Michael Quinlan
Senior Program Manager
Site Investigation & Remediation

nationalgrid

July 26, 2024

Mr. Tracey Garland
New York State Department of Environmental Conservation
Division of Environmental Remediation
Remedial Bureau C, Section E
625 Broadway, 12th Floor
Albany, New York 12233-7014

East Garden City Former Stewart Avenue Holder Station
Routine Biennial Groundwater Well Sampling Report
Order on Consent – Index No. A2-0552-0606

Dear Mr. Garland:

The purpose of this letter is to document the biannual groundwater sampling activities completed by GEI Consultants, Inc. DBA GEI Consultants Engineering, Geology, Architecture & Landscape Architecture (GEI) on June 19, 2024, at the East Garden City Former Stewart Avenue Holder Station (the Site), located in Garden City, New York. A Site Location Map is provided as Fig. 1 in Attachment 1.

The sampling activities for this reporting period summarized below were completed pursuant to the requirements of the New York State Department of Environmental Conservation (NYSDEC)-approved September 2022 Site Management Plan (SMP) to monitor and manage residual MGP-related impacts previously identified at the Site.

The narrative below provides pertinent background information; a description of GEI's completed sampling activities, findings, and analysis of analytical results for this reporting period; and our associated conclusions and recommendations.

Background

Residual contamination was identified at the Site during completion of a in 2011 Site Characterization (SC). As detailed in the December 2011 SC Report, low-level manufactured gas plant (MGP)-related residual contamination and other low-level contaminants (target analyte list [TAL] metals and polychlorinated biphenyls [PCBs]), were identified in surface and subsurface soil throughout the Site. In addition, elevated concentrations of total cyanide above the NYSDEC Class GA Groundwater Standards and Guidance Values were identified in one monitoring well (EGCMW-06) located in the southern portion of the Site. Monitoring well locations are depicted on Fig. 2 in Attachment 1.

Based on the elevated total cyanide concentrations in monitoring well EGCMW-06, the SMP included provisions for the sampling of three groundwater monitoring wells (EGCMW-03, EGCMW-06 and EGCMW-07) for total cyanide on an annual basis for an initial period of three years. Wells EGCMW-03 and EGCMW-07 are located on the downgradient perimeter of the Site. Following the completion of the 2018 sampling event, the NYSDEC approved a reduction to biennial sampling frequency on October 11, 2018.

175 East Old Country Road, Hicksville, NY 11801
T: 516.220.4363 ■ F: 516.545.2582 ■ Michael.quinlan@nationalgrid.com ■ www.nationalgrid.com

Summary of Field Activities

As part of this effort, depth to bottom and water level measurements were collected from six wells (EGCMW-01, EGCMW-02, and EGCMW-04 through EGCMW-07) using an electronic water level indicator on June 19, 2024. Measurements were collected in reference to the top of the PVC casing and were also utilized in order to calculate the required purge volume for wells to be sampled.

Groundwater samples were collected via low-flow sampling procedures from two of three wells during tins reporting period (EGCMW-06 and EGCMW-07). It should be noted that a groundwater sample was not collected from well EGCMW-03 during this reporting period, as this well could not be located and is presumed to be destroyed.

A check-valve and new poly tubing were utilized to purge and sample each well. The tubing was extended to within the screened zones of each well (12.5 to 22.5 feet below grade surface [bgs] at EGCMW-06, and 16 to 26 feet bgs at EGCMW-07).

Purge water was monitored for conductivity, dissolved oxygen, pH, temperature, and turbidity utilizing a calibrated water quality meter. Results were recorded on Monitoring Well Sample Data Forms provided as Attachment 2. Purging continued until the pH, temperature and conductivity had stabilized to within 10 percent for three consecutive readings, and the minimum purge water volume requirements had been achieved at each well.

Samples were transferred directly to laboratory-supplied sample containers and sent to the analytical laboratory, Eurofins Laboratories, Inc., within 24 hours of sample collection, for total and dissolved cyanide analysis. Quality control (QC) samples collected during the groundwater sampling event included one matrix spike/matrix spike duplicate (MS/MSD) set.

Findings and Analysis of Analytical Results

Depth to water measurements ranged from 15.55 feet bgs feet at EGCMW-04 to 18.13 feet bgs at EGCMW-07. Groundwater reportedly flows generally to the south at the Site, per the results of the 2011 SC investigation.

The total cyanide analytical results are provided below:

Sample ID Sampling Date Dilution Factor Units	**EGCMW-03**	**EGCMW-06 6/19/24 20 µg/L**	**EGCMW-07 6/19/24 1 µg/L**	**NYSDEC Class GA Standard or Guidance Value µg/L**
Total Cyanide	NS	**1,500 J**	10	200
Dissolved Cyanide	NS	**2,400 J**	14	200

Note:
µg/L = micrograms per liter
Bold text denotes an exceedance of the Class GA Groundwater Standard.

Similar to previous results, total cyanide exceedances above the Class GA Standard of 200 µg/L were limited to monitoring well EGCMW-06 (1,500 µg/L). Total cyanide concentrations detected in EGCMW-06 have varied since sampling began, from a high of 1,590 µg/L detected

in September 2011 to a low of 271 µg/L detected in April 2014 but have been relatively stable in recent events. Dissolved cyanide was sampled for the first time, due to high turbidity in the previous sampling event. The dissolved cyanide concentrations in EGCMW-06 and EGCMW-07 during the 2024 sampling event were 2,400 µg/L and 14 µg/L, respectively. It is noted that the turbidity in each of these wells was low during the 2024 sampling event.

Although historical total cyanide concentrations have been somewhat variable in well EGCMW-03, current (EGCMW-07) and historical total cyanide concentrations continue to remain well below the Class GA Standard in wells EGCMW-03 and EGCMW-07. It should again be noted that a groundwater sample was not collected from well EGCMW-03 during this reporting period, as this well could not be located and is presumed to be destroyed.

Sample locations and total cyanide exceedances in groundwater detected during this reporting period are depicted on Fig. 2. The laboratory data package and a data usability summary report (DUSR) are provided in Attachment 3. Historical total cyanide concentrations are provided in Attachment 4.

Based on the relative consistency of the analytical results, it is proposed that groundwater sampling continue at the Site as described above on a biennial frequency.

Please do not hesitate to contact me at 516-220-4363, if you have any questions and/or comments.

Sincerely,

Christopher Morris, P.G.
On behalf of
Michael Quinlan

Enclosures

cc: T. Johansen, GEI
J. Mitchell, National Grid

B:\Working\NATIONAL GRID\1905774 (13 Sites) OM&M Services-Downstate, NY\02_PM\13 Sites\East Garden City\Site Reports\2024\letter.A2-0552-0606.2024-07-25.BiennialGWSummary_R1.docx

ATTACHMENT 1

SITE FIGURES

SOURCE:
MAP EXTRACTED FROM GOOGLE MAPS

EAST GARDEN CITY FORMER STEWART AVENUE HOLDER STATION EAST GARDEN CITY, NEW YORK	GEI Consultants	SITE LOCATION MAP
NATIONAL GRID GARDEN CITY, NEW YORK	Project 1905774	July 2024 Fig. 1

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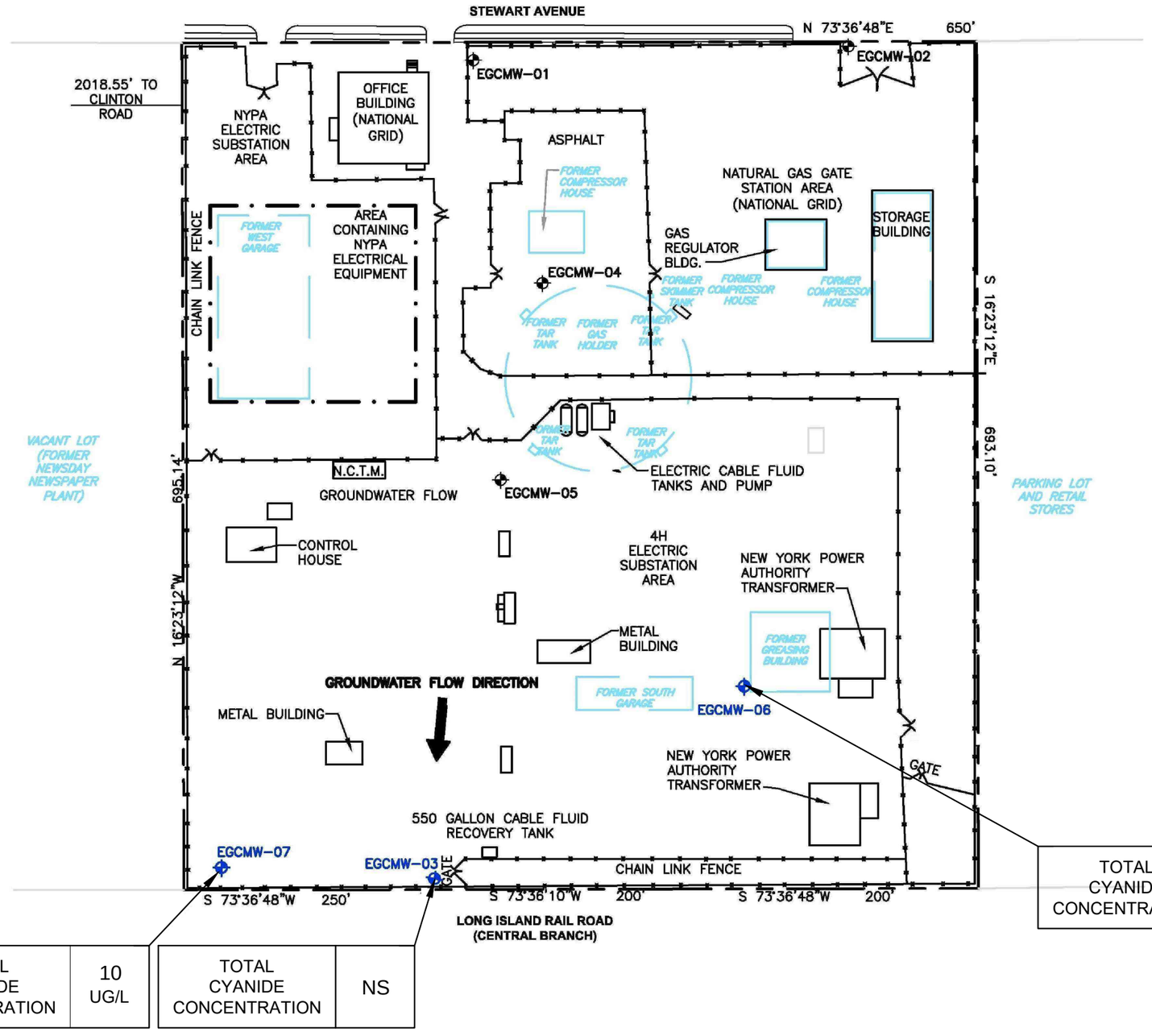

EAST GARDEN CITY FORMER STEWART AVENUE HOLDER STATION
EAST GARDEN CITY, NEW YORK

NATIONAL GRID
GARDEN CITY, NEW YORK

GEI Consultants

SAMPLE LOCATION AND TOTAL CYANIDE CONCENTRATION SUMMARY MAP

Project 1950774 | July 2024 | Fig. 2

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ATTACHMENT 2

SAMPLING FORMS

MS/MSD + DUP-01

Monitoring Well Sample Data Form

Project: EGC **Well ID:** EGCMW-06 **Sample Date:** 6/19/24

Total Well Depth (Field Recording) 25.87

Total Well Depth (On Tracking Sheet) 24.50'

Depth to Water (from top of casing): 16.25'

Well Diameter: 3/4" 1" (2") 4"

Pump Intake Depth (Mid-Point of Screen Zone): 22.50'

Sampling Crew: C. Hayes

Purging Method: Peri Pump

Purge Time: Start: 1000 Finish: 1040

Sampling Method: Low Flow

Sample Time: Start: (1045) Finish:

Sample Analysis: Cyanide, Total

Purge Data

Sample Time	Flow Rate (lpm/gpm)	Volume Purged (liters/gals.)	pH (std. Units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/l)	Temperature (Cel.)	Salinity (%)	ORP (mV)	Comments/Observations
1005	0.4	Initial	6.34	0.313	170	6.76	16.77	0.1	173	Well Headspace PID =
1010	0.4	2	6.39	0.316	50.8	6.20	16.65	0.2	186	
1015	0.4	4	6.41	0.318	40.8	6.06	16.62	0.2	190	
1020	0.4	6	6.40	0.322	25.8	5.86	16.51	0.2	196	
1025	0.4	8	6.48	0.322	6.4	5.68	16.59	0.2	199	
1030	0.4	10	6.49	0.321	1.2	5.83	16.37	0.2	204	
1035	0.4	12	6.49	0.324	0.1	5.85	16.39	0.2	205	
1040	0.4	14	6.50	0.326	0.0	5.90	16.41	0.2	206	

Monitoring Well Sample Data Form

Project: EGC **Well ID:** EGCMW-07 **Sample Date:** 6/19/24

Total Well Depth (Field Recording) 29.10'

Total Well Depth (On Tracking Sheet) 28.00

Depth to Water (from top of casing): 18.13'

Well Diameter: 3/4" 1" (2") 4"

Pump Intake Depth (Mid-Point of Screen Zone): 25.00'

Sampling Crew: C. Hayes

Purge Time: Start: 1115 Finish: 1155

Purging Method: Peri Pump

Sampling Method: Low Flow

Sample Time: Start: 1200 Finish:

Sample Analysis: Cyanide, Total

Purge Data

Sample Time	Flow Rate (L/m)(gpm)	Volume Purged (liters/gals.)	pH (std. Units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/l)	Temperature (Cel.)	Salinity (%)	ORP (mV)	Comments/Observations
1120	0.4	Initial	6.64	0.089	365	8.94	18.74	0.0	84	Well Headspace PID =
1125	0.4	2	6.61	0.083	105	8.30	18.08	0.0	102	
1130	0.4	4	6.60	0.088	16.8	8.26	18.08	0.0	117	
1135	0.4	6	6.55	0.081	2.1	10.05	18.07	0.0	120	
1140	0.4	8	6.33	0.077	1.4	10.01	18.23	0.0	135	
1145	0.4	10	6.10	0.082	0.5	9.89	18.35	0.0	147	
1150	0.4	12	6.07	0.081	0.4	9.75	18.36	0.0	151	
1155	0.4	14	6.04	0.080	0.3	9.63	18.40	0.0	155	

ATTACHMENT 3

LABORATORY DATA AND
DATA USABILITY SUMMARY REPORT

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Christopher Morris
GEI Consultants, Inc.
1000 New York Avenue
Huntington Station NY 11746

Generated 6/26/2024 9:10 PM

JOB DESCRIPTION

National Grid-Downstate East Garden City

JOB NUMBER

460-306246-1

Eurofins Edison
777 New Durham Road
Edison NJ 08817

See page two for job notes and contact information.

Eurofins Edison

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northeast, LLC Project Manager.

Compliance Statement

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed within the body of this report. Release of the data contained in this sample data package and in the electronic data deliverable has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Authorization

Generated
6/26/2024 9:10 PM

Authorized for release by
Warleny M Infante, Project Management Assistant I
Warleny.Infante@et.eurofinsus.com
Designee for
Melissa Haas, Senior Project Manager
Melissa.Haas@et.eurofinsus.com
203 308-0880

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Table of Contents

CASE NARRATIVE

Client: GEI Consultants, Inc.

Project: National Grid-Downstate East Garden City

Report Number: 460-306246-1

This case narrative is in the form of an exception report, where only the anomalies related to this report, method specific performance and/or QA/QC issues are discussed. If there are no issues to report, this narrative will include a statement that documents that there are no relevant data issues.

