

Daily Analysis Runlog For Sequence/QC Batch ID # LB86318

Review By		Review On				
SubDirectory		LB86318		Test : Cyanide		
STD. NAME		STD REF.#				
ICAL Standard		WP53456,WP53455,WP53454,WP53453,WP53452,WP53451				
ICV Standard		WP53457				
CCV Standard		WP53458				
ICSA Standard						
CRI Standard						
LCS Standard						
Chk Standard		WP53459,WP50159,WP551626,WP51615				
Sr#	SampleId	ClientID	QcType	Date	Comment	Status
1	S0.0	S0.0	CAL1	03/11/17 11:47		OK
2	S5.0	S5.0	CAL2	03/11/17 11:47		OK
3	S10.0	S10.0	CAL3	03/11/17 11:47		OK
4	S100.0	S100.0	CAL4	03/11/17 11:47		OK
5	S250.0	S250.0	CAL5	03/11/17 11:47		OK
6	S500.0	S500.0	CAL6	03/11/17 11:47		OK
7	ICV	ICV	ICV	03/11/17 13:17		OK
8	ICB	ICB	ICB	03/11/17 13:17		OK
9	CCV001	CCV001	CCV	03/11/17 13:17		OK
10	CCB001	CCB001	CCB	03/11/17 13:17		OK
11	PB97511BL	PBW005	MB	03/11/17 13:17		OK
12	I2093-01	MC0AD9	SAM	03/11/17 13:17		OK
13	I2093-02	MC0AE0	SAM	03/11/17 13:17		OK
14	I2093-03	MC0AE0D	DUP	03/11/17 13:17		OK
15	I2093-04	MC0AE0S	MS	03/11/17 13:17		OK
16	I2093-05	MC0AE1	SAM	03/11/17 13:17		OK
17	I2093-06	MC0AE2	SAM	03/11/17 13:17		OK
18	I2093-07	MC0AE3	SAM	03/11/17 13:23		OK
19	I2093-08	MC0AE4	SAM	03/11/17 13:23		OK
20	I2093-09	MC0AE6	SAM	03/11/17 13:23		OK
21	I2093-10	MC0AE7	SAM	03/11/17 13:23		OK

Daily Analysis Runlog For Sequence/QC Batch ID # LB86318

Review By		Review On				
SubDirectory		Test : Cyanide				
LB86318						
STD. NAME		STD REF.#				
ICAL Standard		WP53456,WP53455,WP53454,WP53453,WP53452,WP53451				
ICV Standard		WP53457				
CCV Standard		WP53458				
ICSA Standard						
CRI Standard						
LCS Standard						
Chk Standard		WP53459,WP50159,WP551626,WP51615				
22	I2093-11	MC0AE8	SAM	03/11/17 13:24		OK
23	I2093-12	MC0AE9	SAM	03/11/17 13:24		OK
24	I2093-13	MC0AL4	SAM	03/11/17 13:24		OK
25	CCV002	CCV002	CCV	03/11/17 13:24		OK
26	CCB002	CCB002	CCB	03/11/17 13:24		OK



Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: LB86318

SDG No.: LB86318

Contract: _____

Lab Code: CHEM

Case No.: LB86318

SAS No.: LB86318

Initial Calibration Source: _____

Continuing Calibration Source: _____

Sample ID	Analyte	Result ug/L	True Value	% Recovery	% RSD	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
ICV	Cyanide	92.4	99	93	0	85 - 115	CN	03/11/2017	13:17	LB86318



Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: LB86318

SDG No.: LB86318

Contract: _____ Lab Code: CHEM

Case No.: LB86318

SAS No.: LB86318

Initial Calibration Source: _____

Continuing Calibration Source: _____

Sample ID	Analyte	Result ug/L	True Value	% Recovery	% RSD	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV001	Cyanide	240	250	96	0	85 - 115	CN	03/11/2017	13:17	LB86318
CCV002	Cyanide	245	250	98	0	85 - 115	CN	03/11/2017	13:24	LB86318



Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB86318 **SDG No.:** LB86318
Contract: **Lab Code:** CHEM **Case No.:** LB86318 **SAS No.:** LB86318

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB	Cyanide	1.5	+/-10.0	U	5.0	10.0	CN	03/11/2017	13:17	LB86318



Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client:	<u>LB86318</u>	SDG No.:	<u>LB86318</u>				
Contract:	<u> </u>	Lab Code:	<u>CHEM</u>	Case No.:	<u>LB86318</u>	SAS No.:	<u>LB86318</u>

