/17 10:21		OK
2	5.0PPBCN	5.0PPBCN	CAL2	07/26/17 10:21		OK
3	10PPBCN	10PPBCN	CAL3	07/26/17 10:21		OK
4	50PPBCN	50PPBCN	CAL4	07/26/17 10:21		OK
5	100PPBCN	100PPBCN	CAL5	07/26/17 10:21		OK
6	250PPBCN	250PPBCN	CAL6	07/26/17 10:21		OK
7	500PPBCN	500PPBCN	CAL7	07/26/17 10:21		OK
8	ICV1	ICV1	ICV	07/26/17 11:12		OK
9	ICB1	ICB1	ICB	07/26/17 11:12		OK
10	CCV1	CCV1	CCV	07/26/17 11:12		OK
11	CCB1	CCB1	CCB	07/26/17 11:12		OK
12	PB100934BL	PB100934BL	MB	07/26/17 11:12		OK
13	PB100934BS	PB100934BS	LCS	07/26/17 11:17		OK
14	LOWPB100934	LOWPB100934	SAM	07/26/17 11:17		OK
15	I4407-01	HDD-PILWC3	SAM	07/26/17 11:17		OK
16	I4407-01DUP	HDD-PILWC3DUP	DUP	07/26/17 11:17		OK
17	I4407-01MS	HDD-PILWC3MS	MS	07/26/17 11:22		OK
18	I4407-01MSD	HDD-PILWC3MSD	MSD	07/26/17 11:22		OK
19	I4414-01	OR-03-072417	SAM	07/26/17 11:22		OK
20	I4415-01	SU-02-072417	SAM	07/26/17 11:22		OK
21	CCV2	CCV2	CCV	07/26/17 11:22		OK

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STD. NAME		STD REF.#				
ICAL Standard		WP56672,WP56673,WP56674,WP56675,WP56676,WP56677,WP56678,WP56679				
ICV Standard		W1541				
CCV Standard		WP56681				
ICSA Standard		N/A				
CRI Standard		N/A				
LCS Standard		WP54521				
Chk Standard		WP56680,WP55355,WP55836				
22	CCB2	CCB2	CCB	07/26/17 11:27		OK
23	I4417-01	FK-BPM-01-A3-A4-A	SAM	07/26/17 11:27		OK
24	I4418-01	FK-BPM-01-B3-B4-B	SAM	07/26/17 11:27		OK
25	I4419-01	FK-BPM-01-A7-A8-B	SAM	07/26/17 11:27		OK
26	I4420-06	2A-1-2-3-4-5-COMP-	SAM	07/26/17 11:27		OK
27	I4420-13	2A-6-7-8-9-10-COMP	SAM	07/26/17 11:32		OK
28	I4422-05	VNJ-201-COMP	SAM	07/26/17 11:32		OK
29	I4422-09	72-12018-COMP	SAM	07/26/17 11:32		OK
30	I4422-13	72-11940-COMP	SAM	07/26/17 11:32		OK
31	I4424-01	AU-06-072417-A	SAM	07/26/17 11:32		OK
32	I4424-04	AU-06-072417-B	SAM	07/26/17 11:38		OK
33	CCV3	CCV3	CCV	07/26/17 12:11		OK
34	CCB3	CCB3	CCB	07/26/17 12:11		OK
35	I4424-07	AU-06-072417-C	SAM	07/26/17 12:11		OK
36	I4424-10	AU-06-072417-D	SAM	07/26/17 12:11		OK
37	HIGHPB100934	HIGHPB100934	SAM	07/26/17 12:40		OK
38	CCV4	CCV4	CCV	07/26/17 12:40		OK
39	CCB4	CCB4	CCB	07/26/17 12:40		OK



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Report of Analysis

Client:		Date Collected:	
Project:	LB89021	Date Received:	
Client Sample ID:	HIGHPB100934	SDG No.:	LB89021
Lab Sample ID:	HIGHPB100934	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	OR	1	0.003		0.005	mg/L		07/26/2017	9012B



