

Daily Analysis Runlog For Sequence/QC Batch ID # LB94035

Review By		Review On				
SubDirectory		LB94035		Test : Cyanide		
STD. NAME		STD REF.#				
ICAL Standard		WP62877,WP62878,WP62879,WP62880,WP62881,WP62882,WP62883				
ICV Standard		W1542				
CCV Standard		WP62884				
ICSA Standard		N/A				
CRI Standard		N/A				
LCS Standard		WP62802				
Chk Standard		WP62886,WP59958,WP60878				
Sr#	SampleID	ClientID	QcType	Date	Comment	Status
1	0.0PPBCN	0.0PPBCN	CAL1	03/20/18 13:25		OK
2	5.0PPBCN	5.0PPBCN	CAL2	03/20/18 13:25		OK
3	10PPBCN	10PPBCN	CAL3	03/20/18 13:25		OK
4	50PPBCN	50PPBCN	CAL4	03/20/18 13:25		OK
5	100PPBCN	100PPBCN	CAL5	03/20/18 13:25		OK
6	250PPBCN	250PPBCN	CAL6	03/20/18 13:25		OK
7	500PPBCN	500PPBCN	CAL7	03/20/18 13:25		OK
8	ICV1	ICV1	ICV	03/20/18 13:56		OK
9	ICB1	ICB1	ICB	03/20/18 13:56		OK
10	CCV1	CCV1	CCV	03/20/18 13:56		OK
11	CCB1	CCB1	CCB	03/20/18 13:56		OK
12	PB107496BL	PB107496BL	MB	03/20/18 13:56		OK
13	PB107496BS	PB107496BS	LCS	03/20/18 13:56		OK
14	LOWPB107496	LOWPB107496	SAM	03/20/18 13:56		OK
15	HIGHPB107496	HIGHPB107496	SAM	03/20/18 13:56		OK
16	J1760-03	SU-03-031918	SAM	03/20/18 13:56		OK
17	J1760-03DUP	SU-03-031918DUP	DUP	03/20/18 13:56		OK
18	J1760-03MS	SU-03-031918MS	MS	03/20/18 13:56		OK
19	J1760-03MSD	SU-03-031918MSD	MSD	03/20/18 14:01		OK
20	J1972-02	S-1 COMP	SAM	03/20/18 14:01		OK
21	J1972-04	S-2 COMP	SAM	03/20/18 14:01		OK

Daily Analysis Runlog For Sequence/QC Batch ID # LB94035

Review By			Review On			
SubDirectory		LB94035		Test : Cyanide		
STD. NAME		STD REF.#				
ICAL Standard		WP62877,WP62878,WP62879,WP62880,WP62881,WP62882,WP62883				
ICV Standard		W1542				
CCV Standard		WP62884				
ICSA Standard		N/A				
CRI Standard		N/A				
LCS Standard		WP62802				
Chk Standard		WP62886,WP59958,WP60878				
22	CCV2	CCV2	CCV	03/20/18 14:01		OK
23	CCB2	CCB2	CCB	03/20/18 14:01		OK
24	J1972-06	S-3 COMP	SAM	03/20/18 14:07		OK
25	J1972-08	S-4 COMP	SAM	03/20/18 14:07		OK
26	J1974-01	YR18020063	SAM	03/20/18 14:07		OK
27	J1975-05	FS-SOIL	SAM	03/20/18 14:07		OK
28	J1977-02	SP	SAM	03/20/18 14:07		OK
29	J1979-01	SP-1	SAM	03/20/18 14:12		OK
30	J1981-01	TILCON-MT-HOPE-1	SAM	03/20/18 14:12		OK
31	J1981-02	TILCON-MT-HOPE-2	SAM	03/20/18 14:12		OK
32	PB1017497BL	PB1017497BL	MB	03/20/18 14:12		OK
33	PB107497BS	PB107497BS	LCS	03/20/18 14:12		OK
34	CCV3	CCV3	CCV	03/20/18 14:16		OK
35	CCB3	CCB3	CCB	03/20/18 14:16		OK
36	J1979-05	A3960	SAM	03/20/18 14:16		OK
37	J1979-05DUP	A3960DUP	DUP	03/20/18 14:16		OK
38	J1979-05MS	A3960MS	MS	03/20/18 14:16		OK
39	J1979-05MSD	A3960MSD	MSD	03/20/18 14:20		OK
40	CCV5	CCV5	CCV	03/20/18 14:20		OK
41	CCB5	CCB5	CCB	03/20/18 14:20		OK