It should be noted that samples with elevated Reporting Limits (RLs) as a result of a dilution may not be able to satisfy customer reporting limits in some cases. Such increases in the RLs are unavoidable but acceptable consequence of sample dilution that enables quantification of target analytes or interferences which exceed the calibration range of the instrument.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT
The samples were received on 6/19/2024 7:50 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.0°C.

Note: All samples which require thermal preservation are considered acceptable if the arrival temperature is within 2C of the required temperature or method specified range. For samples with a specified temperature of 4C, samples with a temperature ranging from just above freezing temperature of water to 6C shall be acceptable. Samples that are hand delivered immediately following collection may not meet these criteria, however they will be deemed acceptable according to NELAC standards, if there is evidence that the chilling process has begun, such as arrival on ice, etc.

CYANIDE (DISSOLVED)
Samples EGCMW-06 (460-306246-1), EGCMW-07 (460-306246-2), FB-061924 (460-306246-3) and DUP-01 (460-306246-4) were analyzed for cyanide (dissolved) in accordance with EPA SW-846 Method 9012B (Dissolved). The samples were prepared and analyzed on 06/25/2024.

Samples EGCMW-06 (460-306246-1)[20X] and DUP-01 (460-306246-4)[20X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Cyanide, Total failed the recovery criteria low for the MS of sample EGCMW-06MS (460-306246-1) in batch 460-982112.

Cyanide, Total failed the recovery criteria low for the MSD of sample EGCMW-06MSD (460-306246-1) in batch 460-982112.

Refer to the QC report for details.

No other difficulties were encountered during the Diss. Cyanide analysis.

All other quality control parameters were within the acceptance limits.

TOTAL CYANIDE
Samples EGCMW-06 (460-306246-1), EGCMW-07 (460-306246-2), FB-061924 (460-306246-3) and DUP-01 (460-306246-4) were analyzed for total cyanide in accordance with EPA SW-846 Method 9012B. The samples were prepared on 06/22/2024 and analyzed on 06/23/2024.

Samples EGCMW-06 (460-306246-1)[20X] and DUP-01 (460-306246-4)[20X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Cyanide, Total failed the recovery criteria low for the MS of sample EGCMW-06MS (460-306246-1) in batch

460-981795.

Cyanide, Total failed the recovery criteria high for the MSD of sample EGCMW-06MSD (460-306246-1) in batch 460-981795.

Refer to the QC report for details.

No other difficulties were encountered during the cyanide analysis.

All other quality control parameters were within the acceptance limits.

Sample Summary

Client: GEI Consultants, Inc. Job ID: 460-306246-1
Project/Site: National Grid-Downstate East Garden City

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
460-306246-1	EGCMW-06	Water	06/19/24 10:45	06/19/24 19:50
460-306246-2	EGCMW-07	Water	06/19/24 12:00	06/19/24 19:50
460-306246-3	FB-061924	Water	06/19/24 13:30	06/19/24 19:50
460-306246-4	DUP-01	Water	06/19/24 00:00	06/19/24 19:50

Detection Summary

Client: GEI Consultants, Inc. Job ID: 460-306246-1
Project/Site: National Grid-Downstate East Garden City

Client Sample ID: EGCMW-06 Lab Sample ID: 460-306246-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cyanide, Total	1.5		0.20	0.080	mg/L	20		9012B	Total/NA
Cyanide, Total	2.4		0.20	0.080	mg/L	20		9012B	Dissolved

Client Sample ID: EGCMW-07 Lab Sample ID: 460-306246-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cyanide, Total	0.010		0.010	0.0040	mg/L	1		9012B	Total/NA
Cyanide, Total	0.014		0.010	0.0040	mg/L	1		9012B	Dissolved

Client Sample ID: FB-061924 Lab Sample ID: 460-306246-3

No Detections.

Client Sample ID: DUP-01 Lab Sample ID: 460-306246-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cyanide, Total	0.69		0.20	0.080	mg/L	20		9012B	Total/NA
Cyanide, Total	2.1		0.20	0.080	mg/L	20		9012B	Dissolved

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: GEI Consultants, Inc.
Project/Site: National Grid-Downstate East Garden City

Job ID: 460-306246-1

Client Sample ID: EGCMW-06 — Lab Sample ID: 460-306246-1

CAS No.	Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
57-12-5	Cyanide, Total	1.5		0.20	0.080	mg/L	20		9012B	Total/NA
57-12-5	Cyanide, Total	2.4		0.20	0.080	mg/L	20		9012B	Dissolved

Client Sample ID: EGCMW-07 — Lab Sample ID: 460-306246-2

CAS No.	Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
57-12-5	Cyanide, Total	0.010		0.010	0.0040	mg/L	1		9012B	Total/NA
57-12-5	Cyanide, Total	0.014		0.010	0.0040	mg/L	1		9012B	Dissolved

Client Sample ID: FB-061924 — Lab Sample ID: 460-306246-3

No Detections.

Client Sample ID: DUP-01 — Lab Sample ID: 460-306246-4

CAS No.	Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
57-12-5	Cyanide, Total	0.69		0.20	0.080	mg/L	20		9012B	Total/NA
57-12-5	Cyanide, Total	2.1		0.20	0.080	mg/L	20		9012B	Dissolved

This Detection Summary does not include radiochemical test results.

Method Summary

Client: GEI Consultants, Inc. Job ID: 460-306246-1
Project/Site: National Grid-Downstate East Garden City

Method	Method Description	Protocol	Laboratory
9012B	Cyanide, Total andor Amenable	SW846	EET EDI
9012B	Cyanide, Total and/or Amenable, Distillation	SW846	EET EDI
FILTRATION	Sample Filtration	None	EET EDI

Protocol References:

None = None

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET EDI = Eurofins Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900

Client Sample ID: EGCMW-06 — Lab Sample ID: 460-306246-1

Date Collected: 06/19/24 10:45 — **Matrix: Water**
Date Received: 06/19/24 19:50

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total (SW846 9012B)	1.5		0.20	0.080	mg/L		06/22/24 21:57	06/23/24 17:01	20

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total (SW846 9012B)	2.4		0.20	0.080	mg/L		06/25/24 08:09	06/25/24 14:31	20

Client Sample ID: EGCMW-07 — Lab Sample ID: 460-306246-2

Date Collected: 06/19/24 12:00 — **Matrix: Water**
Date Received: 06/19/24 19:50

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total (SW846 9012B)	0.010		0.010	0.0040	mg/L		06/22/24 21:57	06/23/24 16:46	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total (SW846 9012B)	0.014		0.010	0.0040	mg/L		06/25/24 08:09	06/25/24 14:16	1

Client Sample ID: FB-061924 — Lab Sample ID: 460-306246-3

Date Collected: 06/19/24 13:30 — **Matrix: Water**
Date Received: 06/19/24 19:50

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total (SW846 9012B)	10.0	U	10.0	4.0	mg/L		06/22/24 21:57	06/23/24 16:47	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total (SW846 9012B)	0.010	U	0.010	0.0040	mg/L		06/25/24 08:09	06/25/24 14:17	1

Client Sample ID: DUP-01 — Lab Sample ID: 460-306246-4

Date Collected: 06/19/24 00:00 — **Matrix: Water**
Date Received: 06/19/24 19:50

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total (SW846 9012B)	0.69		0.20	0.080	mg/L		06/22/24 21:57	06/23/24 17:07	20

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total (SW846 9012B)	2.1		0.20	0.080	mg/L		06/25/24 08:09	06/25/24 14:33	20

Method: 9012B - Cyanide, Total andor Amenable

Lab Sample ID: MB 460-981700/13-A
Matrix: Water
Analysis Batch: 981795

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 981700

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.010	U	0.010	0.0040	mg/L		06/22/24 21:57	06/23/24 16:27	1

Lab Sample ID: LCS 460-981700/14-A
Matrix: Water
Analysis Batch: 981795

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 981700

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Cyanide, Total	0.100	0.0960		mg/L		96	85 - 115

Lab Sample ID: MRL 460-981700/12-A
Matrix: Water
Analysis Batch: 981795

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 981700

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Cyanide, Total	0.0100	0.0101		mg/L		101	50 - 150

Lab Sample ID: 460-306246-1 MS
Matrix: Water
Analysis Batch: 981795

Client Sample ID: EGCMW-06
Prep Type: Total/NA
Prep Batch: 981700

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Cyanide, Total	1.5		0.200	1.58	4	mg/L		38	90 - 110

Lab Sample ID: 460-306246-1 MSD
Matrix: Water
Analysis Batch: 981795

Client Sample ID: EGCMW-06
Prep Type: Total/NA
Prep Batch: 981700

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Cyanide, Total	1.5		0.200	2.06	4	mg/L		279	90 - 110	26	35

Lab Sample ID: MB 460-982045/1-A
Matrix: Water
Analysis Batch: 982112

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 982045

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.010	U	0.010	0.0040	mg/L		06/25/24 08:09	06/25/24 14:06	1

Lab Sample ID: LCS 460-982045/2-A
Matrix: Water
Analysis Batch: 982112

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 982045

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Cyanide, Total	0.100	0.107		mg/L		107	85 - 115

Lab Sample ID: MB 460-982057/12-A
Matrix: Water
Analysis Batch: 982112

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 982057

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.010	U	0.010	0.0040	mg/L		06/25/24 09:03	06/25/24 13:25	1

Method: 9012B - Cyanide, Total andor Amenable

Lab Sample ID: MRL 460-982057/11-A
Matrix: Water
Analysis Batch: 982112

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 982057

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits		
Cyanide, Total			0.0100	0.0106		mg/L		106	50 - 150		

Lab Sample ID: MB 460-982040/1-B
Matrix: Water
Analysis Batch: 982112

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 982045

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.010	U	0.010	0.0040	mg/L		06/25/24 08:09	06/25/24 14:07	1

Lab Sample ID: 460-306246-1 MS
Matrix: Water
Analysis Batch: 982112

Client Sample ID: EGCMW-06
Prep Type: Dissolved
Prep Batch: 982045

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Cyanide, Total	2.4		0.200	2.40	4	mg/L		0	90 - 110		

Lab Sample ID: 460-306246-1 MSD
Matrix: Water
Analysis Batch: 982112

Client Sample ID: EGCMW-06
Prep Type: Dissolved
Prep Batch: 982045

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Cyanide, Total	2.4		0.200	2.46	4	mg/L		30	90 - 110	2	35

Qualifiers

General Chemistry

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
U	Indicates analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

General Chemistry

Prep Batch: 981700

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-306246-1	EGCMW-06	Total/NA	Water	9012B	
460-306246-2	EGCMW-07	Total/NA	Water	9012B	
460-306246-3	FB-061924	Total/NA	Water	9012B	
460-306246-4	DUP-01	Total/NA	Water	9012B	
MB 460-981700/13-A	Method Blank	Total/NA	Water	9012B	
LCS 460-981700/14-A	Lab Control Sample	Total/NA	Water	9012B	
MRL 460-981700/12-A	Lab Control Sample	Total/NA	Water	9012B	
460-306246-1 MS	EGCMW-06	Total/NA	Water	9012B	
460-306246-1 MSD	EGCMW-06	Total/NA	Water	9012B	

Analysis Batch: 981795

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-306246-1	EGCMW-06	Total/NA	Water	9012B	981700
460-306246-2	EGCMW-07	Total/NA	Water	9012B	981700
460-306246-3	FB-061924	Total/NA	Water	9012B	981700
460-306246-4	DUP-01	Total/NA	Water	9012B	981700
MB 460-981700/13-A	Method Blank	Total/NA	Water	9012B	981700
LCS 460-981700/14-A	Lab Control Sample	Total/NA	Water	9012B	981700
MRL 460-981700/12-A	Lab Control Sample	Total/NA	Water	9012B	981700
460-306246-1 MS	EGCMW-06	Total/NA	Water	9012B	981700
460-306246-1 MSD	EGCMW-06	Total/NA	Water	9012B	981700

Filtration Batch: 982040

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-306246-1	EGCMW-06	Dissolved	Water	FILTRATION	
460-306246-2	EGCMW-07	Dissolved	Water	FILTRATION	
460-306246-3	FB-061924	Dissolved	Water	FILTRATION	
460-306246-4	DUP-01	Dissolved	Water	FILTRATION	
MB 460-982040/1-B	Method Blank	Dissolved	Water	FILTRATION	
460-306246-1 MS	EGCMW-06	Dissolved	Water	FILTRATION	
460-306246-1 MSD	EGCMW-06	Dissolved	Water	FILTRATION	

Prep Batch: 982045

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-306246-1	EGCMW-06	Dissolved	Water	9012B	982040
460-306246-2	EGCMW-07	Dissolved	Water	9012B	982040
460-306246-3	FB-061924	Dissolved	Water	9012B	982040
460-306246-4	DUP-01	Dissolved	Water	9012B	982040
MB 460-982040/1-B	Method Blank	Dissolved	Water	9012B	982040
MB 460-982045/1-A	Method Blank	Total/NA	Water	9012B	
LCS 460-982045/2-A	Lab Control Sample	Total/NA	Water	9012B	
460-306246-1 MS	EGCMW-06	Dissolved	Water	9012B	982040
460-306246-1 MSD	EGCMW-06	Dissolved	Water	9012B	982040

Prep Batch: 982057

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 460-982057/12-A	Method Blank	Total/NA	Water	9012B	
MRL 460-982057/11-A	Lab Control Sample	Total/NA	Water	9012B	

General Chemistry

Analysis Batch: 982112

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-306246-1	EGCMW-06	Dissolved	Water	9012B	982045
460-306246-2	EGCMW-07	Dissolved	Water	9012B	982045
460-306246-3	FB-061924	Dissolved	Water	9012B	982045
460-306246-4	DUP-01	Dissolved	Water	9012B	982045
MB 460-982040/1-B	Method Blank	Dissolved	Water	9012B	982045
MB 460-982045/1-A	Method Blank	Total/NA	Water	9012B	982045
MB 460-982057/12-A	Method Blank	Total/NA	Water	9012B	982057
LCS 460-982045/2-A	Lab Control Sample	Total/NA	Water	9012B	982045
MRL 460-982057/11-A	Lab Control Sample	Total/NA	Water	9012B	982057
460-306246-1 MS	EGCMW-06	Dissolved	Water	9012B	982045
460-306246-1 MSD	EGCMW-06	Dissolved	Water	9012B	982045

Lab Chronicle

Client: GEI Consultants, Inc. Job ID: 460-306246-1
Project/Site: National Grid-Downstate East Garden City

Client Sample ID: EGCMW-06 Lab Sample ID: 460-306246-1

Date Collected: 06/19/24 10:45 **Matrix: Water**
Date Received: 06/19/24 19:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Filtration	FILTRATION			982040	BJK	EET EDI	06/25/24 07:59
Dissolved	Prep	9012B			982045	BJK	EET EDI	06/25/24 08:09
Dissolved	Analysis	9012B		20	982112	BJK	EET EDI	06/25/24 14:31
Total/NA	Prep	9012B			981700	VBG	EET EDI	06/22/24 21:57
Total/NA	Analysis	9012B		20	981795	VBG	EET EDI	06/23/24 17:01

Client Sample ID: EGCMW-07 Lab Sample ID: 460-306246-2

Date Collected: 06/19/24 12:00 **Matrix: Water**
Date Received: 06/19/24 19:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Filtration	FILTRATION			982040	BJK	EET EDI	06/25/24 07:59
Dissolved	Prep	9012B			982045	BJK	EET EDI	06/25/24 08:09
Dissolved	Analysis	9012B		1	982112	BJK	EET EDI	06/25/24 14:16
Total/NA	Prep	9012B			981700	VBG	EET EDI	06/22/24 21:57
Total/NA	Analysis	9012B		1	981795	VBG	EET EDI	06/23/24 16:46