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB001	Cyanide	0.46	+/-10.0	U	5.0	10.0	CN	03/11/2017	13:17	LB86318
CCB002	Cyanide	0.53	+/-10.0	U	5.0	10.0	CN	03/11/2017	13:24	LB86318



Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB86318

SDG No.: LB86318

Contract: Lab Code: CHEM

Case No.: LB86318

SAS No.: LB86318

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
-----------	---------	----------------	---------------------	--------------	-----	------	---	------------------	------------------	---------------



284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:		Date Collected:	2/28/2017 12:00:00 AM
Project:	LB86318	Date Received:	3/3/2017 12:00:00 AM
Client Sample ID:	MC0AD9	SDG No.:	LB86318
Lab Sample ID:	I2093-01	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	U	1	1.5	5	10	ug/L	03/10/2017	03/11/2017	ISM02.2_CN



284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:		Date Collected:	2/28/2017 12:00:00 AM
Project:	LB86318	Date Received:	3/3/2017 12:00:00 AM
Client Sample ID:	MC0AE0	SDG No.:	LB86318
Lab Sample ID:	I2093-02	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	U	1	1.5	5	10	ug/L	03/10/2017	03/11/2017	ISM02.2_CN



284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:		Date Collected:	2/28/2017 12:00:00 AM
Project:	LB86318	Date Received:	3/3/2017 12:00:00 AM
Client Sample ID:	MC0AE1	SDG No.:	LB86318
Lab Sample ID:	I2093-05	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	U	1	1.5	5	10	ug/L	03/10/2017	03/11/2017	ISM02.2_CN



284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:		Date Collected:	2/28/2017 12:00:00 AM
Project:	LB86318	Date Received:	3/3/2017 12:00:00 AM
Client Sample ID:	MC0AE2	SDG No.:	LB86318
Lab Sample ID:	I2093-06	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	U	1	1.5	5	10	ug/L	03/10/2017	03/11/2017	ISM02.2_CN



284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:		Date Collected:	2/28/2017 12:00:00 AM
Project:	LB86318	Date Received:	3/3/2017 12:00:00 AM
Client Sample ID:	MC0AE3	SDG No.:	LB86318
Lab Sample ID:	I2093-07	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	U	1	1.5	5	10	ug/L	03/10/2017	03/11/2017	ISM02.2_CN



284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:		Date Collected:	2/28/2017 12:00:00 AM
Project:	LB86318	Date Received:	3/3/2017 12:00:00 AM
Client Sample ID:	MC0AE4	SDG No.:	LB86318
Lab Sample ID:	I2093-08	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	U	1	1.5	5	10	ug/L	03/10/2017	03/11/2017	ISM02.2_CN



284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:		Date Collected:	2/28/2017 12:00:00 AM
Project:	LB86318	Date Received:	3/3/2017 12:00:00 AM
Client Sample ID:	MC0AE6	SDG No.:	LB86318
Lab Sample ID:	I2093-09	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	U	1	1.5	5	10	ug/L	03/10/2017	03/11/2017	ISM02.2_CN



284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:		Date Collected:	2/28/2017 12:00:00 AM
Project:	LB86318	Date Received:	3/3/2017 12:00:00 AM
Client Sample ID:	MC0AE7	SDG No.:	LB86318
Lab Sample ID:	I2093-10	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	3.9	J	1	1.5	5	10	ug/L	03/10/2017	03/11/2017	ISM02.2_CN



284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:		Date Collected:	2/28/2017 12:00:00 AM
Project:	LB86318	Date Received:	3/3/2017 12:00:00 AM
Client Sample ID:	MC0AE8	SDG No.:	LB86318
Lab Sample ID:	I2093-11	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	U	1	1.5	5	10	ug/L	03/10/2017	03/11/2017	ISM02.2_CN



284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:		Date Collected:	2/28/2017 12:00:00 AM
Project:	LB86318	Date Received:	3/3/2017 12:00:00 AM
Client Sample ID:	MC0AE9	SDG No.:	LB86318
Lab Sample ID:	I2093-12	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	U	1	1.5	5	10	ug/L	03/10/2017	03/11/2017	ISM02.2_CN



284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:		Date Collected:	3/2/2017 12:00:00 AM
Project:	LB86318	Date Received:	3/3/2017 12:00:00 AM
Client Sample ID:	MC0AL4	SDG No.:	LB86318
Lab Sample ID:	I2093-13	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	U	1	1.5	5	10	ug/L	03/10/2017	03/11/2017	ISM02.2_CN