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Report of Analysis

Client:		Date Collected:	
Project:	LB94035	Date Received:	
Client Sample ID:	HIGHPB107496	SDG No.:	LB94035
Lab Sample ID:	HIGHPB107496	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		03/20/2018	9012B



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Report of Analysis

Client:		Date Collected:	3/19/2018 12:00:00 AM
Project:	LB94035	Date Received:	3/19/2018 12:00:00 AM
Client Sample ID:	SU-03-031918	SDG No.:	LB94035
Lab Sample ID:	J1760-03	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	0.023	U	1	0.039		0.29	mg/Kg	03/20/2018	03/20/2018	9012B



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Report of Analysis

Client:		Date Collected:	3/19/2018 12:00:00 AM
Project:	LB94035	Date Received:	3/19/2018 12:00:00 AM
Client Sample ID:	S-1 COMP	SDG No.:	LB94035
Lab Sample ID:	J1972-02	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	0.052	J	1	0.039		0.3	mg/Kg	03/20/2018	03/20/2018	9012B



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Report of Analysis

Client:		Date Collected:	3/19/2018 12:00:00 AM
Project:	LB94035	Date Received:	3/19/2018 12:00:00 AM
Client Sample ID:	S-2 COMP	SDG No.:	LB94035
Lab Sample ID:	J1972-04	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	0.038	U	1	0.04		0.3	mg/Kg	03/20/2018	03/20/2018	9012B



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Report of Analysis

Client:		Date Collected:	3/19/2018 12:00:00 AM
Project:	LB94035	Date Received:	3/19/2018 12:00:00 AM
Client Sample ID:	S-3 COMP	SDG No.:	LB94035
Lab Sample ID:	J1972-06	Matrix:	Solid
Level (low/med):	low	% Solid:	84.5

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.11	J	1	0.037		0.28	mg/Kg	03/20/2018	03/20/2018	9012B



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Report of Analysis

Client:		Date Collected:	3/19/2018 12:00:00 AM
Project:	LB94035	Date Received:	3/19/2018 12:00:00 AM
Client Sample ID:	S-4 COMP	SDG No.:	LB94035
Lab Sample ID:	J1972-08	Matrix:	Solid
Level (low/med):	low	% Solid:	84.3

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.046	J	1	0.038		0.29	mg/Kg	03/20/2018	03/20/2018	9012B



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Report of Analysis

Client:		Date Collected:	3/19/2018 12:00:00 AM
Project:	LB94035	Date Received:	3/19/2018 12:00:00 AM
Client Sample ID:	YR18020063	SDG No.:	LB94035
Lab Sample ID:	J1974-01	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	0.01	U	1	0.036		0.27	mg/Kg	03/20/2018	03/20/2018	9012B

Report of Analysis

Client:		Date Collected:	3/19/2018 12:00:00 AM
Project:	LB94035	Date Received:	3/19/2018 12:00:00 AM
Client Sample ID:	FS-SOIL	SDG No.:	LB94035
Lab Sample ID:	J1975-05	Matrix:	Solid
Level (low/med):	low	% Solid:	80.8

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	-0.019	U	1	0.04		0.3	mg/Kg	03/20/2018	03/20/2018	9012B



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Report of Analysis

Client:		Date Collected:	3/19/2018 12:00:00 AM
Project:	LB94035	Date Received:	3/19/2018 12:00:00 AM
Client Sample ID:	SP	SDG No.:	LB94035
Lab Sample ID:	J1977-02	Matrix:	Solid
Level (low/med):	low	% Solid:	90.6

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	-0.026	U	1	0.036		0.27	mg/Kg	03/20/2018	03/20/2018	9012B



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Report of Analysis

Client:		Date Collected:	3/19/2018 12:00:00 AM
Project:	LB94035	Date Received:	3/19/2018 12:00:00 AM
Client Sample ID:	SP-1	SDG No.:	LB94035
Lab Sample ID:	J1979-01	Matrix:	Solid
Level (low/med):	low	% Solid:	88.3