Client Sample ID: FB-061924 Lab Sample ID: 460-306246-3

Date Collected: 06/19/24 13:30 **Matrix: Water**
Date Received: 06/19/24 19:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Filtration	FILTRATION			982040	BJK	EET EDI	06/25/24 07:59
Dissolved	Prep	9012B			982045	BJK	EET EDI	06/25/24 08:09
Dissolved	Analysis	9012B		1	982112	BJK	EET EDI	06/25/24 14:17
Total/NA	Prep	9012B			981700	VBG	EET EDI	06/22/24 21:57
Total/NA	Analysis	9012B		1	981795	VBG	EET EDI	06/23/24 16:47

Client Sample ID: DUP-01 Lab Sample ID: 460-306246-4

Date Collected: 06/19/24 00:00 **Matrix: Water**
Date Received: 06/19/24 19:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Filtration	FILTRATION			982040	BJK	EET EDI	06/25/24 07:59
Dissolved	Prep	9012B			982045	BJK	EET EDI	06/25/24 08:09
Dissolved	Analysis	9012B		20	982112	BJK	EET EDI	06/25/24 14:33
Total/NA	Prep	9012B			981700	VBG	EET EDI	06/22/24 21:57
Total/NA	Analysis	9012B		20	981795	VBG	EET EDI	06/23/24 17:07

Laboratory References:
EET EDI = Eurofins Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900

Accreditation/Certification Summary

Client: GEI Consultants, Inc. Job ID: 460-306246-1
Project/Site: National Grid-Downstate East Garden City

Laboratory: Eurofins Edison

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
New York	NELAP	11452	04-01-25

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Edison Job No.: 460-306246-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
WTcn6ppm_ICV_01209	06/22/24	06/21/24	0.25N NaOH, Lot C-3294-24	100 mL	WTCNstock2_00035	0.6 mL	Cyanide, Free	6 mg/L
							Cyanide, Total	6 mg/L
.WTCNstock2_00035	08/30/24		RICCA, Lot 1402C59		(Purchased Reagent)		Cyanide, Free	1000 mg/L
							Cyanide, Total	1000 mg/L
WTcn6ppm_ICV_01211	06/26/24	06/25/24	0.25N NaOH, Lot C-3315-24	100 mL	WTCNstock2_00035	0.6 mL	Cyanide, Free	6 mg/L
							Cyanide, Total	6 mg/L
.WTCNstock2_00035	08/30/24		RICCA, Lot 1402C59		(Purchased Reagent)		Cyanide, Free	1000 mg/L
							Cyanide, Total	1000 mg/L
WTcn6ppm_Pri_01233	06/22/24	06/21/24	0.25N NaOH, Lot C-3294-24	100 mL	WTcnSP1_00040	0.6 mL	Cyanide, Free	6 mg/L
							Cyanide, Non-amenable	6 mg/L
							Cyanide, Total	6 mg/L
.WTcnSP1_00040	09/30/24		RICCA, Lot 1404G63		(Purchased Reagent)		Cyanide, Free	1000 mg/L
							Cyanide, Non-amenable	1000 mg/L
							Cyanide, Total	1000 mg/L
WTcn6ppm_Pri_01235	06/26/24	06/25/24	0.25N NaOH, Lot C-3315-24	100 mL	WTcnSP1_00040	0.6 mL	Cyanide, Free	6 mg/L
							Cyanide, Non-amenable	6 mg/L
							Cyanide, Total	6 mg/L
.WTcnSP1_00040	09/30/24		RICCA, Lot 1404G63		(Purchased Reagent)		Cyanide, Free	1000 mg/L
							Cyanide, Non-amenable	1000 mg/L
							Cyanide, Total	1000 mg/L
WTcnCmplex-IM_01266	06/22/24	06/21/24	0.25N NaOH, Lot C-3294-24	100 mL	WTCNstock_00020	0.6 mL	Cyanide, Non-amenable	6 mg/L
							Cyanide, Total	6 mg/L
.WTCNstock_00020	09/26/24		ERA, Lot 510922m		(Purchased Reagent)		Cyanide, Non-amenable	1000 mg/L
							Cyanide, Total	1000 mg/L
WTcnCmplex-IM_01269	06/26/24	06/25/24	0.25N NaOH, Lot C-3315-24	100 mL	WTCNstock_00020	0.6 mL	Cyanide, Non-amenable	6 mg/L
							Cyanide, Total	6 mg/L
.WTCNstock_00020	09/26/24		ERA, Lot 510922m		(Purchased Reagent)		Cyanide, Non-amenable	1000 mg/L
							Cyanide, Total	1000 mg/L

Reagent

WTcnSP1_00040

RICCA CHEMICAL COMPANY®

448 West Fork Dr
Arlington, TX 76012
http://www.riccachemical.com
1-888-GO-RICCA
customerservice@riccachemical.com

Certificate of Analysis

Cyanide Standard, 1000 ppm CN^-

Lot Number: 1404G63 **Product Number:** 2543

Manufacture Date: APR 12, 2024
Expiration Date: SEP 2024

This standard is prepared using accurate volumetric techniques from material that has been assayed against Silver Nitrate solution certified traceable to NIST Standard Reference Material 999. The certified value reported is the prepared value based upon the method of preparation of the material. The uncertainty in the prepared value is the combined uncertainty based on the stability of the assayed Potassium Cyanide, and the uncertainty in the mass and volume measurements.
Use 0.16% (w/v) (0.04 N) Sodium Hydroxide or 0.225 % (w/v) (0.04 N) Potassium Hydroxide to make dilutions of this standard. Restandardize weekly if extreme accuracy is required.

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Potassium Cyanide	151-50-8	ACS
Sodium Hydroxide	1310-73-2	Reagent

Test	Specification	Result
Appearance	Colorless liquid	Passed
Cyanide (CN^-)	995-1005 ppm	1000 ppm

Specification	Reference
Stock Standard Cyanide Solution	APHA (4500-CN- F)
Stock Cyanide Solution	APHA (4500-CN- E)
Stock Cyanide Solution	APHA (4500-CN- K)
Stock Cyanide Solution	APHA (4500-CN- H)
Cyanide Reference Solution (1000 mg/L)	EPA (SW-846) (7.3.3.2)
Cyanide Calibration Stock Solution (1,000 mg/L CN-)	EPA (SW-846) (9213)
Stock Cyanide Solution	EPA (335.3)
Stock Cyanide Solution	EPA (335.2)
Cyanide Solution Stock	ASTM (D 4282)
Simple Cyanide Solution, Stock (1.0 g/L CN)	ASTM (D 4374)

Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

Part Number	Size / Package Type	Shelf Life (Unopened Container)
2543-4	120 mL amber poly	6 months

Recommended Storage: 2°C - 8°C (36°F - 46°F)

Heidi J Green (04/12/2024)

Operations Manager

This document is designed to comply with ISO Guide 31 "Reference Materials -- Contents of Certificates and Labels."

Reagent

WTCNstock_00020

ERA
A Waters Company

Certified Reference Material

▪ Certificate of Analysis ▪

Product:	1000 mg/L Complex Cyanide
Catalog Number:	049-125mL, 998-500mL
Lot No.	510922m
Starting Material:	Potassium Ferrocyanide 3-Hydrate ($K_4Fe(CN)_6$-$3H_2O$)
Matrix:	18 megohm deionized water and 0.5% (v/v) NaOH
Density:	1.0086 ± 0.0003 g/mL · 20.4 °C and 768 mm Hg
Verification Method:	Spectrophotometry
Certificate Issue Date:	November 9, 2022
Expiration Date:	September 26, 2024
Revision Number:	Original

rec'd 2/3/23

CERTIFICATION

Parameter	Certified Value[1]	Uncertainty[2]	NIST Traceability	
	mg/L	%	SRM Number[3]	Recovery %
Complex Cyanide	1000	1.72	-	-

16341 Table Mountain Pkwy ▪ Golden, CO 80403 ▪ 800.372.0122 ▪ 303.431.8454 ▪ fax 303.421.0159 ▪ www.eraqc.com

▪ Certificate of Analysis ▪

1. The **Certified Value** is the actual gravimetric/volumetric "made-to" concentration confirmed by ERA analytical verification. The certified value is monitored and the purchasers will be notified of any significant changes resulting in recertification or withdrawal of this certified reference material during the period of validity of this certificate.

2. The **Uncertainty** represents an expanded uncertainty and approximates a 95% confidence interval. The uncertainty is based on the characterization, homogeneity and stability characteristics of the product, multiplied by a coverage factor (k=2). The uncertainty applies to the product as supplied and does not take into account any required or optional dilution and/or preparations the laboratory may perform while using this product. The formula used to calculate the expanded uncertainty is:
$U_{expanded} = k * SQRT((U_{char}^2) + (U_{homogen}^2) + (U_{LTS}^2) + (U_{STS}^2) + (U_{RSS}^2))$

Where:

$U_{expanded}$ = Expanded uncertainty.
k = Coverage factor.
U_{char} = Combined standard uncertainty of the manufacturing and/or analytical verification assessment.
$U_{homogen}$ = Standard uncertainty of the homogeneity assessment.
U_{LTS} = Standard uncertainty associated with long-term stability.
U_{STS} = Standard uncertainty associated with short-term (transport) stability.
U_{RSS} = Standard uncertainty associated with repeated sampling of the product (where permitted by product use instructions).

3. Where NIST Standard Reference Materials (SRMs) are available, each analyte has been analytically traced to the NIST SRM listed. **Analytical Traceability Recovery (%)** = [(% recovery ERA certified reference material)/(% recovery NIST SRM)]*100
The traceability data shown were compiled by analyzing this ERA certified reference material and/or it's associated stock solution(s) against the applicable NIST SRMs.

4. **Metrological Traceability.** This certified reference material is metrologically traceable to NIST mass reference materials through an unbroken chain of comparisons.

5. **Storage:** 20-25°C

6. **Intended Use:** This standard is intended to be used to calibrate your analytical process and/or as a quality control check of the entire process for the analytes/matrix included in the standard.

7. **Minimum Sample Size:** ERA suggests that when subsampling this product prior to analysis, you use a minimum sample size of at least 1 mL. Using a smaller sample size may invalidate the assigned value and/or uncertainty shown.

8. **Repeat Sampling:** Repeated Sampling of this product is permitted, provided minimum sample sizes and storage instructions are adhered to.

9. **Safety:** ERA products may be hazardous and are intended for use by professional laboratory personnel trained in the competent handling of such materials. Responsibility for the safe use of these products rests entirely with the buyer and/or user. Safety Data Sheets (SDS) for all ERA products are available through our website: www.eraqc.com

If you have any questions or need technical assistance, please call ERA technical assistance at 1-800-372-0122 or send an email to info@eraqc.com.

Certifying Officer
Brian Miller

Brian Miller

Quality Officer
Matthew Seebeck

ISO 17034:2016
ACCREDITED
Reference Material Producer
CERT #1539.03

ISO/IEC 17025:2017
ACCREDITED
Chemical Testing Laboratory
CERT #1539.02

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Reagent

WTCNstock2_00035

RICCA CHEMICAL COMPANY®

448 West Fork Dr
Arlington, TX 76012
http://www.riccachemical.com
1-888-GO-RICCA
customerservice@riccachemical.com

Certificate of Analysis

Cyanide Standard, 1000 ppm CN^-

Lot Number: 1402C59 **Product Number:** 2543

Manufacture Date: FEB 16, 2024
Expiration Date: AUG 2024

This standard is prepared using accurate volumetric techniques from material that has been assayed against Silver Nitrate solution certified traceable to NIST Standard Reference Material 999. The certified value reported is the prepared value based upon the method of preparation of the material. The uncertainty in the prepared value is the combined uncertainty based on the stability of the assayed Potassium Cyanide, and the uncertainty in the mass and volume measurements.
Use 0.16% (w/v) (0.04 N) Sodium Hydroxide or 0.225 % (w/v) (0.04 N) Potassium Hydroxide to make dilutions of this standard. Restandardize weekly if extreme accuracy is required.

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Sodium Hydroxide	1310-73-2	Reagent
Potassium Cyanide	151-50-8	ACS

Test	Specification	Result
Appearance	Colorless liquid	Passed
Cyanide (CN^-)	995-1005 ppm	1000 ppm

Specification	Reference
Stock Standard Cyanide Solution	APHA (4500-CN- F)
Stock Cyanide Solution	APHA (4500-CN- E)
Stock Cyanide Solution	APHA (4500-CN- K)
Stock Cyanide Solution	APHA (4500-CN- H)
Cyanide Reference Solution (1000 mg/L)	EPA (SW-846) (7.3.3.2)
Cyanide Calibration Stock Solution (1,000 mg/L CN-)	EPA (SW-846) (9213)
Stock Cyanide Solution	EPA (335.3)
Stock Cyanide Solution	EPA (335.2)
Cyanide Solution Stock	ASTM (D 4282)
Simple Cyanide Solution, Stock (1.0 g/L CN)	ASTM (D 4374)

Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

Part Number	Size / Package Type	Shelf Life (Unopened Container)
2543-4	120 mL amber poly	6 months

Recommended Storage: 2°C - 8°C (36°F - 46°F)

Heidi J Green (02/16/2024)

Operations Manager

This document is designed to comply with ISO Guide 31 "Reference Materials -- Contents of Certificates and Labels."

