

Daily Analysis Runlog For Sequence/QC Batch ID # LB95397

Review By		Review On				
SubDirectory		LB95397		Test : Cyanide		
STD. NAME		STD REF.#				
ICAL Standard		WP64511,WP64512,WP64513,WP64514,WP64515,WP64516,WP64157				
ICV Standard		W1542				
CCV Standard		WP64518				
ICSA Standard		N/A				
CRI Standard		N/A				
LCS Standard		WP62802				
Chk Standard		WP64520,WP59958,WP60878				
Sr#	SampleID	ClientID	QcType	Date	Comment	Status
1	0.0PPBCN	0.0PPBCN	CAL1	05/16/18 07:47		OK
2	5.0PPBCN	5.0PPBCN	CAL2	05/16/18 07:48		OK
3	10PPBCN	10PPBCN	CAL3	05/16/18 07:48		OK
4	50PPBCN	50PPBCN	CAL4	05/16/18 07:48		OK
5	100PPBCN	100PPBCN	CAL5	05/16/18 07:48		OK
6	250PPBCN	250PPBCN	CAL6	05/16/18 07:48		OK
7	500PPBCN	500PPBCN	CAL7	05/16/18 07:48		OK
8	ICV1	ICV1	ICV	05/16/18 15:32		OK
9	ICB1	ICB1	ICB	05/16/18 15:32		OK
10	CCV1	CCV1	CCV	05/16/18 15:32		OK
11	CCB1	CCB1	CCB	05/16/18 15:32		OK
12	PB109346BL	PB109346BL	MB	05/16/18 15:32		OK
13	PB109346BS	PB109346BS	LCS	05/16/18 15:32		OK
14	J2919-01	FK-SF-02-003-A	SAM	05/16/18 15:32		OK
15	J2919-01DUP	FK-SF-02-003-ADUP	DUP	05/16/18 15:32		OK
16	J2919-01MS	FK-SF-02-003-AMS	MS	05/16/18 15:32		OK
17	J2919-01MSD	FK-SF-02-003-AMSD	MSD	05/16/18 15:32		OK
18	J2919-03	FK-SF-02-003-B	SAM	05/16/18 15:32		OK
19	J2921-01	FK-GF-02-019-A	SAM	05/16/18 15:40		OK
20	J2921-03	FK-GF-02-019-B	SAM	05/16/18 15:40		OK
21	J2922-01	FK-GF-01-005-A	SAM	05/16/18 15:40		OK

Daily Analysis Runlog For Sequence/QC Batch ID # LB95397

Review By			Review On			
SubDirectory		LB95397		Test : Cyanide		
STD. NAME		STD REF.#				
ICAL Standard		WP64511,WP64512,WP64513,WP64514,WP64515,WP64516,WP64157				
ICV Standard		W1542				
CCV Standard		WP64518				
ICSA Standard		N/A				
CRI Standard		N/A				
LCS Standard		WP62802				
Chk Standard		WP64520,WP59958,WP60878				
22	CCV2	CCV2	CCV	05/16/18 15:40		OK
23	CCB2	CCB2	CCB	05/16/18 15:40		OK
24	J2922-03	FK-GF-01-005-B	SAM	05/16/18 15:40		OK
25	J2923-01	LOQ-SCM-Precision-	LOQ	05/16/18 15:40		OK
26	J2923-02	LOQ-SCM-Precision-	LOQ	05/16/18 15:40		OK
27	J2923-03	LOQ-SCM-Precision-	LOQ	05/16/18 15:40		OK
28	J2923-04	LOQ-SCM-Precision-	LOQ	05/16/18 15:40		OK
29	PB109347BL	PB109347BL	MB	05/16/18 15:40		OK
30	PB109347BS	PB109347BS	LCS	05/16/18 15:47		OK
31	J2519-02	OILY-WATER-TOTE	SAM	05/16/18 15:47		OK
32	J2519-02DUP	OILY-WATER-TOTED	DUP	05/16/18 15:47		OK
33	J2519-02MS	OILY-WATER-TOTEN	MS	05/16/18 15:47		OK
34	CCV3	CCV3	CCV	05/16/18 15:47		OK
35	CCB3	CCB3	CCB	05/16/18 15:47		OK
36	J2519-02MSD	OILY-WATER-TOTEM	MSD	05/16/18 15:47		OK
37	J2923-05	LOQ-NPW-Precision-	LOQ	05/16/18 15:47		OK
38	J2923-06	LOQ-NPW-Precision-	LOQ	05/16/18 15:47		OK
39	J2923-07	LOQ-NPW-Precision-	LOQ	05/16/18 15:47		OK
40	J2923-08	LOQ-NPW-Precision-	LOQ	05/16/18 15:52		OK
41	CCV4	CCV4	CCV	05/16/18 16:09		OK
42	CCB4	CCB4	CCB	05/16/18 16:09		OK