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Report of Analysis

Client:		Date Collected:	7/21/2017 12:00:00 AM
Project:	LB89021	Date Received:	7/21/2017 12:00:00 AM
Client Sample ID:	HDD-PILWC3	SDG No.:	LB89021
Lab Sample ID:	I4407-01	Matrix:	Solid
Level (low/med):	low	% Solid:	78.6

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.015	U	1	0.041		0.31	mg/Kg	07/25/2017	07/26/2017	9012B



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Report of Analysis

Client:		Date Collected:	7/24/2017 12:00:00 AM
Project:	LB89021	Date Received:	7/24/2017 12:00:00 AM
Client Sample ID:	OR-03-072417	SDG No.:	LB89021
Lab Sample ID:	I4414-01	Matrix:	Solid
Level (low/med):	low	% Solid:	83.4

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.036	U	1	0.038		0.29	mg/Kg	07/25/2017	07/26/2017	9012B



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Report of Analysis

Client:		Date Collected:	7/24/2017 12:00:00 AM
Project:	LB89021	Date Received:	7/24/2017 12:00:00 AM
Client Sample ID:	SU-02-072417	SDG No.:	LB89021
Lab Sample ID:	I4415-01	Matrix:	Solid
Level (low/med):	low	% Solid:	87.3

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.012	U	1	0.036		0.27	mg/Kg	07/25/2017	07/26/2017	9012B



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Report of Analysis

Client:		Date Collected:	7/24/2017 12:00:00 AM
Project:	LB89021	Date Received:	7/24/2017 12:00:00 AM
Client Sample ID:	FK-BPM-01-A3-A4-A5-A6	SDG No.:	LB89021
Lab Sample ID:	I4417-01	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	-0.0028	U	1	0.034		0.26	mg/Kg	07/25/2017	07/26/2017	9012B



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Report of Analysis

Client:		Date Collected:	7/24/2017 12:00:00 AM
Project:	LB89021	Date Received:	7/24/2017 12:00:00 AM
Client Sample ID:	FK-BPM-01-B3-B4-B5-B6	SDG No.:	LB89021
Lab Sample ID:	I4418-01	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	0.078	J	1	0.034		0.26	mg/Kg	07/25/2017	07/26/2017	9012B



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Report of Analysis

Client:		Date Collected:	7/24/2017 12:00:00 AM
Project:	LB89021	Date Received:	7/24/2017 12:00:00 AM
Client Sample ID:	FK-BPM-01-A7-A8-B7-B8	SDG No.:	LB89021
Lab Sample ID:	I4419-01	Matrix:	Solid
Level (low/med):	low	% Solid:	93.8

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.0018	U	1	0.034		0.26	mg/Kg	07/25/2017	07/26/2017	9012B



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Report of Analysis

Client:		Date Collected:	7/24/2017 12:00:00 AM
Project:	LB89021	Date Received:	7/24/2017 12:00:00 AM
Client Sample ID:	2A-1-2-3-4-5-COMP-(0-10)	SDG No.:	LB89021
Lab Sample ID:	I4420-06	Matrix:	Solid
Level (low/med):	low	% Solid:	92.6

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	-0.0072	U	1	0.034		0.26	mg/Kg	07/25/2017	07/26/2017	9012B



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Report of Analysis

Client:		Date Collected:	7/24/2017 12:00:00 AM
Project:	LB89021	Date Received:	7/24/2017 12:00:00 AM
Client Sample ID:	2A-6-7-8-9-10-COMP-(0-10)	SDG No.:	LB89021
Lab Sample ID:	I4420-13	Matrix:	Solid
Level (low/med):	low	% Solid:	93.8

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.027	U	1	0.034		0.26	mg/Kg	07/25/2017	07/26/2017	9012B