GENERAL CHEMISTRY

COVER PAGE
GENERAL CHEMISTRY

Lab Name: Eurofins Edison Job Number: 460-306246-1

SDG No.:

Project: National Grid-Downstate East Garden City

Client Sample ID	Lab Sample ID
EGCMW-06	460-306246-1
EGCMW-07	460-306246-2
FB-061924	460-306246-3
DUP-01	460-306246-4

Comments:

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: EGCMW-06 | Lab Sample ID: 460-306246-1

Lab Name: Eurofins Edison | Job No.: 460-306246-1

SDG ID.:

Matrix: Water | Date Sampled: 06/19/2024 10:45

Reporting Basis: WET | Date Received: 06/19/2024 19:50

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
57-12-5	Cyanide, Total	1.5	0.20	0.080	mg/L			20	9012B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY - DISSOLVED

Client Sample ID: EGCMW-06 Lab Sample ID: 460-306246-1

Lab Name: Eurofins Edison Job No.: 460-306246-1

SDG ID.:

Matrix: Water Date Sampled: 06/19/2024 10:45

Reporting Basis: WET Date Received: 06/19/2024 19:50

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
57-12-5	Cyanide, Total	2.4	0.20	0.080	mg/L			20	9012B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: EGCMW-07 | Lab Sample ID: 460-306246-2

Lab Name: Eurofins Edison | Job No.: 460-306246-1

SDG ID.:

Matrix: Water | Date Sampled: 06/19/2024 12:00

Reporting Basis: WET | Date Received: 06/19/2024 19:50

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
57-12-5	Cyanide, Total	0.010	0.010	0.0040	mg/L			1	9012B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY - DISSOLVED

Client Sample ID: EGCMW-07 | Lab Sample ID: 460-306246-2

Lab Name: Eurofins Edison | Job No.: 460-306246-1

SDG ID.:

Matrix: Water | Date Sampled: 06/19/2024 12:00

Reporting Basis: WET | Date Received: 06/19/2024 19:50

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
57-12-5	Cyanide, Total	0.014	0.010	0.0040	mg/L			1	9012B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: FB-061924 | Lab Sample ID: 460-306246-3

Lab Name: Eurofins Edison | Job No.: 460-306246-1

SDG ID.:

Matrix: Water | Date Sampled: 06/19/2024 13:30

Reporting Basis: WET | Date Received: 06/19/2024 19:50

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
57-12-5	Cyanide, Total	10.0	10.0	4.0	mg/L	U		1	9012B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY - DISSOLVED

Client Sample ID: FB-061924 Lab Sample ID: 460-306246-3

Lab Name: Eurofins Edison Job No.: 460-306246-1

SDG ID.:

Matrix: Water Date Sampled: 06/19/2024 13:30

Reporting Basis: WET Date Received: 06/19/2024 19:50

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
57-12-5	Cyanide, Total	0.010	0.010	0.0040	mg/L	U		1	9012B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: DUP-01 | Lab Sample ID: 460-306246-4

Lab Name: Eurofins Edison | Job No.: 460-306246-1

SDG ID.:

Matrix: Water | Date Sampled: 06/19/2024 00:00

Reporting Basis: WET | Date Received: 06/19/2024 19:50

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
57-12-5	Cyanide, Total	0.69	0.20	0.080	mg/L			20	9012B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY - DISSOLVED

Client Sample ID: DUP-01 Lab Sample ID: 460-306246-4

Lab Name: Eurofins Edison Job No.: 460-306246-1

SDG ID.:

Matrix: Water Date Sampled: 06/19/2024 00:00

Reporting Basis: WET Date Received: 06/19/2024 19:50

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
57-12-5	Cyanide, Total	2.1	0.20	0.080	mg/L			20	9012B

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: Eurofins Edison Job No.: 460-306246-1

SDG No.:

Analyst: VBG Batch Start Date: 06/23/2024

Reporting Units: mg/L Analytical Batch No.: 981795

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
8	ICV	14:11	Cyanide, Total	0.202	0.200	101	85-115		WTcn6ppm_ICV_01209
9	ICB	14:12	Cyanide, Total	0.010				U	
131	CCV	16:24	Cyanide, Total	0.206	0.200	103	85-115		WTcn6ppm_Pri_01233
132	CCB	16:27	Cyanide, Total	0.010				U	
143	CCV	16:36	Cyanide, Total	0.206	0.200	103	85-115		WTcn6ppm_Pri_01233
144	CCB	16:39	Cyanide, Total	0.010				U	
155	CCV	16:49	Cyanide, Total	0.207	0.200	104	85-115		WTcn6ppm_Pri_01233
156	CCB	16:52	Cyanide, Total	0.010				U	
167	CCV	17:03	Cyanide, Total	0.206	0.200	103	85-115		WTcn6ppm_Pri_01233
168	CCB	17:06	Cyanide, Total	0.010				U	
170	CCV	17:08	Cyanide, Total	0.206	0.200	103	85-115		WTcn6ppm_Pri_01233
171	CCB	17:11	Cyanide, Total	0.010				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: Eurofins Edison Job No.: 460-306246-1

SDG No.:

Analyst: BJK Batch Start Date: 06/25/2024

Reporting Units: mg/L Analytical Batch No.: 982112

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
8	ICV	13:17	Cyanide, Total	0.199	0.200	100	85-115		WTcn6ppm_ICV_01211
9	ICB	13:17	Cyanide, Total	0.010				U	
11	CCV	13:21	Cyanide, Total	0.212	0.200	106	85-115		WTcn6ppm_Pri_01235
12	CCB	13:24	Cyanide, Total	0.010				U	
23	CCV	13:34	Cyanide, Total	0.212	0.200	106	85-115		WTcn6ppm_Pri_01235
24	CCB	13:36	Cyanide, Total	0.010				U	
47	CCV	13:58	Cyanide, Total	0.212	0.200	106	85-115		WTcn6ppm_Pri_01235
48	CCB	14:01	Cyanide, Total	0.010				U	
59	CCV	14:12	Cyanide, Total	0.212	0.200	106	85-115		WTcn6ppm_Pri_01235
60	CCB	14:15	Cyanide, Total	0.010				U	
71	CCV	14:24	Cyanide, Total	0.211	0.200	106	85-115		WTcn6ppm_Pri_01235
72	CCB	14:27	Cyanide, Total	0.010				U	
80	CCV	14:36	Cyanide, Total	0.212	0.200	106	85-115		WTcn6ppm_Pri_01235
81	CCB	14:39	Cyanide, Total	0.010				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: Eurofins Edison Job No.: 460-306246-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID: 981795	Date: 06/23/2024 16:27	Prep Batch: 981700	Date: 06/22/2024 21:57				
9012B	MB 460-981700/13-A	Cyanide, Total	0.010	U	mg/L	0.010	1
Batch ID: 982112	Date: 06/25/2024 13:25	Prep Batch: 982057	Date: 06/25/2024 09:03				
9012B	MB 460-982057/12-A	Cyanide, Total	0.010	U	mg/L	0.010	1
Batch ID: 982112	Date: 06/25/2024 14:06	Prep Batch: 982045	Date: 06/25/2024 08:09				
9012B	MB 460-982045/1-A	Cyanide, Total	0.010	U	mg/L	0.010	1
Batch ID: 982112	Date: 06/25/2024 14:07	Prep Batch: 982045	Date: 06/25/2024 08:09				
9012B	MB 460-982040/1-B	Cyanide, Total	0.010	U	mg/L	0.010	1

5-IN
MATRIX SPIKE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: Eurofins Edison Job No.: 460-306246-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 981795	Date: 06/23/2024 17:01		Prep Batch: 981700		Date: 06/22/2024 21:57						
9012B	460-306246-1	Cyanide, Total	1.5		mg/L						
9012B	460-306246-1 MS	Cyanide, Total	1.58		mg/L	0.200	38	90-110			4
Batch ID: 982112	Date: 06/25/2024 14:32		Prep Batch: 982045		Date: 06/25/2024 08:09						
9012B	460-306246-1	Cyanide, Total	2.4		mg/L						
9012B	460-306246-1 MS	Cyanide, Total	2.40		mg/L	0.200	0	90-110			4

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

5-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: Eurofins Edison Job No.: 460-306246-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 981795	Date: 06/23/2024 17:02		Prep Batch: 981700			Date: 06/22/2024 21:57					
9012B	460-306246-1 MSD	Cyanide, Total	2.06		mg/L	0.200	279	90-110	26	35	4
Batch ID: 982112	Date: 06/25/2024 14:33		Prep Batch: 982045			Date: 06/25/2024 08:09					
9012B	460-306246-1 MSD	Cyanide, Total	2.46		mg/L	0.200	30	90-110	2	35	4

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

7A-IN
LAB CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: Eurofins Edison Job No.: 460-306246-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 981795	Date: 06/23/2024 16:28		Prep Batch: 981700			Date: 06/22/2024 21:57					
						LCS Source: WTcnCmplex-IM_01266					
9012B	LCS 460-981700/14-A	Cyanide, Total	0.0960		mg/L	0.100	96	85-115			
Batch ID: 982112	Date: 06/25/2024 14:07		Prep Batch: 982045			Date: 06/25/2024 08:09					
						LCS Source: WTcnCmplex-IM_01269					
9012B	LCS 460-982045/2-A	Cyanide, Total	0.107		mg/L	0.100	107	85-115			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

7A-IN
METHOD REPORTING LIMIT CHECK
GENERAL CHEMISTRY

Lab Name: Eurofins Edison Job No.: 460-306246-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 981795	Date: 06/23/2024 14:14		Prep Batch: 981700			Date: 06/22/2024 21:57					
						LCS Source: WTcn6ppm_Pri_01233					
9012B	MRL 460-981700/12-A	Cyanide, Total	0.0101		mg/L	0.0100	101	50-150			
Batch ID: 982112	Date: 06/25/2024 13:20		Prep Batch: 982057			Date: 06/25/2024 09:03					
						LCS Source: WTcn6ppm_Pri_01235					
9012B	MRL 460-982057/11-A	Cyanide, Total	0.0106		mg/L	0.0100	106	50-150			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

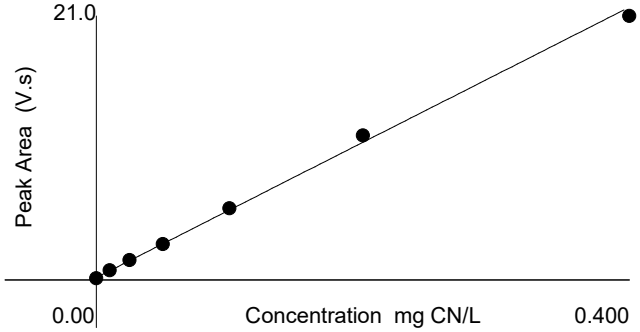
Original Run Filename: OM_6-25-2024_01-09-51PM.OMN Created: 6/25/2024 1:09:51 PM
Original Run Author's Signature: [EdiLachat]
Current Run Filename: OM_6-25-2024_01-09-51PM.OMN Last Modified: 6/25/2024 2:41:40 PM
Current Run Author's Signature: [EdiLachat]
Description: Default New Run

Sample	Cup No.	Channel 1 Cyanide		Detection Time
		Conc. (mg CN/L)	Area (V.s)	
ic 460-982057/1-a	1	0.400	21.0	6/25/2024@1:10:53 PM
ic 460-982057/2-a	2	0.200	11.5	6/25/2024@1:11:46 PM
ic 460-982057/3-a	3	0.100	5.70	6/25/2024@1:12:39 PM
ic 460-982057/4-a	4	0.0500	2.84	6/25/2024@1:13:32 PM
ic 460-982057/5-a	5	0.0250	1.58	6/25/2024@1:14:25 PM
ic 460-982057/6-a	6	0.0100	0.760	6/25/2024@1:15:18 PM
ic 460-982057/7-a	7	0.00	0.122	6/25/2024@1:16:11 PM

Table : 1 (Cyanide)

	Known Conc. (mg CN/L)	Rep.	Peak Area (V.s)	Peak Height (V)	% RSD	% Residual	Det. Conc (mg CN/L)	Detection Date	Detection Time
1	0.400	1	21.0	1.28	0.0	3.2	0.386	6/25/2024	1:10:53 PM
2	0.200	1	11.5	0.713	0.0	-4.9	0.210	6/25/2024	1:11:46 PM
3	0.100	1	5.70	0.357	0.0	-2.3	0.102	6/25/2024	1:12:39 PM
4	0.0500	1	2.84	0.177	0.0	1.4	0.0492	6/25/2024	1:13:32 PM
5	0.0250	1	1.58	0.0982	0.0	-3.1	0.0259	6/25/2024	1:14:25 PM
6	0.0100	1	0.760	0.0470	0.0	-4.5	0.0106	6/25/2024	1:15:18 PM
7	0.00	1	0.122	7.49e-3			-1.18e-3	6/25/2024	1:16:11 PM

Figure : 1 (Cyanide)



Area = 53.9 * Conc + 0.188
Conc = 0.0185 * Area - 3.44e-3
Correlation Coefficient (r) = 0.99979

Weighting : 1/x

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins Edison Job Number: 460-306246-1

SDG Number:

Matrix: Water Instrument ID: Lachat3

Method: 9012B MDL Date: 04/20/2018 11:15

Prep Method: 9012B

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Cyanide, Total		0.01	0.004

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins Edison Job Number: 460-306246-1

SDG Number:

Matrix: Water Instrument ID: Lachat3

Method: 9012B XMDL Date: 04/20/2018 11:15

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Cyanide, Total		0.01	0.004

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY - DISSOLVED

Lab Name: Eurofins Edison Job Number: 460-306246-1

SDG Number:

Matrix: Water Instrument ID: Lachat3

Method: 9012B MDL Date: 04/20/2018 11:15

Prep Method: 9012B

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Cyanide, Total		0.01	0.004

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY - DISSOLVED

Lab Name: Eurofins Edison Job Number: 460-306246-1

SDG Number:

Matrix: Water Instrument ID: Lachat3

Method: 9012B XMDL Date: 04/20/2018 11:15

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Cyanide, Total		0.01	0.004

12-IN
PREPARATION LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Edison Job No.: 460-306246-1

SDG No.:

Prep Method: 9012B

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MRL 460-981700/12-A	06/22/2024 21:57	981700		6.0	6.0
MB 460-981700/13-A	06/22/2024 21:57	981700		6.0	6.0
LCS 460-981700/14-A	06/22/2024 21:57	981700		6.0	6.0
460-306246-1	06/22/2024 21:57	981700		6.0	6.0
460-306246-1 MS	06/22/2024 21:57	981700		6.0	6.0
460-306246-1 MSD	06/22/2024 21:57	981700		6.0	6.0
460-306246-2	06/22/2024 21:57	981700		6.0	6.0
460-306246-3	06/22/2024 21:57	981700	6.0		6.0
460-306246-4	06/22/2024 21:57	981700		6.0	6.0

12-IN
PREPARATION LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Edison Job No.: 460-306246-1

SDG No.:

Prep Method: 9012B

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 460-982045/1-A	06/25/2024 08:09	982045		6.0	6.0
LCS 460-982045/2-A	06/25/2024 08:09	982045		6.0	6.0
MB 460-982040/1-B	06/25/2024 08:09	982045		6.0	6.0
460-306246-1	06/25/2024 08:09	982045		6.0	6.0
460-306246-1 MS	06/25/2024 08:09	982045		6.0	6.0
460-306246-1 MSD	06/25/2024 08:09	982045		6.0	6.0
460-306246-2	06/25/2024 08:09	982045		6.0	6.0
460-306246-3	06/25/2024 08:09	982045		6.0	6.0
460-306246-4	06/25/2024 08:09	982045		6.0	6.0

12-IN
PREPARATION LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Edison Job No.: 460-306246-1

SDG No.:

Prep Method: 9012B

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MRL 460-982057/11-A	06/25/2024 09:03	982057		6.0	6.0
MB 460-982057/12-A	06/25/2024 09:03	982057		6.0	6.0

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Edison Job No.: 460-306246-1

SDG No.:

Instrument ID: Lachat3 Method: 9012B

Start Date: 06/23/2024 14:05 End Date: 06/23/2024 17:11

Lab Sample ID	D / F	Type	Time	Analytes																			
				CN																			
IC 460-981478/1-A			14:05	X																			
IC 460-981478/2-A			14:05	X																			
IC 460-981478/3-A			14:06	X																			
IC 460-981478/4-A			14:07	X																			
IC 460-981478/5-A			14:08	X																			
IC 460-981478/6-A			14:09	X																			
IC 460-981478/7-A			14:10	X																			
ICV 460-981700/8-A	1		14:11	X																			
ICB 460-981795/9	1		14:12	X																			
MRL 460-981700/12-A	1	T	14:14	X																			
CCV 460-981700/9-A			14:15																				
CCB 460-981795/12			14:18																				
ZZZZZZ			14:19																				
ZZZZZZ			14:20																				
ZZZZZZ			14:21																				
ZZZZZZ			14:22																				
ZZZZZZ			14:23																				
ZZZZZZ			14:23																				
ZZZZZZ			14:24																				
ZZZZZZ			14:25																				
ZZZZZZ			14:26																				
ZZZZZZ			14:27																				
CCV 460-981700/9-A			14:28																				
CCB 460-981795/24			14:31																				
ZZZZZZ			14:32																				
ZZZZZZ			14:32																				
ZZZZZZ			14:33																				
ZZZZZZ			14:34																				
ZZZZZZ			14:35																				
ZZZZZZ			14:36																				
ZZZZZZ			14:37																				
ZZZZZZ			14:38																				
ZZZZZZ			14:38																				
ZZZZZZ			14:39																				
CCV 460-981700/9-A			14:40																				
CCB 460-981795/36			14:43																				
ZZZZZZ			14:44																				
ZZZZZZ			14:45																				
ZZZZZZ			14:46																				
ZZZZZZ			14:47																				
ZZZZZZ			14:48																				