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Report of Analysis

Client:		Date Collected:	5/15/2018 12:00:00 AM
Project:	LB95397	Date Received:	5/15/2018 12:00:00 AM
Client Sample ID:	OILY-WATER-TOTE	SDG No.:	LB95397
Lab Sample ID:	J2519-02	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	0.00066	U	1	0.003		0.005	mg/L	05/16/2018	05/16/2018	9012B



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Report of Analysis

Client:		Date Collected:	5/15/2018 12:00:00 AM
Project:	LB95397	Date Received:	5/15/2018 12:00:00 AM
Client Sample ID:	FK-SF-02-003-A	SDG No.:	LB95397
Lab Sample ID:	J2919-01	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	0.098	J	1	0.035		0.27	mg/Kg	05/16/2018	05/16/2018	9012B



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Report of Analysis

Client:		Date Collected:	5/15/2018 12:00:00 AM
Project:	LB95397	Date Received:	5/15/2018 12:00:00 AM
Client Sample ID:	FK-SF-02-003-B	SDG No.:	LB95397
Lab Sample ID:	J2919-03	Matrix:	Solid
Level (low/med):	low	% Solid:	89.5

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.087	J	1	0.035		0.27	mg/Kg	05/16/2018	05/16/2018	9012B



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Report of Analysis

Client:		Date Collected:	5/15/2018 12:00:00 AM
Project:	LB95397	Date Received:	5/15/2018 12:00:00 AM
Client Sample ID:	FK-GF-02-019-A	SDG No.:	LB95397
Lab Sample ID:	J2921-01	Matrix:	Solid
Level (low/med):	low	% Solid:	89.2

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.076	J	1	0.035		0.27	mg/Kg	05/16/2018	05/16/2018	9012B



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Report of Analysis

Client:		Date Collected:	5/15/2018 12:00:00 AM
Project:	LB95397	Date Received:	5/15/2018 12:00:00 AM
Client Sample ID:	FK-GF-02-019-B	SDG No.:	LB95397
Lab Sample ID:	J2921-03	Matrix:	Solid
Level (low/med):	low	% Solid:	92.1

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	05/16/2018	05/16/2018	9012B



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Report of Analysis

Client:		Date Collected:	5/15/2018 12:00:00 AM
Project:	LB95397	Date Received:	5/15/2018 12:00:00 AM
Client Sample ID:	FK-GF-01-005-A	SDG No.:	LB95397
Lab Sample ID:	J2922-01	Matrix:	Solid
Level (low/med):	low	% Solid:	89.5

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.093	J	1	0.035		0.27	mg/Kg	05/16/2018	05/16/2018	9012B



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Report of Analysis

Client:		Date Collected:	5/15/2018 12:00:00 AM
Project:	LB95397	Date Received:	5/15/2018 12:00:00 AM
Client Sample ID:	FK-GF-01-005-B	SDG No.:	LB95397
Lab Sample ID:	J2922-03	Matrix:	Solid
Level (low/med):	low	% Solid:	88.9

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.081	J	1	0.036		0.27	mg/Kg	05/16/2018	05/16/2018	9012B



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Report of Analysis

Client:		Date Collected:	5/15/2018 12:00:00 AM
Project:	LB95397	Date Received:	5/15/2018 12:00:00 AM
Client Sample ID:	FK-GF-01-005-B	SDG No.:	LB95397
Lab Sample ID:	J2922-03	Matrix:	Solid
Level (low/med):	low	% Solid:	88.9

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: LB95397

SDG No.: LB95397

Contract: _____ Lab Code: CHEM

Case No.: LB95397

SAS No.: LB95397

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	0.097	0.099	98		85 - 115		05/16/2018	15:32	LB95397



GENCHEM

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: LB95397

SDG No.: LB95397

Contract: _____ Lab Code: CHEM

Case No.: LB95397

SAS No.: LB95397

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		05/16/2018	15:32	LB95397
CCV2	Cyanide	0.24	0.25	96		90 - 110		05/16/2018	15:40	LB95397
CCV3	Cyanide	0.24	0.25	96		90 - 110		05/16/2018	15:47	LB95397
CCV4	Cyanide	0.25	0.25	100		90 - 110		05/16/2018	16:09	LB95397



