



GENCHEM

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: LB86528

SDG No.: LB86528

Contract: _____ Lab Code: CHEM

Case No.: LB86528

SAS No.: LB86528

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		03/23/2017	16:56	LB86528
CCV2	Cyanide	0.24	0.25	96	0	90 - 110		03/23/2017	17:04	LB86528
CCV3	Cyanide	0.24	0.25	96	0	90 - 110		03/23/2017	17:11	LB86528
CCV4	Cyanide	0.25	0.25	100	0	90 - 110		03/23/2017	17:52	LB86528



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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB86528

SDG No.: LB86528

Contract:

Lab Code: CHEM

Case No.: LB86528

SAS No.: LB86528

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		03/23/2017	16:56	LB86528

Sample ID	Analyte	Result mg/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB1	Cyanide	0.00037	+/-0.005	U		0.005		03/23/2017	16:57	LB86528
CCB2	Cyanide	0.00031	+/-0.005	U		0.005		03/23/2017	17:04	LB86528
CCB3	Cyanide	-0.0001	+/-0.005	U		0.005		03/23/2017	17:11	LB86528
CCB4	Cyanide	0.00069	+/-0.005	U		0.005		03/23/2017	17:52	LB86528



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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB86528

SDG No.: LB86528

Contract: Lab Code: CHEM

Case No.: LB86528

SAS No.: LB86528

Sample ID	Analyte	Result mg/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
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Report of Analysis

Client:		Date Collected:	
Project:	LB86528	Date Received:	
Client Sample ID:	HIGHPB97752	SDG No.:	LB86528
Lab Sample ID:	HIGHPB97752	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		03/23/2017	9012B



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Report of Analysis

Client:		Date Collected:	
Project:	LB86528	Date Received:	
Client Sample ID:	HIGHPB97771	SDG No.:	LB86528
Lab Sample ID:	HIGHPB97771	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		03/23/2017	9012B



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Report of Analysis

Client:		Date Collected:	3/21/2017 12:00:00 AM
Project:	LB86528	Date Received:	3/21/2017 12:00:00 AM
Client Sample ID:	MANHOLE-001	SDG No.:	LB86528
Lab Sample ID:	I2351-01	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	0.0013	U	1	0.003		0.005	mg/L	03/22/2017	03/23/2017	9012B



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Report of Analysis

Client:		Date Collected:	3/22/2017 12:00:00 AM
Project:	LB86528	Date Received:	3/22/2017 12:00:00 AM
Client Sample ID:	WC-COMP-10	SDG No.:	LB86528
Lab Sample ID:	I2364-01	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	0.19	J	1	0.039		0.3	mg/Kg	03/23/2017	03/23/2017	9012B



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Report of Analysis

Client:		Date Collected:	3/22/2017 12:00:00 AM
Project:	LB86528	Date Received:	3/22/2017 12:00:00 AM
Client Sample ID:	WC-COMP-11	SDG No.:	LB86528
Lab Sample ID:	I2364-02	Matrix:	Solid
Level (low/med):	low	% Solid:	83.7

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	-0.03	U	1	0.038		0.29	mg/Kg	03/23/2017	03/23/2017	9012B



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Report of Analysis

Client:		Date Collected:	3/22/2017 12:00:00 AM
Project:	LB86528	Date Received:	3/22/2017 12:00:00 AM
Client Sample ID:	WC-COMP-12	SDG No.:	LB86528
Lab Sample ID:	I2364-03	Matrix:	Solid
Level (low/med):	low	% Solid:	91.8

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.4		1	0.034		0.26	mg/Kg	03/23/2017	03/23/2017	9012B



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Report of Analysis

Client:		Date Collected:	3/21/2017 12:00:00 AM
Project:	LB86528	Date Received:	3/22/2017 12:00:00 AM
Client Sample ID:	E2-B4567	SDG No.:	LB86528
Lab Sample ID:	I2367-01	Matrix:	Solid
Level (low/med):	low	% Solid:	94.3

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.19	J	1	0.033		0.25	mg/Kg	03/23/2017	03/23/2017	9012B



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Report of Analysis

Client:		Date Collected:	
Project:	LB86528	Date Received:	
Client Sample ID:	LOWPB97752	SDG No.:	LB86528
Lab Sample ID:	LOWPB97752	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		03/23/2017	9012B



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Report of Analysis

Client:		Date Collected:	
Project:	LB86528	Date Received:	
Client Sample ID:	LOWPB97771	SDG No.:	LB86528
Lab Sample ID:	LOWPB97771	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		03/23/2017	9012B



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Report of Analysis

Client:		Date Collected:	
Project:	LB86528	Date Received:	
Client Sample ID:	LOWPB97771	SDG No.:	LB86528
Lab Sample ID:	LOWPB97771	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