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Edison Job No.: 460-306246-1

SDG No.:

Instrument ID: Lachat3 Method: 9012B

Start Date: 06/23/2024 14:05 End Date: 06/23/2024 17:11

Lab Sample ID	D / F	Type	Time	Analytes																			
				CN																			
ZZZZZZ			14:48																				
ZZZZZZ			14:49																				
ZZZZZZ			14:50																				
ZZZZZZ			14:51																				
ZZZZZZ			14:52																				
CCV 460-981700/9-A			14:53																				
CCB 460-981795/48			14:56																				
ZZZZZZ			14:56																				
ZZZZZZ			14:57																				
ZZZZZZ			14:58																				
ZZZZZZ			14:59																				
ZZZZZZ			15:00																				
ZZZZZZ			15:01																				
ZZZZZZ			15:02																				
ZZZZZZ			15:03																				
ZZZZZZ			15:03																				
ZZZZZZ			15:04																				
CCV 460-981700/9-A			15:05																				
CCB 460-981795/60			15:08																				
ZZZZZZ			15:09																				
ZZZZZZ			15:12																				
ZZZZZZ			15:13																				
ZZZZZZ			15:14																				
ZZZZZZ			15:14																				
ZZZZZZ			15:15																				
ZZZZZZ			15:16																				
ZZZZZZ			15:17																				
ZZZZZZ			15:18																				
ZZZZZZ			15:19																				
CCV 460-981700/9-A			15:20																				
CCB 460-981795/72			15:23																				
ZZZZZZ			15:23																				
ZZZZZZ			15:24																				
ZZZZZZ			15:25																				
ZZZZZZ			15:26																				
ZZZZZZ			15:27																				
ZZZZZZ			15:29																				
ZZZZZZ			15:30																				
ZZZZZZ			15:31																				
ZZZZZZ			15:32																				
ZZZZZZ			15:33																				

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Edison Job No.: 460-306246-1

SDG No.:

Instrument ID: Lachat3 Method: 9012B

Start Date: 06/23/2024 14:05 End Date: 06/23/2024 17:11

Lab Sample ID	D / F	Type	Time	Analytes																			
				CN																			
CCV 460-981700/9-A			15:34																				
CCB 460-981795/84			15:37																				
ZZZZZZ			15:37																				
ZZZZZZ			15:38																				
ZZZZZZ			15:39																				
ZZZZZZ			15:40																				
ZZZZZZ			15:41																				
ZZZZZZ			15:42																				
ZZZZZZ			15:43																				
ZZZZZZ			15:44																				
ZZZZZZ			15:44																				
ZZZZZZ			15:45																				
CCV 460-981700/9-A			15:46																				
CCB 460-981795/96			15:49																				
ZZZZZZ			15:50																				
ZZZZZZ			15:51																				
ZZZZZZ			15:52																				
ZZZZZZ			15:53																				
ZZZZZZ			15:53																				
ZZZZZZ			15:54																				
ZZZZZZ			15:55																				
ZZZZZZ			15:56																				
ZZZZZZ			15:57																				
ZZZZZZ			15:58																				
CCV 460-981700/9-A			15:59																				
CCB 460-981795/108			16:02																				
ZZZZZZ			16:02																				
ZZZZZZ			16:03																				
ZZZZZZ			16:04																				
ZZZZZZ			16:05																				
ZZZZZZ			16:06																				
ZZZZZZ			16:07																				
ZZZZZZ			16:08																				
ZZZZZZ			16:09																				
ZZZZZZ			16:09																				
ZZZZZZ			16:10																				
CCV 460-981700/9-A			16:11																				
CCB 460-981795/120			16:14																				
ZZZZZZ			16:15																				
ZZZZZZ			16:16																				
ZZZZZZ			16:17																				

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Edison Job No.: 460-306246-1

SDG No.:

Instrument ID: Lachat3 Method: 9012B

Start Date: 06/23/2024 14:05 End Date: 06/23/2024 17:11

Lab Sample ID	D/F	Type	Time	Analytes																			
				CN																			
ZZZZZZ			16:18																				
ZZZZZZ			16:18																				
ZZZZZZ			16:19																				
ZZZZZZ			16:20																				
ZZZZZZ			16:21																				
ZZZZZZ			16:22																				
ZZZZZZ			16:23																				
CCV 460-981700/9-A	1		16:24	X																			
CCB 460-981795/132	1		16:27	X																			
MB 460-981700/13-A	1	T	16:27	X																			
LCS 460-981700/14-A	1	T	16:28	X																			
ZZZZZZ			16:29																				
ZZZZZZ			16:30																				
ZZZZZZ			16:31																				
ZZZZZZ			16:32																				
ZZZZZZ			16:33																				
ZZZZZZ			16:34																				
ZZZZZZ			16:34																				
ZZZZZZ			16:35																				
CCV 460-981700/9-A	1		16:36	X																			
CCB 460-981795/144	1		16:39	X																			
ZZZZZZ			16:40																				
ZZZZZZ			16:41																				
ZZZZZZ			16:42																				
ZZZZZZ			16:43																				
ZZZZZZ			16:43																				
ZZZZZZ			16:44																				
ZZZZZZ			16:45																				
460-306246-2	1	T	16:46	X																			
460-306246-3	1	T	16:47	X																			
ZZZZZZ			16:48																				
CCV 460-981700/9-A	1		16:49	X																			
CCB 460-981795/156	1		16:52	X																			
ZZZZZZ			16:52																				
ZZZZZZ			16:53																				
ZZZZZZ			16:54																				
ZZZZZZ			16:55																				
ZZZZZZ			16:56																				
ZZZZZZ			16:59																				
ZZZZZZ			17:00																				
460-306246-1	20	T	17:01	X																			

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Edison Job No.: 460-306246-1

SDG No.:

Instrument ID: Lachat3 Method: 9012B

Start Date: 06/23/2024 14:05 End Date: 06/23/2024 17:11

Lab Sample ID	D / F	Type	Time	Analytes																			
				CN																			
460-306246-1 MS	20	T	17:01	X																			
460-306246-1 MSD	20	T	17:02	X																			
CCV 460-981700/9-A	1		17:03	X																			
CCB 460-981795/168	1		17:06	X																			
460-306246-4	20	T	17:07	X																			
CCV 460-981700/9-A	1		17:08	X																			
CCB 460-981795/171	1		17:11	X																			

Prep Types

T = Total/NA

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Edison Job No.: 460-306246-1

SDG No.:

Instrument ID: Lachat3 Method: 9012B

Start Date: 06/25/2024 13:10 End Date: 06/25/2024 14:39

Lab Sample ID	D / F	Type	Time	Analytes																			
				CN																			
IC 460-982057/1-A			13:10	X																			
IC 460-982057/2-A			13:11	X																			
IC 460-982057/3-A			13:12	X																			
IC 460-982057/4-A			13:13	X																			
IC 460-982057/5-A			13:14	X																			
IC 460-982057/6-A			13:15	X																			
IC 460-982057/7-A			13:16	X																			
ICV 460-982057/8-A	1		13:17	X																			
ICB 460-982112/9	1		13:17	X																			
MRL 460-982057/11-A	1	T	13:20	X																			
CCV 460-982057/9-A	1		13:21	X																			
CCB 460-982112/12	1		13:24	X																			
MB 460-982057/12-A	1	T	13:25	X																			
ZZZZZZ			13:26																				
ZZZZZZ			13:27																				
ZZZZZZ			13:27																				
ZZZZZZ			13:28																				
ZZZZZZ			13:29																				
ZZZZZZ			13:30																				
ZZZZZZ			13:31																				
ZZZZZZ			13:32																				
ZZZZZZ			13:33																				
CCV 460-982057/9-A	1		13:34	X																			
CCB 460-982112/24	1		13:36	X																			
ZZZZZZ			13:37																				
ZZZZZZ			13:38																				
ZZZZZZ			13:39																				
ZZZZZZ			13:40																				
ZZZZZZ			13:41																				
ZZZZZZ			13:42																				
ZZZZZZ			13:42																				
ZZZZZZ			13:43																				
ZZZZZZ			13:44																				
ZZZZZZ			13:45																				
CCV 460-982057/9-A			13:46																				
CCB 460-982112/36			13:49																				
ZZZZZZ			13:50																				
ZZZZZZ			13:51																				
ZZZZZZ			13:51																				
ZZZZZZ			13:52																				
ZZZZZZ			13:53																				

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Edison Job No.: 460-306246-1

SDG No.:

Instrument ID: Lachat3 Method: 9012B

Start Date: 06/25/2024 13:10 End Date: 06/25/2024 14:39

Lab Sample ID	D / F	Type	Time	Analytes																			
				CN																			
ZZZZZZ			13:54																				
ZZZZZZ			13:55																				
ZZZZZZ			13:56																				
ZZZZZZ			13:57																				
ZZZZZZ			13:58																				
CCV 460-982057/9-A	1		13:58	X																			
CCB 460-982112/48	1		14:01	X																			
ZZZZZZ			14:02																				
ZZZZZZ			14:03																				
ZZZZZZ			14:04																				
ZZZZZZ			14:05																				
MB 460-982045/1-A	1	T	14:06	X																			
LCS 460-982045/2-A	1	T	14:07	X																			
MB 460-982040/1-B	1	D	14:07	X																			
ZZZZZZ			14:08																				
ZZZZZZ			14:09																				
ZZZZZZ			14:10																				
CCV 460-982057/9-A	1		14:12	X																			
CCB 460-982112/60	1		14:15	X																			
460-306246-2	1	D	14:16	X																			
460-306246-3	1	D	14:17	X																			
ZZZZZZ			14:18																				
ZZZZZZ			14:18																				
ZZZZZZ			14:19																				
ZZZZZZ			14:20																				
ZZZZZZ			14:21																				
ZZZZZZ			14:22																				
ZZZZZZ			14:23																				
ZZZZZZ			14:24																				
CCV 460-982057/9-A	1		14:24	X																			
CCB 460-982112/72	1		14:27	X																			
ZZZZZZ			14:28																				
ZZZZZZ			14:29																				
ZZZZZZ			14:30																				
460-306246-1	20	D	14:31	X																			
460-306246-1 MS	20	D	14:32	X																			
460-306246-1 MSD	20	D	14:33	X																			
460-306246-4	20	D	14:33	X																			
CCV 460-982057/9-A	1		14:36	X																			
CCB 460-982112/81	1		14:39	X																			

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Edison Job No.: 460-306246-1

SDG No.:

Instrument ID: Lachat3 Method: 9012B

Start Date: 06/25/2024 13:10 End Date: 06/25/2024 14:39

Prep Types
D = Dissolved
T = Total/NA

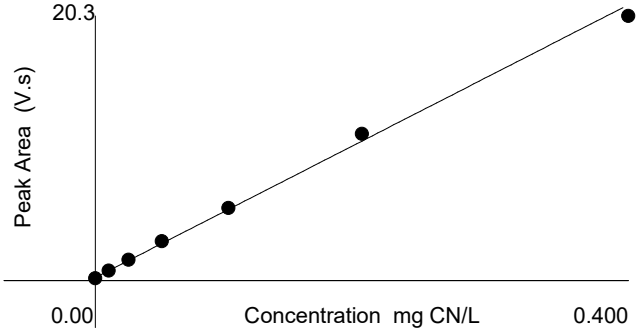
Original Run Filename: OM_6-23-2024_02-04-00PM.OMN Created: 6/23/2024 2:04:00 PM
Original Run Author's Signature: [EdiLachat]
Current Run Filename: OM_6-23-2024_02-04-00PM.OMN Last Modified: 6/23/2024 5:13:06 PM
Current Run Author's Signature: [EdiLachat]
Description: Default New Run

Sample	Cup No.	Channel 1		Detection Time
		Cyanide		
		Conc. (mg CN/L)	Area (V.s)	
IC 460-981478/1-A	1	0.400	20.3	6/23/2024@2:05:00 PM
IC 460-981478/2-A	2	0.200	11.3	6/23/2024@2:05:55 PM
IC 460-981478/3-A	3	0.100	5.55	6/23/2024@2:06:47 PM
IC 460-981478/4-A	4	0.0500	3.02	6/23/2024@2:07:40 PM
IC 460-981478/5-A	5	0.0250	1.60	6/23/2024@2:08:33 PM
IC 460-981478/6-A	6	0.0100	0.759	6/23/2024@2:09:25 PM
IC 460-981478/7-A	7	0.00	0.173	6/23/2024@2:10:18 PM

Table : 1 (Cyanide)

	Known Conc. (mg CN/L)	Rep.	Peak Area (V.s)	Peak Height (V)	% RSD	% Residual	Det. Conc (mg CN/L)	Detection Date	Detection Time
1	0.400	1	20.3	1.25	0.0	4.1	0.383	6/23/2024	2:05:00 PM
2	0.200	1	11.3	0.719	0.0	-5.2	0.210	6/23/2024	2:05:55 PM
3	0.100	1	5.55	0.353	0.0	-1.6	0.101	6/23/2024	2:06:47 PM
4	0.0500	1	3.02	0.192	0.0	-5.7	0.0530	6/23/2024	2:07:40 PM
5	0.0250	1	1.60	0.101	0.0	-3.4	0.0260	6/23/2024	2:08:33 PM
6	0.0100	1	0.759	0.0481	0.0	0.4	9.98e-3	6/23/2024	2:09:25 PM
7	0.00	1	0.173	0.0108			-1.20e-3	6/23/2024	2:10:18 PM

Figure : 1 (Cyanide)



Area = 52.3 * Conc + 0.239
Conc = 0.0191 * Area - 4.51e-3
Correlation Coefficient (r) = 0.99971

Weighting : 1/x

Original Run Filename: OM_6-23-2024_02-04-00PM.OMN Created: 6/23/2024 2:04:00 PM
Original Run Author's Signature: [EdiLachat]
Current Run Filename: OM_6-23-2024_02-04-00PM.OMN Last Modified: 6/23/2024 5:13:06 PM
Current Run Author's Signature: [EdiLachat]
Description: Default New Run