GENCHEM

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB95397 **SDG No.:** LB95397
Contract: **Lab Code:** CHEM **Case No.:** LB95397 **SAS No.:** LB95397

Sample ID	Analyte	Result mg/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB1	Cyanide	0.00095	+/-0.005	U		0.005		05/16/2018	15:32	LB95397

Sample ID	Analyte	Result mg/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB1	Cyanide	0.0011	+/-0.005	U		0.005		05/16/2018	15:32	LB95397
CCB2	Cyanide	0.00059	+/-0.005	U		0.005		05/16/2018	15:40	LB95397
CCB3	Cyanide	0.0011	+/-0.005	U		0.005		05/16/2018	15:47	LB95397
CCB4	Cyanide	0.00053	+/-0.005	U		0.005		05/16/2018	16:09	LB95397



GENCHEM

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB95397

SDG No.: LB95397

Contract: Lab Code: CHEM

Case No.: LB95397

SAS No.: LB95397

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: LB95397

SDG No.: LB95397

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
PB109346BL	Cyanide	SOLID		Batch Number:		PB109346		Prep Date:	05/16/2018	
		0.045	<0.25	J		0.25		05/16/2018	15:32	LB95397
Sample ID	Analyte	Result (mg/L)	Acceptance Limit	Conc Qual	LOD mg/L	CRQL mg/L	M	Analysis Date	Analysis Time	Run
PB109347BL	Cyanide	WATER		Batch Number:		PB109347		Prep Date:	05/16/2018	
		0.00072	<0.005	U		0.005		05/16/2018	15:40	LB95397



GENCHEM
- 5a -
MATRIX SPIKE SUMMARY

client: LB95397 level: low sdg no.: LB95397
contract: lab code: CHEM case no.: LB95397 sas no.: LB95397
matrix: WATER sample id: J2519-02 client id: OILY-WATER-TOTEMS
Percent Solids for Sample: 0 Spiked ID: J2519-02MS 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	0.036		0.003	U	0.04	90		



GENCHEM
- 5a -
MATRIX SPIKE DUPLICATE SUMMARY

client: LB95397 level: low sdg no.: LB95397
contract: lab code: CHEM case no.: LB95397 sas no.: LB95397
matrix: WATER sample id: J2519-02 client id: OILY-WATER-TOTEMSD
Percent Solids for Sample: 0 Spiked ID: J2519-02MSD 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	0.035		0.003	U	0.04	87.5		



GENCHEM
- 5a -
MATRIX SPIKE SUMMARY

client: LB95397 level: low sdg no.: LB95397
contract: lab code: CHEM case no.: LB95397 sas no.: LB95397
matrix: Solid sample id: J2919-01 client id: FK-SF-02-003-AMS
Percent Solids for Sample: 89.6 Spiked ID: J2919-01MS Percent Solids for Spike Sample: 89.6

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Cyanide	mg/Kg	75 - 125	1.9		0.098	J	2.2	82		



GENCHEM
- 5a -
MATRIX SPIKE DUPLICATE SUMMARY

client: LB95397 level: low sdg no.: LB95397
contract: lab code: CHEM case no.: LB95397 sas no.: LB95397
matrix: Solid sample id: J2919-01 client id: FK-SF-02-003-AMSD
Percent Solids for Sample: 89.6 Spiked ID: J2919-01MSD Percent Solids for Spike Sample: 89.6

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Cyanide	mg/Kg	75 - 125	1.9		0.098	J	2.1	86		

GENCHEM

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DUPLICATE SAMPLE SUMMARY

Client: LB95397 **Level:** LOW **SDG No.:** LB95397
Contract: **Lab Code:** CHEM **Case No.:** LB95397 **SAS No.:** LB95397
Matrix: WATER **Sample ID:** J2519-02 **Client ID:** OILY-WATER-TOTEDUP
Percent Solids for Sample: 0 **Duplicate ID** J2519-02DUP **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	0.00088	U			

GENCHEM

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DUPLICATE SAMPLE SUMMARY

Client: LB95397 **Level:** LOW **SDG No.:** LB95397
Contract: **Lab Code:** CHEM **Case No.:** LB95397 **SAS No.:** LB95397
Matrix: WATER **Sample ID:** J2519-02MS **Client ID:** OILY-WATER-TOTEMSD
Percent Solids for Sample: 0 **Duplicate ID** J2519-02MSD **Percent Solids for Spike Sample:** 0