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.3		1	0.036		0.27	mg/Kg	03/20/2018	03/20/2018	9012B



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Report of Analysis

Client:		Date Collected:	3/19/2018 12:00:00 AM
Project:	LB94035	Date Received:	3/19/2018 12:00:00 AM
Client Sample ID:	A3960	SDG No.:	LB94035
Lab Sample ID:	J1979-05	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	0.02		1	0.003		0.005	mg/L	03/20/2018	03/20/2018	9012B



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Report of Analysis

Client:		Date Collected:	3/13/2018 12:00:00 AM
Project:	LB94035	Date Received:	3/19/2018 12:00:00 AM
Client Sample ID:	TILCON-MT-HOPE-1	SDG No.:	LB94035
Lab Sample ID:	J1981-01	Matrix:	Solid
Level (low/med):	low	% Solid:	94.4

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	-0.0062	U	1	0.034		0.26	mg/Kg	03/20/2018	03/20/2018	9012B



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Report of Analysis

Client:		Date Collected:	3/13/2018 12:00:00 AM
Project:	LB94035	Date Received:	3/19/2018 12:00:00 AM
Client Sample ID:	TILCON-MT-HOPE-2	SDG No.:	LB94035
Lab Sample ID:	J1981-02	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	0.013	U	1	0.033		0.25	mg/Kg	03/20/2018	03/20/2018	9012B



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Report of Analysis

Client:		Date Collected:	
Project:	LB94035	Date Received:	
Client Sample ID:	LOWPB107496	SDG No.:	LB94035
Lab Sample ID:	LOWPB107496	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	0.0099		1	0.003		0.005	mg/L		03/20/2018	9012B



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Report of Analysis

Client:		Date Collected:	
Project:	LB94035	Date Received:	
Client Sample ID:	LOWPB107496	SDG No.:	LB94035
Lab Sample ID:	LOWPB107496	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: LB94035

SDG No.: LB94035

Contract: _____ Lab Code: CHEM

Case No.: LB94035

SAS No.: LB94035

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		03/20/2018	13:56	LB94035



GENCHEM

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: LB94035

SDG No.: LB94035

Contract: _____ Lab Code: CHEM

Case No.: LB94035

SAS No.: LB94035

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		03/20/2018	13:56	LB94035
CCV2	Cyanide	0.26	0.25	104		90 - 110		03/20/2018	14:01	LB94035
CCV3	Cyanide	0.25	0.25	100		90 - 110		03/20/2018	14:16	LB94035
CCV5	Cyanide	0.26	0.25	104		90 - 110		03/20/2018	14:20	LB94035



GENCHEM

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB94035

SDG No.: LB94035

Contract:

Lab Code: CHEM

Case No.: LB94035

SAS No.: LB94035

Sample ID	Analyte	Result mg/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB1	Cyanide	-0.00019	+/-0.005	U		0.005		03/20/2018	13:56	LB94035
CCB2	Cyanide	-0.00029	+/-0.005	U		0.005		03/20/2018	14:01	LB94035
CCB3	Cyanide	-0.00011	+/-0.005	U		0.005		03/20/2018	14:16	LB94035
CCB5	Cyanide	-0.00016	+/-0.005	U		0.005		03/20/2018	14:20	LB94035



GENCHEM

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB94035

SDG No.: LB94035

Contract: Lab Code: CHEM

Case No.: LB94035

SAS No.: LB94035

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: LB94035

SDG No.: LB94035

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
PB1017497BL	Cyanide	SOLID		Batch Number:				Prep Date:		
		-0.00044	<0.005	U		0.005		03/20/2018	14:12	LB94035
Sample ID	Analyte	Result (mg/Kg)	Acceptance Limit	Conc Qual	LOD mg/Kg	CRQL mg/Kg	M	Analysis Date	Analysis Time	Run
PB107496BL	Cyanide	SOLID		Batch Number:		PB107496		Prep Date:		03/20/2018
		-0.01	<0.24	U		0.24		03/20/2018	13:56	LB94035



GENCHEM
- 5a -
MATRIX SPIKE SUMMARY

client: LB94035 level: low sdg no.: LB94035
contract: lab code: CHEM case no.: LB94035 sas no.: LB94035
matrix: Solid sample id: J1760-03 client id: SU-03-031918MS
Percent Solids for Sample: 83.7 Spiked ID: J1760-03MS Percent Solids for Spike Sample: 83.7