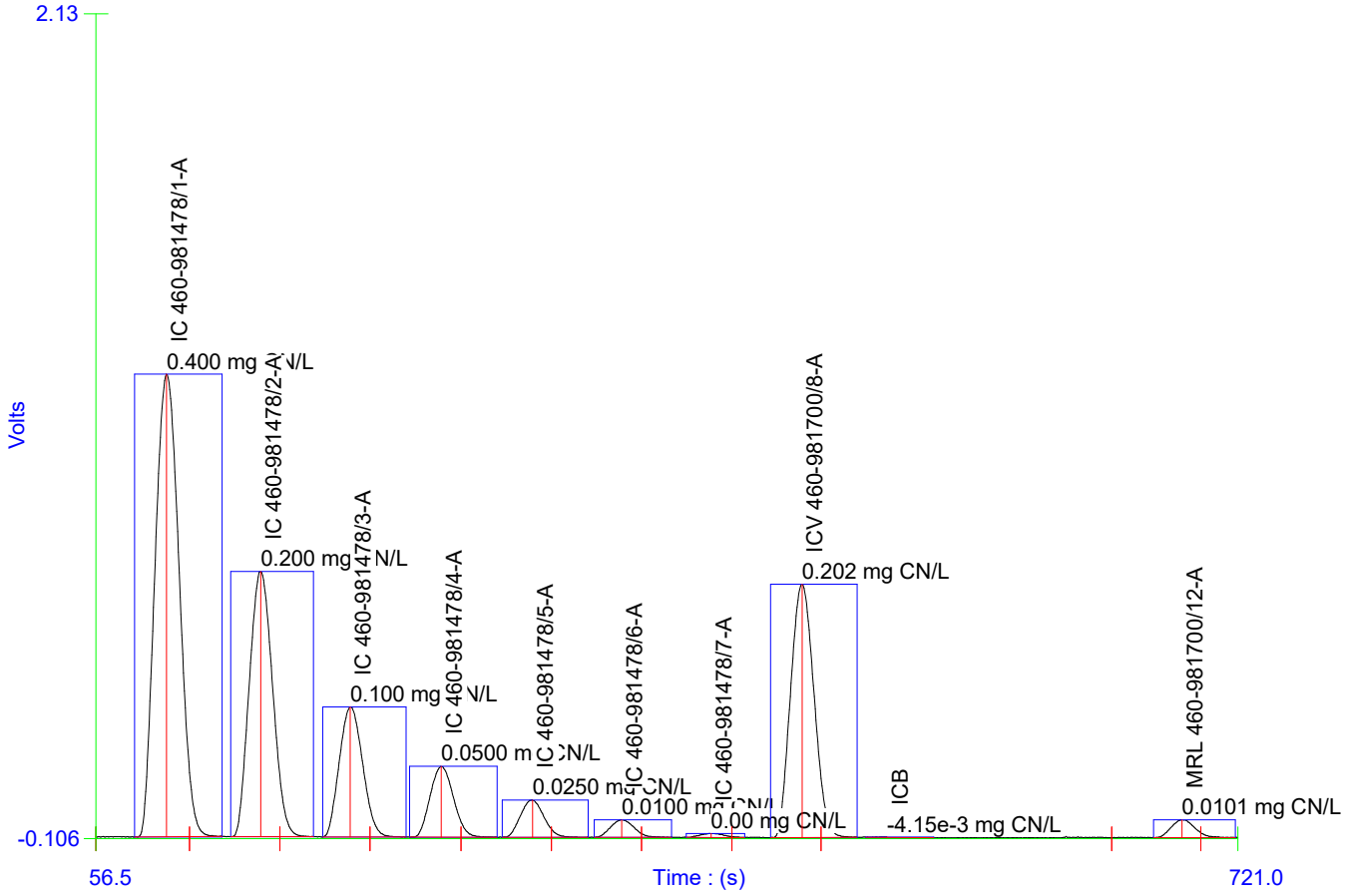
Sample	Cup No.	Channel 1 Cyanide		Detection Time
		Conc. (mg CN/L)	Area (V.s)	
IC 460-981478/1-A	1	0.400	20.3	6/23/2024@2:05:00 PM
IC 460-981478/2-A	2	0.200	11.3	6/23/2024@2:05:55 PM
IC 460-981478/3-A	3	0.100	5.55	6/23/2024@2:06:47 PM
IC 460-981478/4-A	4	0.0500	3.02	6/23/2024@2:07:40 PM
IC 460-981478/5-A	5	0.0250	1.60	6/23/2024@2:08:33 PM
IC 460-981478/6-A	6	0.0100	0.759	6/23/2024@2:09:25 PM
IC 460-981478/7-A	7	0.00	0.173	6/23/2024@2:10:18 PM
ICV 460-981700/8-A	8	0.202	10.8	6/23/2024@2:11:11 PM
Calibration:		Table/Fig. : 1		
ICB	9	-4.15e-3	0.0191	6/23/2024@2:12:03 PM
MRL 460-981700/12-A	10	0.0101	0.765	6/23/2024@2:14:52 PM
CCV	S8	0.207	11.1	6/23/2024@2:15:44 PM
Known Conc:		0.200		
CCB	S9	-4.65e-3	-7.07e-3	6/23/2024@2:18:35 PM
Known Conc:		0.00		
MB 460-981701/1-A	11	-4.29e-3	0.0115	6/23/2024@2:19:27 PM
LCSSRM 460-981701/2-A @ 20	12	0.144	7.80	6/23/2024@2:20:25 PM
460-305696-E-4-C	13	3.07e-3	0.398	6/23/2024@2:21:18 PM
460-305696-E-4-D MS	14	0.164	8.84	6/23/2024@2:22:09 PM
460-305696-E-4-E MSD	15	0.156	8.43	6/23/2024@2:23:00 PM
460-305696-B-1-E	16	-1.18e-3	0.175	6/23/2024@2:23:54 PM
460-305696-D-5-B	17	3.34e-3	0.411	6/23/2024@2:24:48 PM
460-305696-F-6-B	18	-7.09e-4	0.199	6/23/2024@2:25:41 PM
460-305696-D-8-A	19	1.39e-3	0.309	6/23/2024@2:26:34 PM
460-305696-D-9-E	20	3.88e-3	0.440	6/23/2024@2:27:27 PM
CCV	S8	0.207	11.1	6/23/2024@2:28:19 PM
Known Conc:		0.200		
CCB	S9	-3.95e-3	0.0295	6/23/2024@2:31:09 PM
Known Conc:		0.00		
460-305696-D-10-E	21	1.96e-3	0.339	6/23/2024@2:32:01 PM
460-305696-F-11-E	22	3.99e-3	0.446	6/23/2024@2:32:54 PM
460-305696-E-12-B	23	5.17e-3	0.508	6/23/2024@2:33:46 PM
460-305696-F-13-E	24	8.18e-3	0.665	6/23/2024@2:34:39 PM
460-305696-F-14-D	25	3.06e-3	0.397	6/23/2024@2:35:31 PM
460-305696-F-14-E MS	26	0.162	8.70	6/23/2024@2:36:24 PM
460-305696-F-14-F MSD	27	0.171	9.20	6/23/2024@2:37:16 PM
460-305696-F-15-A	28	8.07e-3	0.659	6/23/2024@2:38:08 PM
460-305696-F-16-E	29	0.0129	0.912	6/23/2024@2:38:59 PM
460-305696-F-17-C	30	0.0237	1.48	6/23/2024@2:39:51 PM
CCV	S8	0.207	11.1	6/23/2024@2:40:43 PM
Known Conc:		0.200		
CCB	S9	-3.96e-3	0.0290	6/23/2024@2:43:35 PM
Known Conc:		0.00		
460-305696-F-18-D	31	0.0212	1.35	6/23/2024@2:44:28 PM
460-305696-E-19-A	32	0.0397	2.32	6/23/2024@2:45:22 PM
460-305696-F-21-B	33	0.0358	2.12	6/23/2024@2:46:15 PM
460-305698-H-2-J	34	0.0354	2.09	6/23/2024@2:47:08 PM
460-305698-I-1-E	35	0.0509	2.90	6/23/2024@2:48:01 PM
460-305827-F-25-C	36	1.33e-3	0.306	6/23/2024@2:48:54 PM
MB 460-981753/1-A	37	-4.07e-3	0.0232	6/23/2024@2:49:46 PM
LCSSRM 460-981753/2-A @ 20	38	0.146	7.89	6/23/2024@2:50:39 PM
460-305829-E-6-H	39	5.14e-4	0.263	6/23/2024@2:51:31 PM
460-305829-E-6-I MS	40	0.170	9.16	6/23/2024@2:52:23 PM
CCV	S8	0.207	11.1	6/23/2024@2:53:15 PM
Known Conc:		0.200		
CCB	S9	-3.84e-3	0.0351	6/23/2024@2:56:06 PM
Known Conc:		0.00		
460-305829-E-6-J MSD	41	0.152	8.22	6/23/2024@2:56:59 PM

460-305829-B-1-D	42	-3.88e-3	0.0332	6/23/2024@2:57:50 PM
460-305829-B-2-D	43	-2.86e-3	0.0869	6/23/2024@2:58:43 PM
460-305829-F-7-D	44	-3.13e-3	0.0723	6/23/2024@2:59:34 PM
460-305829-D-8-C	45	-4.00e-3	0.0270	6/23/2024@3:00:26 PM
460-305829-D-9-C	46	-2.67e-3	0.0966	6/23/2024@3:01:19 PM
460-305829-D-10-C	47	-1.34e-3	0.166	6/23/2024@3:02:13 PM
460-305829-F-11-C	48	-2.06e-3	0.129	6/23/2024@3:03:06 PM
460-305829-F-13-B	49	-7.57e-4	0.197	6/23/2024@3:03:58 PM
460-305829-F-14-B	50	3.23e-3	0.406	6/23/2024@3:04:50 PM
CCV	S8	0.207	11.1	6/23/2024@3:05:43 PM
Known Conc:		0.200		
CCB	S9	-4.10e-3	0.0217	6/23/2024@3:08:35 PM
Known Conc:		0.00		
460-305829-D-12-H	51	-3.92e-3	0.0312	6/23/2024@3:09:28 PM
460-305829-D-12-I MS	52	0.193	10.3	6/23/2024@3:12:22 PM
460-305829-D-12-J MSD	53	0.199	10.7	6/23/2024@3:13:15 PM
460-305829-D-15-D	54	4.75e-3	0.485	6/23/2024@3:14:07 PM
460-305829-F-16-D	55	0.0130	0.917	6/23/2024@3:14:59 PM
460-305827-D-17-B	56	2.86e-3	0.386	6/23/2024@3:15:51 PM
460-305829-D-18-D	57	0.0130	0.920	6/23/2024@3:16:43 PM
460-305829-D-19-B	58	3.15e-3	0.402	6/23/2024@3:17:34 PM
460-305829-D-20-D	59	-1.50e-3	0.158	6/23/2024@3:18:26 PM
460-305827-E-21-C	60	-3.15e-3	0.0712	6/23/2024@3:19:18 PM
CCV	S8	0.206	11.0	6/23/2024@3:20:09 PM
Known Conc:		0.200		
CCB	S9	-4.02e-3	0.0257	6/23/2024@3:23:01 PM
Known Conc:		0.00		
460-305829-E-22-C	61	-1.02e-3	0.183	6/23/2024@3:23:54 PM
460-305829-E-23-A	62	-3.40e-3	0.0583	6/23/2024@3:24:48 PM
MB 460-981750/1-A	63	-3.90e-3	0.0323	6/23/2024@3:25:41 PM
LCSSRM 460-981750/2-A @ 20	64	0.107	5.84	6/23/2024@3:26:35 PM
460-306091-F-1-C	65	0.0110	0.815	6/23/2024@3:27:27 PM
460-306091-F-1-D MS	66	0.170	9.14	6/23/2024@3:29:55 PM
460-306091-F-1-E MSD	67	0.187	10.0	6/23/2024@3:30:48 PM
460-306091-G-2-E	68	1.20e-3	0.299	6/23/2024@3:31:41 PM
460-306091-F-3-H	69	6.79e-4	0.272	6/23/2024@3:32:32 PM
460-306091-G-4-D	70	-1.56e-3	0.155	6/23/2024@3:33:24 PM
CCV	S8	0.205	11.0	6/23/2024@3:34:16 PM
Known Conc:		0.200		
CCB	S9	-3.89e-3	0.0326	6/23/2024@3:37:07 PM
Known Conc:		0.00		
460-306091-F-5-D	71	-2.35e-3	0.113	6/23/2024@3:37:59 PM
460-306091-F-6-D	72	2.00e-3	0.341	6/23/2024@3:38:51 PM
460-305959-B-2-D	73	1.51e-3	0.316	6/23/2024@3:39:43 PM
460-305959-B-4-D	74	-2.82e-3	0.0887	6/23/2024@3:40:34 PM
460-305959-B-6-D	75	5.62e-3	0.531	6/23/2024@3:41:27 PM
460-305394-A-17-H	76	3.40e-3	0.415	6/23/2024@3:42:20 PM
460-305394-A-18-G	77	1.55e-3	0.318	6/23/2024@3:43:13 PM
460-305394-A-18-H MS	78	0.206	11.0	6/23/2024@3:44:06 PM
460-305394-A-18-I MSD	79	0.204	10.9	6/23/2024@3:44:59 PM
460-305394-A-19-H	80	2.88e-4	0.252	6/23/2024@3:45:52 PM
CCV	S8	0.205	11.0	6/23/2024@3:46:44 PM
Known Conc:		0.200		
CCB	S9	-3.93e-3	0.0305	6/23/2024@3:49:35 PM
Known Conc:		0.00		
460-305394-A-20-I	81	-2.73e-3	0.0937	6/23/2024@3:50:27 PM
460-305394-A-21-H	82	0.0241	1.50	6/23/2024@3:51:20 PM
460-305394-A-22-G	83	-2.74e-5	0.235	6/23/2024@3:52:13 PM
460-305852-A-1-U	84	-2.62e-3	0.0994	6/23/2024@3:53:05 PM
MB 460-981782/1-A	85	-4.18e-3	0.0175	6/23/2024@3:53:56 PM
LCSSRM 460-981782/2-A @ 20	86	0.154	8.31	6/23/2024@3:54:48 PM
460-305827-B-1-G	87	-1.36e-3	0.165	6/23/2024@3:55:40 PM
460-305827-B-1-H MS	88	0.193	10.4	6/23/2024@3:56:32 PM
460-305827-B-1-I MSD	89	0.194	10.4	6/23/2024@3:57:24 PM
460-305827-E-4-B	90	0.0362	2.13	6/23/2024@3:58:16 PM
CCV	S8	0.205	11.0	6/23/2024@3:59:10 PM
Known Conc:		0.200		
CCB	S9	-4.05e-3	0.0242	6/23/2024@4:02:01 PM