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Cyanide	mg/L	20	0.036		0.035		3		

GENCHEM

- 6 -

DUPLICATE SAMPLE SUMMARY

Client: LB95397 **Level:** LOW **SDG No.:** LB95397
Contract: **Lab Code:** CHEM **Case No.:** LB95397 **SAS No.:** LB95397
Matrix: Solid **Sample ID:** J2919-01 **Client ID:** FK-SF-02-003-ADUP
Percent Solids for Sample: 89.6 **Duplicate ID** J2919-01DUP **Percent Solids for Spike Sample:** 89.6

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Cyanide	mg/Kg	20	0.098	J	0.11	J	12		

GENCHEM

- 6 -

DUPLICATE SAMPLE SUMMARY

Client: LB95397 Level: LOW SDG No.: LB95397
 Contract: _____ Lab Code: CHEM Case No.: LB95397 SAS No.: LB95397
 Matrix: Solid Sample ID: J2919-01MS Client ID: FK-SF-02-003-AMSD
 Percent Solids for Sample: 89.6 Duplicate ID J2919-01MSD Percent Solids for Spike Sample: 89.6

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Cyanide	mg/Kg	20	1.9		1.9		0		



GENCHEM

- 7 -

LABORATORY CONTROL SAMPLE SUMMARY

Client: LB95397

SDG No.: LB95397

Contract:

Lab Code: CHEM

Case No.: LB95397

SAS No.: LB95397

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
J2923-01 Cyanide	mg/Kg	0.49	0.19	J	38.8	50 - 150	



GENCHEM

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LABORATORY CONTROL SAMPLE SUMMARY

Client: LB95397

SDG No.: LB95397

Contract:

Lab Code: CHEM

Case No.: LB95397

SAS No.: LB95397

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
J2923-02 Cyanide	mg/Kg	0.5	0.19	J	38	50 - 150	



GENCHEM

- 7 -

LABORATORY CONTROL SAMPLE SUMMARY

Client: LB95397

SDG No.: LB95397

Contract:

Lab Code: CHEM

Case No.: LB95397

SAS No.: LB95397

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
J2923-03 Cyanide	mg/Kg	0.47	0.2	J	42.6	50 - 150	



GENCHEM

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LABORATORY CONTROL SAMPLE SUMMARY

Client: LB95397

SDG No.: LB95397

Contract:

Lab Code: CHEM

Case No.: LB95397

SAS No.: LB95397

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
J2923-04 Cyanide	mg/Kg	0.46	0.17	J	37	50 - 150	



GENCHEM

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LABORATORY CONTROL SAMPLE SUMMARY

Client: LB95397

SDG No.: LB95397

Contract:

Lab Code: CHEM

Case No.: LB95397

SAS No.: LB95397

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
J2923-05 Cyanide	mg/L	0.01	0.0047	J	47	50 - 150	



GENCHEM

- 7 -

LABORATORY CONTROL SAMPLE SUMMARY

Client: LB95397

SDG No.: LB95397

Contract:

Lab Code: CHEM

Case No.: LB95397

SAS No.: LB95397

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
J2923-06 Cyanide	mg/L	0.01	0.0027	U	27	50 - 150	



GENCHEM

- 7 -

LABORATORY CONTROL SAMPLE SUMMARY

Client: LB95397

SDG No.: LB95397

Contract:

Lab Code: CHEM

Case No.: LB95397

SAS No.: LB95397

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
J2923-07 Cyanide	mg/L	0.01	0.0041	J	41	50 - 150	



GENCHEM

- 7 -

LABORATORY CONTROL SAMPLE SUMMARY

Client: LB95397

SDG No.: LB95397

Contract:

Lab Code: CHEM

Case No.: LB95397

SAS No.: LB95397

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
J2923-08 Cyanide	mg/L	0.01	0.0046	J	46	50 - 150	



GENCHEM

- 7 -

LABORATORY CONTROL SAMPLE SUMMARY

Client: LB95397

SDG No.: LB95397

Contract:

Lab Code: CHEM

Case No.: LB95397

SAS No.: LB95397

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB109346BS Cyanide	mg/Kg	5	4.9		98	85 - 115	



GENCHEM

- 7 -

LABORATORY CONTROL SAMPLE SUMMARY

Client: LB95397

SDG No.: LB95397

Contract:

Lab Code: CHEM

Case No.: LB95397

SAS No.: LB95397

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB109347BS Cyanide	mg/L	0.1	0.097		97	85 - 115	