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Report of Analysis

Client:		Date Collected:	7/24/2017 12:00:00 AM
Project:	LB89021	Date Received:	7/24/2017 12:00:00 AM
Client Sample ID:	VNJ-201-COMP	SDG No.:	LB89021
Lab Sample ID:	I4422-05	Matrix:	Solid
Level (low/med):	low	% Solid:	87.1

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	-0.0011	U	1	0.037		0.28	mg/Kg	07/25/2017	07/26/2017	9012B



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Report of Analysis

Client:		Date Collected:	7/24/2017 12:00:00 AM
Project:	LB89021	Date Received:	7/24/2017 12:00:00 AM
Client Sample ID:	72-12018-COMP	SDG No.:	LB89021
Lab Sample ID:	I4422-09	Matrix:	Solid
Level (low/med):	low	% Solid:	93.8

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.01	U	1	0.034		0.26	mg/Kg	07/25/2017	07/26/2017	9012B



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Report of Analysis

Client:		Date Collected:	7/24/2017 12:00:00 AM
Project:	LB89021	Date Received:	7/24/2017 12:00:00 AM
Client Sample ID:	72-11940-COMP	SDG No.:	LB89021
Lab Sample ID:	I4422-13	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	0.0061	U	1	0.036		0.27	mg/Kg	07/25/2017	07/26/2017	9012B



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Report of Analysis

Client:		Date Collected:	7/24/2017 12:00:00 AM
Project:	LB89021	Date Received:	7/24/2017 12:00:00 AM
Client Sample ID:	AU-06-072417-A	SDG No.:	LB89021
Lab Sample ID:	I4424-01	Matrix:	Solid
Level (low/med):	low	% Solid:	81.9

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.11	J	1	0.039		0.29	mg/Kg	07/25/2017	07/26/2017	9012B



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Report of Analysis

Client:		Date Collected:	7/24/2017 12:00:00 AM
Project:	LB89021	Date Received:	7/24/2017 12:00:00 AM
Client Sample ID:	AU-06-072417-B	SDG No.:	LB89021
Lab Sample ID:	I4424-04	Matrix:	Solid
Level (low/med):	low	% Solid:	90.1

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.049	J	1	0.035		0.27	mg/Kg	07/25/2017	07/26/2017	9012B



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Report of Analysis

Client:		Date Collected:	7/24/2017 12:00:00 AM
Project:	LB89021	Date Received:	7/24/2017 12:00:00 AM
Client Sample ID:	AU-06-072417-C	SDG No.:	LB89021
Lab Sample ID:	I4424-07	Matrix:	Solid
Level (low/med):	low	% Solid:	88.7

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.12	J	1	0.036		0.28	mg/Kg	07/25/2017	07/26/2017	9012B



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Report of Analysis

Client:		Date Collected:	7/24/2017 12:00:00 AM
Project:	LB89021	Date Received:	7/24/2017 12:00:00 AM
Client Sample ID:	AU-06-072417-D	SDG No.:	LB89021
Lab Sample ID:	I4424-10	Matrix:	Solid
Level (low/med):	low	% Solid:	91.6

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.088	J	1	0.035		0.27	mg/Kg	07/25/2017	07/26/2017	9012B



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Report of Analysis

Client:		Date Collected:	
Project:	LB89021	Date Received:	
Client Sample ID:	LOWPB100934	SDG No.:	LB89021
Lab Sample ID:	LOWPB100934	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		07/26/2017	9012B



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Report of Analysis

Client:		Date Collected:	
Project:	LB89021	Date Received:	
Client Sample ID:	LOWPB100934	SDG No.:	LB89021
Lab Sample ID:	LOWPB100934	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: LB89021

SDG No.: LB89021

Contract: _____ Lab Code: CHEM

Case No.: LB89021 SAS No.: LB89021

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	0.099	0.099	100	0	85 - 115		07/26/2017	11:12	LB89021