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PREPARATION BLANK SUMMARY

Client: LB86528

SDG No.: LB86528

Instrument: Konelab 20

Sample ID	Analyte	Result (mg/L)	Acceptance Limit	Conc Qual	LOD mg/L	CRQL mg/L	M	Analysis Date	Analysis Time	Run
PB97752BL	WATER			Batch Number:	PB97752			Prep Date:	03/22/2017	
	Cyanide	0.0001	<0.005	U		0.005		03/23/2017	16:57	LB86528
Sample ID	Analyte	Result (mg/Kg)	Acceptance Limit	Conc Qual	LOD mg/Kg	CRQL mg/Kg	M	Analysis Date	Analysis Time	Run
PB97771BL	SOLID			Batch Number:	PB97771			Prep Date:	03/23/2017	
	Cyanide	-0.0043	<0.25	U		0.25		03/23/2017	17:04	LB86528



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MATRIX SPIKE SUMMARY

client: LB86528 level: low sdg no.: LB86528
contract: lab code: CHEM case no.: LB86528 sas no.: LB86528
matrix: WATER sample id: I2351-01 client id: MANHOLE-001MS
Percent Solids for Sample: 0 Spiked ID: I2351-01MS 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	0.038		0.003	U	0.04	95		



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MATRIX SPIKE DUPLICATE SUMMARY

client: LB86528 level: low sdg no.: LB86528
contract: lab code: CHEM case no.: LB86528 sas no.: LB86528
matrix: WATER sample id: I2351-01 client id: MANHOLE-001MSD
Percent Solids for Sample: 0 Spiked ID: I2351-01MSD 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	0.039		0.003	U	0.04	97.5		



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MATRIX SPIKE SUMMARY

client: LB86528 level: low sdg no.: LB86528
contract: lab code: CHEM case no.: LB86528 sas no.: LB86528
matrix: Solid sample id: I2364-01 client id: WC-COMP-10MS
Percent Solids for Sample: 82.2 Spiked ID: I2364-01MS Percent Solids for Spike Sample: 82.2

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Cyanide	mg/Kg	75 - 125	2.6		0.19	J	2.4	100		



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MATRIX SPIKE DUPLICATE SUMMARY

client: LB86528 level: low sdg no.: LB86528
contract: lab code: CHEM case no.: LB86528 sas no.: LB86528
matrix: Solid sample id: I2364-01 client id: WC-COMP-10MSD
Percent Solids for Sample: 82.2 Spiked ID: I2364-01MSD Percent Solids for Spike Sample: 82.2

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Cyanide	mg/Kg	75 - 125	2.5		0.19	J	2.3	100		

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DUPLICATE SAMPLE SUMMARY

Client: LB86528 **Level:** LOW **SDG No.:** LB86528
Contract: **Lab Code:** CHEM **Case No.:** LB86528 **SAS No.:** LB86528
Matrix: WATER **Sample ID:** I2351-01 **Client ID:** MANHOLE-001DUP
Percent Solids for Sample: 0 **Duplicate ID** I2351-01DUP **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	0.0011	U			

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DUPLICATE SAMPLE SUMMARY

Client: LB86528 **Level:** LOW **SDG No.:** LB86528
Contract: **Lab Code:** CHEM **Case No.:** LB86528 **SAS No.:** LB86528
Matrix: WATER **Sample ID:** I2351-01MS **Client ID:** MANHOLE-001MSD
Percent Solids for Sample: 0 **Duplicate ID** I2351-01MSD **Percent Solids for Spike Sample:** 0

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Cyanide	mg/L	20	0.038		0.039		3		

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DUPLICATE SAMPLE SUMMARY

Client: LB86528 **Level:** LOW **SDG No.:** LB86528
Contract: **Lab Code:** CHEM **Case No.:** LB86528 **SAS No.:** LB86528
Matrix: Solid **Sample ID:** I2364-01 **Client ID:** WC-COMP-10DUP
Percent Solids for Sample: 82.2 **Duplicate ID** I2364-01DUP **Percent Solids for Spike Sample:** 82.2

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Cyanide	mg/Kg	20	0.19	J	0.19	J	0		

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DUPLICATE SAMPLE SUMMARY

Client: LB86528 **Level:** LOW **SDG No.:** LB86528
Contract: **Lab Code:** CHEM **Case No.:** LB86528 **SAS No.:** LB86528
Matrix: Solid **Sample ID:** I2364-01MS **Client ID:** WC-COMP-10MSD
Percent Solids for Sample: 82.2 **Duplicate ID** I2364-01MSD **Percent Solids for Spike Sample:** 82.2

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Cyanide	mg/Kg	20	2.6		2.5		4		



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LABORATORY CONTROL SAMPLE SUMMARY

Client: LB86528

SDG No.: LB86528

Contract:

Lab Code: CHEM

Case No.: LB86528

SAS No.: LB86528

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB97752BS Cyanide	mg/L	0.1	0.1		100	85 - 115	



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LABORATORY CONTROL SAMPLE SUMMARY

Client: LB86528

SDG No.: LB86528

Contract:

Lab Code: CHEM

Case No.: LB86528

SAS No.: LB86528

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB97771BS Cyanide	mg/Kg	5	4.8		96	85 - 115	