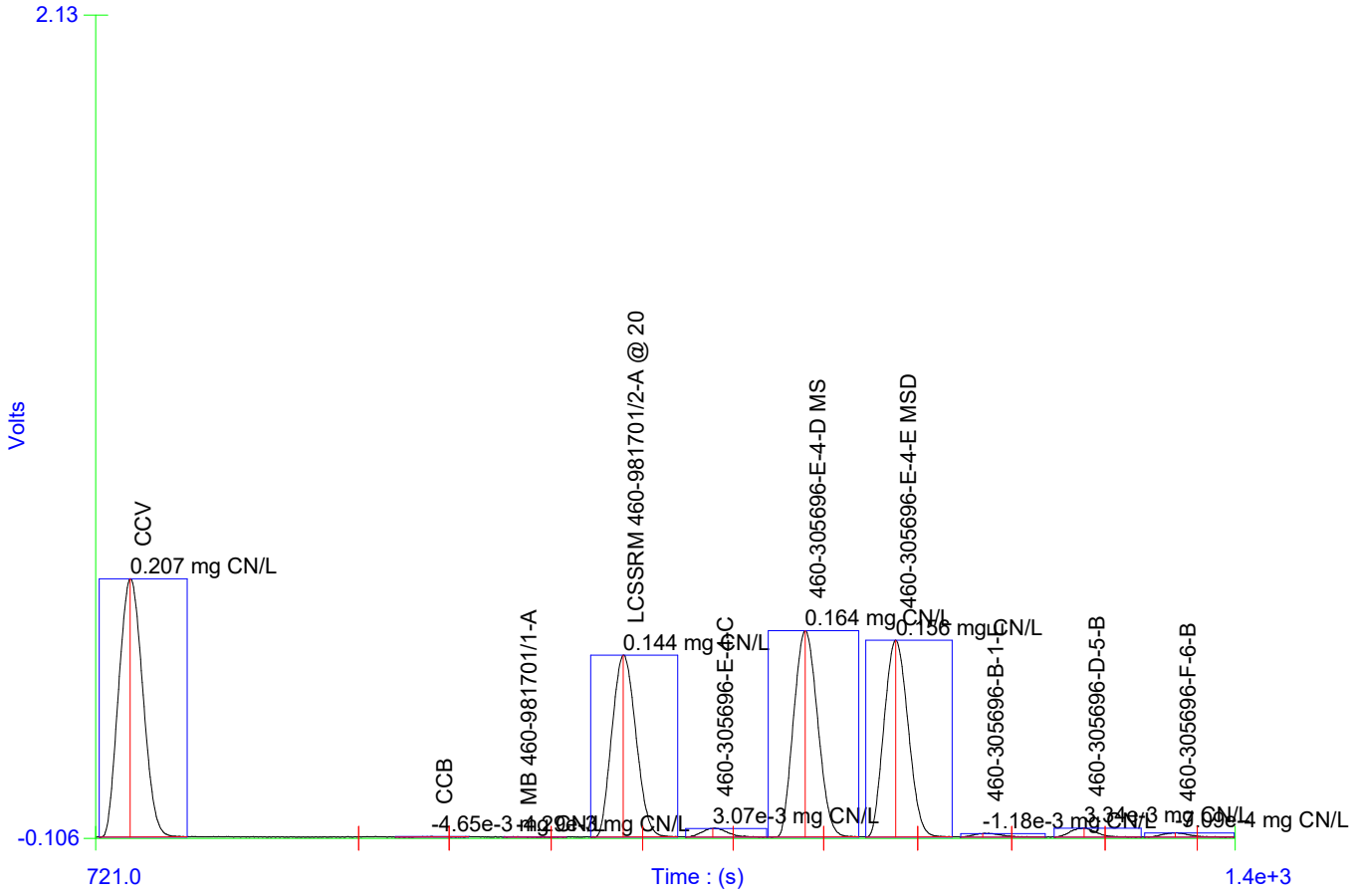
Known Conc:		0.00		
460-305827-F-5-B	91	1.41e-3	0.310	6/23/2024@4:02:54 PM
460-305827-F-6-C	92	4.42e-3	0.468	6/23/2024@4:03:48 PM
460-305827-F-7-B	93	-7.30e-4	0.198	6/23/2024@4:04:41 PM
460-305827-D-8-B	94	-1.87e-3	0.139	6/23/2024@4:05:34 PM
460-305827-D-9-C	95	-8.59e-4	0.191	6/23/2024@4:06:27 PM
460-305827-D-10-C	96	-1.15e-3	0.176	6/23/2024@4:07:19 PM
460-305827-F-11-B	97	8.62e-3	0.688	6/23/2024@4:08:12 PM
460-305827-D-13-B	98	0.0213	1.36	6/23/2024@4:09:04 PM
460-305827-E-14-E	99	1.37e-3	0.308	6/23/2024@4:09:57 PM
460-305827-E-14-F MS	100	0.126	6.86	6/23/2024@4:10:49 PM
CCV	S8	0.206	11.0	6/23/2024@4:11:41 PM
Known Conc:		0.200		
CCB	S9	-3.89e-3	0.0325	6/23/2024@4:14:32 PM
Known Conc:		0.00		
460-305827-E-14-G MSD	101	0.193	10.4	6/23/2024@4:15:24 PM
460-305827-E-16-D	102	-1.36e-3	0.165	6/23/2024@4:16:16 PM
460-305827-E-17-D	103	4.14e-3	0.453	6/23/2024@4:17:09 PM
460-305827-D-18-C	104	1.25e-3	0.302	6/23/2024@4:18:01 PM
460-305827-F-19-D	105	-2.45e-5	0.235	6/23/2024@4:18:53 PM
460-305827-D-20-E	106	1.20e-4	0.243	6/23/2024@4:19:46 PM
460-305827-F-21-C	107	-6.67e-4	0.202	6/23/2024@4:20:40 PM
460-305827-F-22-C	108	-1.10e-3	0.179	6/23/2024@4:21:33 PM
460-305827-F-23-C	109	-1.27e-3	0.170	6/23/2024@4:22:27 PM
460-305827-F-24-C	110	2.27e-3	0.355	6/23/2024@4:23:19 PM
CCV	S8	0.206	11.0	6/23/2024@4:24:11 PM
Known Conc:		0.200		
CCB	S9	-4.08e-3	0.0229	6/23/2024@4:27:02 PM
Known Conc:		0.00		
MB 460-981700/13-A	111	-4.15e-3	0.0190	6/23/2024@4:27:56 PM
LCS 460-981700/14-A	112	0.0960	5.27	6/23/2024@4:28:48 PM
460-305871-A-1-A	113	5.92e-4	0.268	6/23/2024@4:29:41 PM
460-305871-A-1-B MS	114	0.200	10.7	6/23/2024@4:30:33 PM
460-305871-A-1-C MSD	115	0.296	15.7	6/23/2024@4:31:25 PM
460-305871-A-2-A	116	-1.03e-3	0.183	6/23/2024@4:32:17 PM
460-305871-A-3-A	117	-1.47e-3	0.159	6/23/2024@4:33:10 PM
460-305871-A-4-A	118	-1.14e-4	0.231	6/23/2024@4:34:02 PM
460-305871-A-5-A	119	-4.92e-3	-0.0215	6/23/2024@4:34:54 PM
460-305871-A-6-A	120	-2.14e-3	0.125	6/23/2024@4:35:46 PM
CCV	S8	0.206	11.0	6/23/2024@4:36:38 PM
Known Conc:		0.200		
CCB	S9	-4.02e-3	0.0259	6/23/2024@4:39:30 PM
Known Conc:		0.00		
460-305871-A-7-A	121	-8.75e-4	0.191	6/23/2024@4:40:23 PM
460-305931-G-1-A	122	-1.78e-3	0.143	6/23/2024@4:41:16 PM
460-306147-D-1-A	123	-2.99e-3	0.0797	6/23/2024@4:42:10 PM
620-19129-F-2-A	124	-2.76e-3	0.0917	6/23/2024@4:43:03 PM
460-306246-C-1-A	125	1.12	59.0	6/23/2024@4:43:55 PM
460-306246-C-1-B MS	126	1.16	61.3	6/23/2024@4:44:49 PM
460-306246-C-1-C MSD	127	1.16	61.1	6/23/2024@4:45:39 PM
460-306246-C-2-A	128	0.0103	0.778	6/23/2024@4:46:33 PM
460-306246-C-3-A	129	-1.47e-3	0.160	6/23/2024@4:47:24 PM
460-306246-C-4-A	130	1.13	59.4	6/23/2024@4:48:17 PM
CCV	S8	0.207	11.1	6/23/2024@4:49:09 PM
Known Conc:		0.200		
CCB	S9	-3.06e-3	0.0761	6/23/2024@4:52:00 PM
Known Conc:		0.00		
460-306176-I-2-A	131	3.50e-3	0.420	6/23/2024@4:52:53 PM
460-306176-I-3-A	132	9.29e-4	0.285	6/23/2024@4:53:45 PM
460-306176-I-1-A	133	2.24e-3	0.354	6/23/2024@4:54:38 PM
620-19257-J-2-A	134	-2.20e-3	0.121	6/23/2024@4:55:30 PM
620-19247-G-3-A	135	-2.42e-3	0.110	6/23/2024@4:56:22 PM
620-19228-G-3-A	136	2.93e-3	0.390	6/23/2024@4:59:14 PM
460-305871-A-1-C MSD	137	5.22e-4	0.264	6/23/2024@5:00:08 PM
460-306246-C-1-A @ 20	138	0.0751	4.17	6/23/2024@5:01:01 PM
460-306246-C-1-B MS @ 20	139	0.0789	4.37	6/23/2024@5:01:54 PM
460-306246-C-1-C MSD @ 20	140	0.103	5.63	6/23/2024@5:02:47 PM
CCV	S8	0.206	11.0	6/23/2024@5:03:38 PM

	Known Conc:	0.200		
CCB	S9	-3.90e-3	0.0321	6/23/2024@5:06:30 PM
	Known Conc:	0.00		
460-305871-A-4-A @ 20	141	0.0346	2.05	6/23/2024@5:07:23 PM
CCV	S8	0.206	11.0	6/23/2024@5:08:15 PM
	Known Conc:	0.200		
CCB	S9	-4.04e-3	0.0250	6/23/2024@5:11:06 PM
	Known Conc:	0.00		