GENCHEM

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: LB89021

SDG No.: LB89021

Contract: _____ Lab Code: CHEM

Case No.: LB89021

SAS No.: LB89021

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	0.26	0.25	104	0	90 - 110		07/26/2017	11:12	LB89021
CCV2	Cyanide	0.26	0.25	104	0	90 - 110		07/26/2017	11:22	LB89021
CCV3	Cyanide	0.25	0.25	100	0	90 - 110		07/26/2017	12:11	LB89021
CCV4	Cyanide	0.27	0.25	108	0	90 - 110		07/26/2017	12:40	LB89021



GENCHEM

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB89021 **SDG No.:** LB89021
Contract: **Lab Code:** CHEM **Case No.:** LB89021 **SAS No.:** LB89021

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		07/26/2017	11:12	LB89021

Sample ID	Analyte	Result mg/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB1	Cyanide	0.00059	+/-0.005	U		0.005		07/26/2017	11:12	LB89021
CCB2	Cyanide	-0.00032	+/-0.005	U		0.005		07/26/2017	11:27	LB89021
CCB3	Cyanide	0.0008	+/-0.005	U		0.005		07/26/2017	12:11	LB89021
CCB4	Cyanide	0.00018	+/-0.005	U		0.005		07/26/2017	12:40	LB89021



GENCHEM

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client:

LB89021

SDG No.:

LB89021

Contract:

Lab Code:

CHEM

Case No.:

LB89021

SAS No.:

LB89021

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: LB89021

SDG No.: LB89021

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
PB100934BL		SOLID		Batch Number:		PB100934		Prep Date:	07/25/2017	
	Cyanide	-0.0031	<0.25	U		0.25		07/26/2017	11:12	LB89021



GENCHEM
- 5a -
MATRIX SPIKE SUMMARY

client: LB89021 level: low sdg no.: LB89021
contract: lab code: CHEM case no.: LB89021 sas no.: LB89021
matrix: Solid sample id: I4407-01 client id: HDD-PILWC3MS
Percent Solids for Sample: 78.6 Spiked ID: I4407-01MS Percent Solids for Spike Sample: 78.6

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Cyanide	mg/Kg	75 - 125	1.7		0.041	U	2.5	68	*	



GENCHEM
- 5a -
MATRIX SPIKE DUPLICATE SUMMARY

client: LB89021 level: low sdg no.: LB89021
contract: lab code: CHEM case no.: LB89021 sas no.: LB89021
matrix: Solid sample id: I4407-01 client id: HDD-PILWC3MSD
Percent Solids for Sample: 78.6 Spiked ID: I4407-01MSD Percent Solids for Spike Sample: 78.6

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Cyanide	mg/Kg	75 - 125	1.9		0.041	U	2.5	76		

GENCHEM

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DUPLICATE SAMPLE SUMMARY

Client: LB89021 Level: LOW SDG No.: LB89021
Contract: _____ Lab Code: CHEM Case No.: LB89021 SAS No.: LB89021
Matrix: Solid Sample ID: I4407-01 Client ID: HDD-PILWC3DUP
Percent Solids for Sample: 78.6 Duplicate ID I4407-01DUP Percent Solids for Spike Sample: 78.6

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Cyanide	mg/Kg	20	0.041	U	-0.0065	U			

GENCHEM

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DUPLICATE SAMPLE SUMMARY

Client: LB89021 **Level:** LOW **SDG No.:** LB89021
Contract: **Lab Code:** CHEM **Case No.:** LB89021 **SAS No.:** LB89021
Matrix: Solid **Sample ID:** I4407-01MS **Client ID:** HDD-PILWC3MSD
Percent Solids for Sample: 78.6 **Duplicate ID** I4407-01MSD **Percent Solids for Spike Sample:** 78.6

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Cyanide	mg/Kg	20	1.7		1.9		11		



GENCHEM

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LABORATORY CONTROL SAMPLE SUMMARY

Client: LB89021

SDG No.: LB89021

Contract:

Lab Code: CHEM

Case No.: LB89021

SAS No.: LB89021

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB100934BS Cyanide	mg/Kg	4.9	4.8		98	85 - 115	