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Cyanide	mg/Kg	75 - 125	1.9		0.039	U	2.3	82.6		

GENCHEM
- 5a -
MATRIX SPIKE DUPLICATE SUMMARY

client: LB94035 level: low sdg no.: LB94035
contract: lab code: CHEM case no.: LB94035 sas no.: LB94035
matrix: Solid sample id: J1760-03 client id: SU-03-031918MSD
Percent Solids for Sample: 83.7 Spiked ID: J1760-03MSD Percent Solids for Spike Sample: 83.7

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Cyanide	mg/Kg	75 - 125	1.9		0.039	U	2.3	82.6		



GENCHEM
- 5a -
MATRIX SPIKE SUMMARY

client: LB94035 level: low sdg no.: LB94035
contract: lab code: CHEM case no.: LB94035 sas no.: LB94035
matrix: WATER sample id: J1979-05 client id: A3960MS
Percent Solids for Sample: 0 Spiked ID: J1979-05MS 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	0.051		0.02		0.04	78		

GENCHEM
- 5a -
MATRIX SPIKE DUPLICATE SUMMARY

client: LB94035 level: low sdg no.: LB94035
contract: lab code: CHEM case no.: LB94035 sas no.: LB94035
matrix: WATER sample id: J1979-05 client id: A3960MSD
Percent Solids for Sample: 0 Spiked ID: J1979-05MSD 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	0.052		0.02		0.04	80		

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DUPLICATE SAMPLE SUMMARY

Client: LB94035 **Level:** LOW **SDG No.:** LB94035
Contract: **Lab Code:** CHEM **Case No.:** LB94035 **SAS No.:** LB94035
Matrix: Solid **Sample ID:** J1760-03 **Client ID:** SU-03-031918DUP
Percent Solids for Sample: 83.7 **Duplicate ID** J1760-03DUP **Percent Solids for Spike Sample:** 83.7

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Cyanide	mg/Kg	20	0.039	U	-0.0088	U			

GENCHEM

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DUPLICATE SAMPLE SUMMARY

Client: LB94035 Level: LOW SDG No.: LB94035
Contract: _____ Lab Code: CHEM Case No.: LB94035 SAS No.: LB94035
Matrix: Solid Sample ID: J1760-03MS Client ID: SU-03-031918MSD
Percent Solids for Sample: 83.7 Duplicate ID J1760-03MSD Percent Solids for Spike Sample: 83.7

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

GENCHEM

- 6 -

DUPLICATE SAMPLE SUMMARY

Client: LB94035 **Level:** LOW **SDG No.:** LB94035
Contract: **Lab Code:** CHEM **Case No.:** LB94035 **SAS No.:** LB94035
Matrix: WATER **Sample ID:** J1979-05 **Client ID:** A3960DUP
Percent Solids for Sample: 0 **Duplicate ID** J1979-05DUP **Percent Solids for Spike Sample:** 0

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Cyanide	mg/L	20	0.02		0.02		0		

GENCHEM

- 6 -

DUPLICATE SAMPLE SUMMARY

Client: LB94035 **Level:** LOW **SDG No.:** LB94035
Contract: **Lab Code:** CHEM **Case No.:** LB94035 **SAS No.:** LB94035
Matrix: WATER **Sample ID:** J1979-05MS **Client ID:** A3960MSD
Percent Solids for Sample: 0 **Duplicate ID** J1979-05MSD **Percent Solids for Spike Sample:** 0

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Cyanide	mg/L	20	0.051		0.052		2		



GENCHEM

- 7 -

LABORATORY CONTROL SAMPLE SUMMARY

Client: LB94035

SDG No.: LB94035

Contract:

Lab Code: CHEM

Case No.: LB94035

SAS No.: LB94035

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB107496BS Cyanide	mg/Kg	4.9	4.8		98	85 - 115	



GENCHEM

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LABORATORY CONTROL SAMPLE SUMMARY

Client: LB94035

SDG No.: LB94035

Contract:

Lab Code: CHEM

Case No.: LB94035

SAS No.: LB94035

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB107497BS Cyanide	mg/L	0.1	0.1		100	85 - 115	