284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:		Date Collected:	3/2/2017 12:00:00 AM
Project:	LB86318	Date Received:	3/3/2017 12:00:00 AM
Client Sample ID:	MC0AL4	SDG No.:	LB86318
Lab Sample ID:	I2093-13	Matrix:	WATER
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
-----	-----------	-------	------	----	-----	-----	------------	-------	-----------	-----------	----------

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



Metals
- 3b -
PREPARATION BLANK SUMMARY

Client: LB86318

SDG No.: LB86318

Instrument: CN

Sample ID	Analyte	Result (ug/L)	Acceptance Limit	Conc Qual	LOD ug/L	CRQL ug/L	M	Analysis Date	Analysis Time	Run
PB97511BL	Cyanide	1.5	<10	U	5.0	10	CN	03/11/2017	13:17	LB86318



metals
- 5a -
MATRIX SPIKE SUMMARY

client: LB86318 level: low sdg no.: LB86318
contract: lab code: CHEM case no.: LB86318 sas no.: LB86318
matrix: WATER sample id: I2093-02 client id: MC0AE0S
Percent Solids for Sample: 0 Spiked ID: I2093-04 Percent Solids for Spike Sample: 0

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Cyanide	ug/L	75 - 125	93.5		10.0	U	100	94		CN



Metals

- 6 -

DUPLICATE SAMPLE SUMMARY

Client: LB86318 Level: LOW SDG No.: LB86318
Contract: Lab Code: CHEM Case No.: LB86318 SAS No.: LB86318
Matrix: WATER Sample ID: I2093-02 Client ID: MC0AE0D
Percent Solids for Sample: 0 Duplicate ID I2093-03 Percent Solids for Spike Sample: 0

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Cyanide	ug/L	20	10.0	U		0	U		CN

“A control limit of $\pm 20\%$ RPD for each matrix applies for sample values greater than 10 times Detection Limit”



Metals
- 13 -

SAMPLE PREPARATION SUMMARY

Client: LB86318 **SDG No.:** LB86318
Contract: **Lab Code:** CHEM **Method:**
Case No.: LB86318 **SAS No.:** LB86318

					Initial Sample Size(mL)	Final Sample Volume (mL)	Percent Solids
Sample ID	Client ID	Sample Type	Matrix	Prep Date			
Batch Number: PB97511							
PB97511BL	PBW005	MB	WATER	03/11/2017	50.0	50.0	
I2093-01	MC0AD9	SAM	WATER	03/11/2017	50.0	50.0	
I2093-02	MC0AE0	SAM	WATER	03/11/2017	50.0	50.0	
I2093-03	MC0AE0D	DUP	WATER	03/11/2017	50.0	50.0	
I2093-04	MC0AE0S	MS	WATER	03/11/2017	50.0	50.0	
I2093-05	MC0AE1	SAM	WATER	03/11/2017	50.0	50.0	
I2093-06	MC0AE2	SAM	WATER	03/11/2017	50.0	50.0	
I2093-07	MC0AE3	SAM	WATER	03/11/2017	50.0	50.0	
I2093-08	MC0AE4	SAM	WATER	03/11/2017	50.0	50.0	
I2093-09	MC0AE6	SAM	WATER	03/11/2017	50.0	50.0	
I2093-10	MC0AE7	SAM	WATER	03/11/2017	50.0	50.0	
I2093-11	MC0AE8	SAM	WATER	03/11/2017	50.0	50.0	
I2093-12	MC0AE9	SAM	WATER	03/11/2017	50.0	50.0	
I2093-13	MC0AL4	SAM	WATER	03/11/2017	50.0	50.0	

FORM 15-IN
INITIAL CALIBRATION

Lab Name: LB86318 Contract: _____
Lab Code: CHEM Case No.: LB86318 MA No.: _____ SDG No.: LB86318
Instrument ID: CN Start Date: 03/11/2017
Analytical Method: _____ Run Batch: LB86318.mdb
Concentration Units: ug/L

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Cyanide	0	0	0	5	3.7	-26	10	8.1	-19

FORM 15-IN
INITIAL CALIBRATION

Lab Name: LB86318 Contract: _____
Lab Code: CHEM Case No.: LB86318 MA No.: _____ SDG No.: LB86318
Instrument ID: CN Start Date: 03/11/2017
Analytical Method: _____ Run Batch: LB86318.mdb
Concentration Units: ug/L

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Cyanide	100	102	2	250	254	2	500	498	0