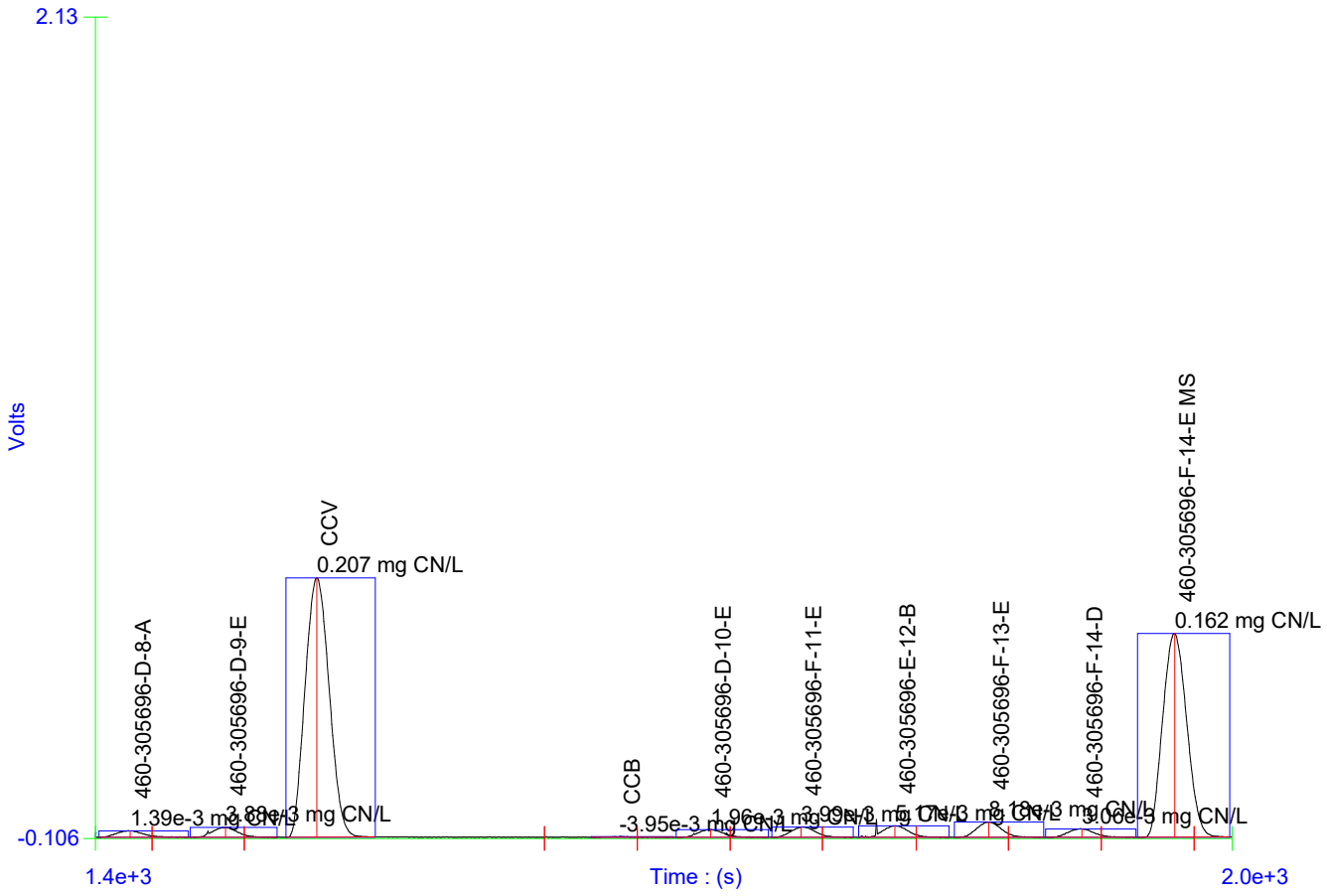
Channel 1 (Cyanide) - Set: 1 / 18



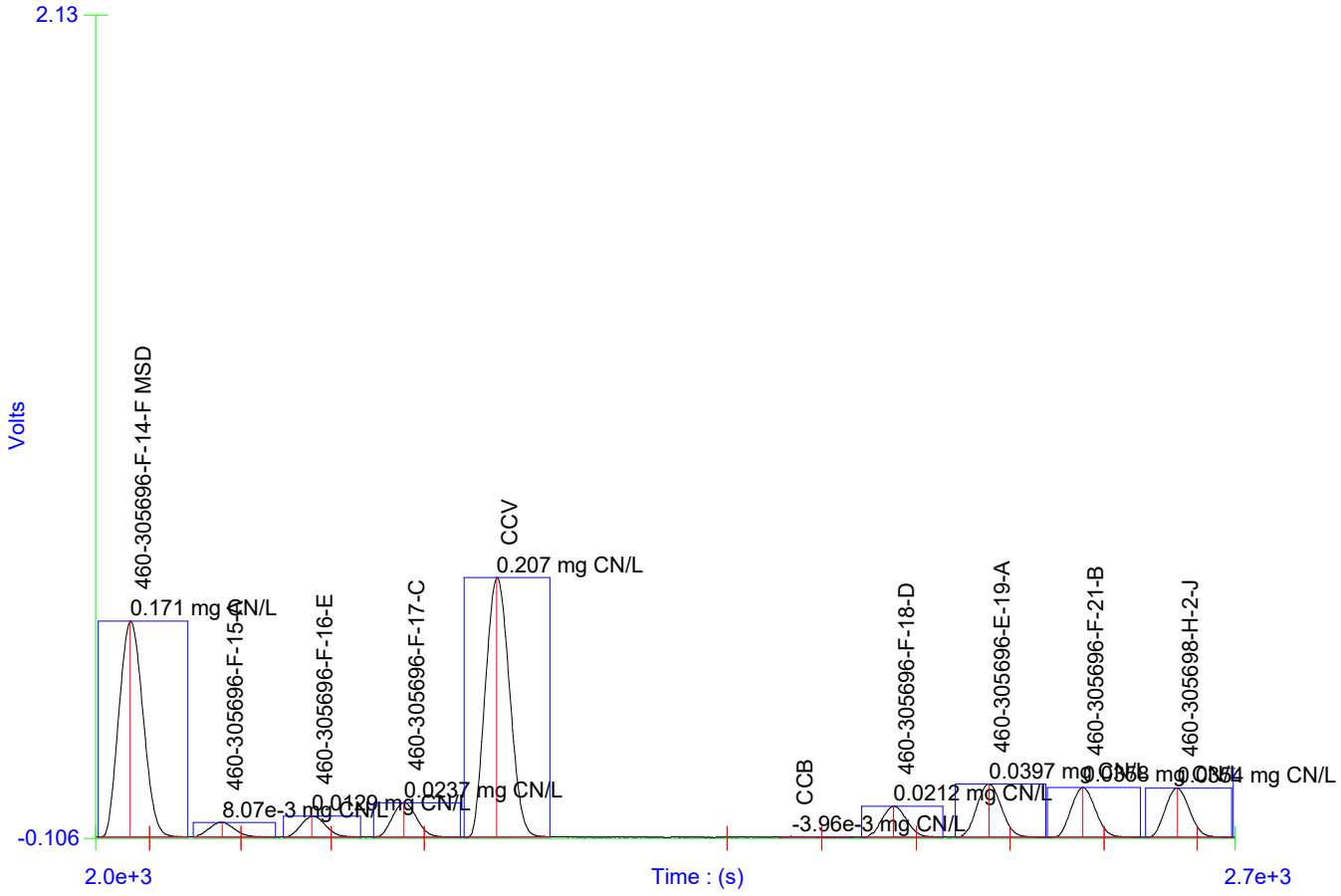
Channel 1 (Cyanide) - Set: 2 / 18



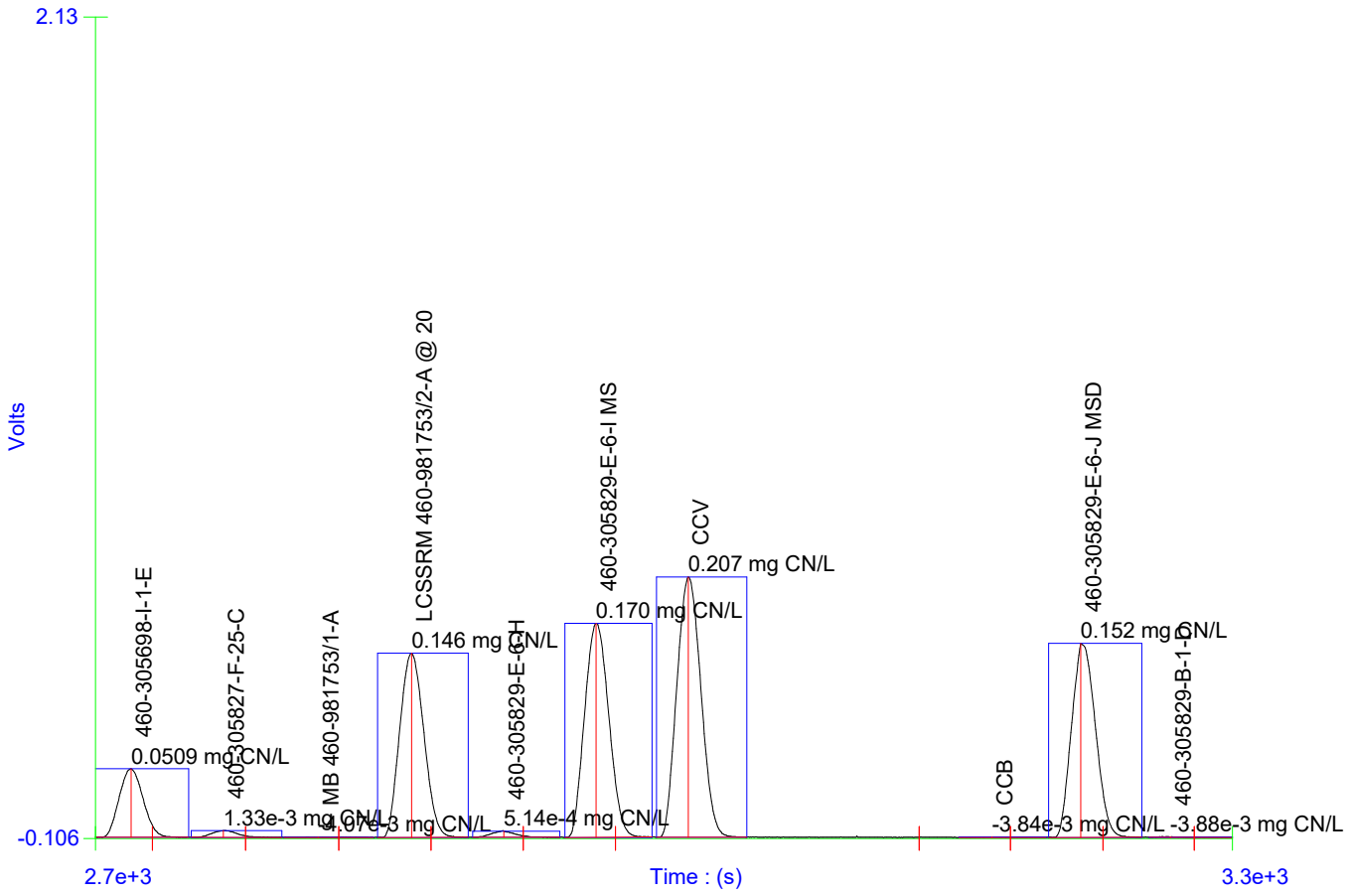
Channel 1 (Cyanide) - Set: 3 / 18



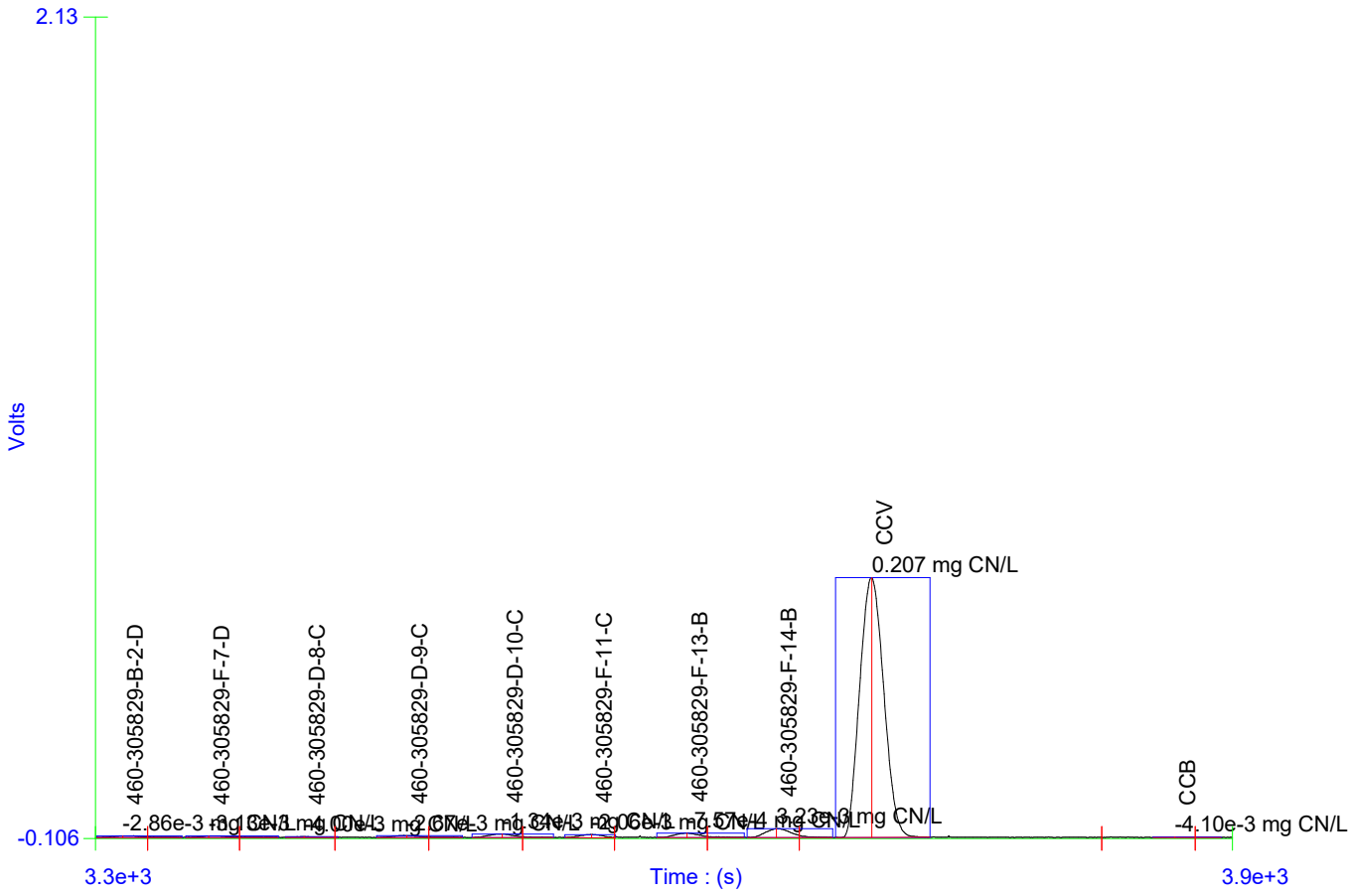
Channel 1 (Cyanide) - Set: 4 / 18



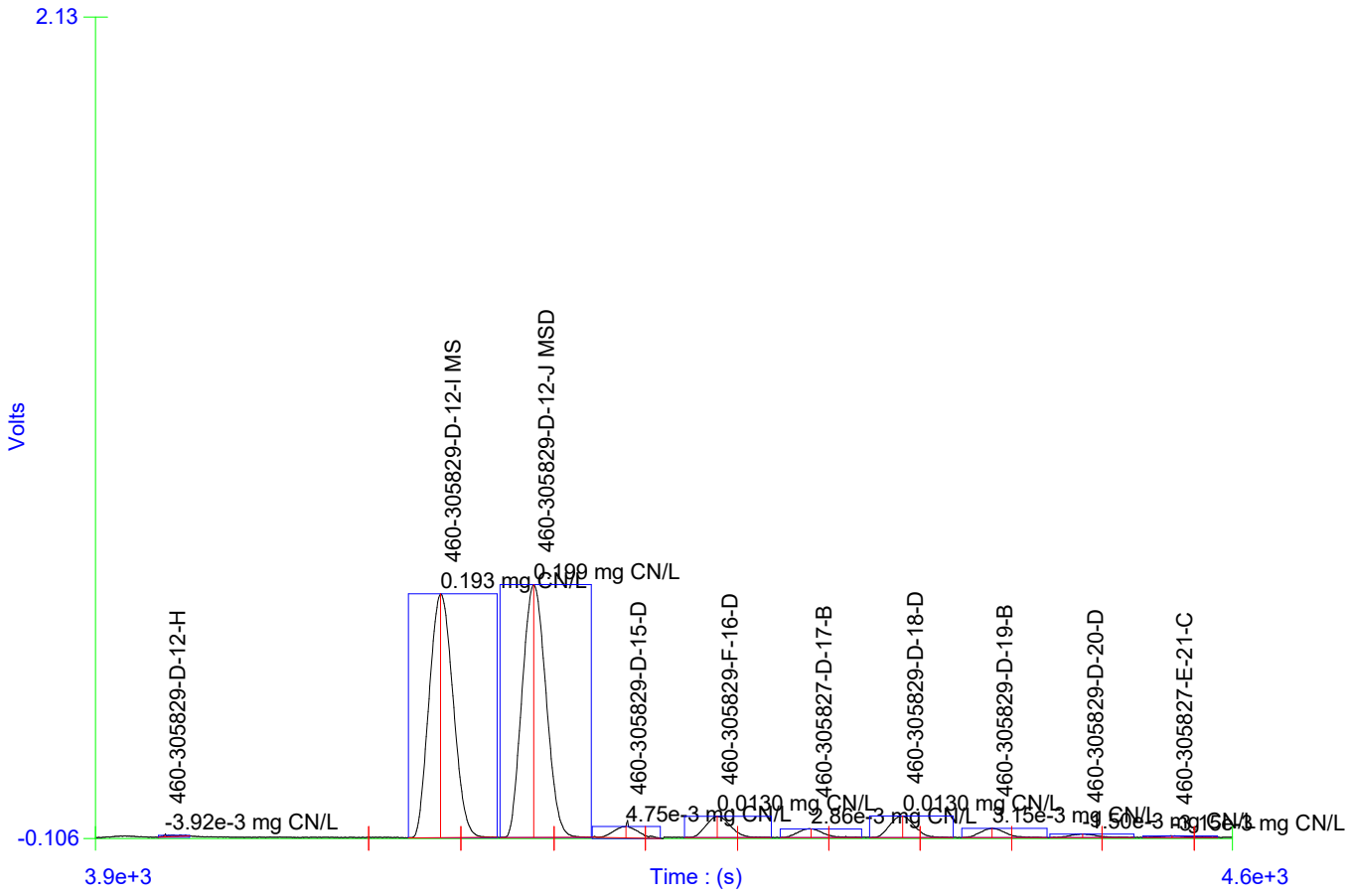
Channel 1 (Cyanide) - Set: 5 / 18



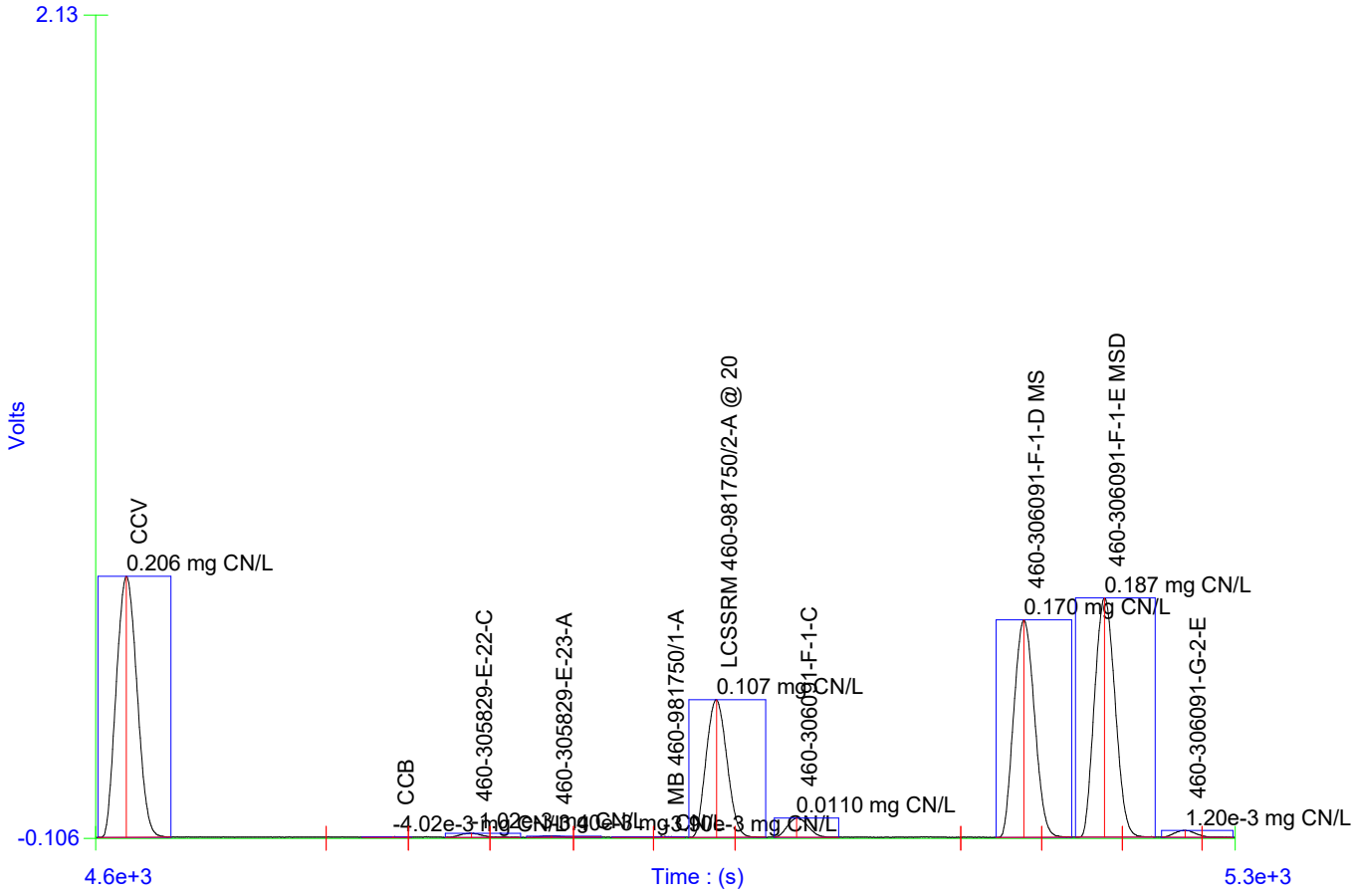
Channel 1 (Cyanide) - Set: 6 / 18



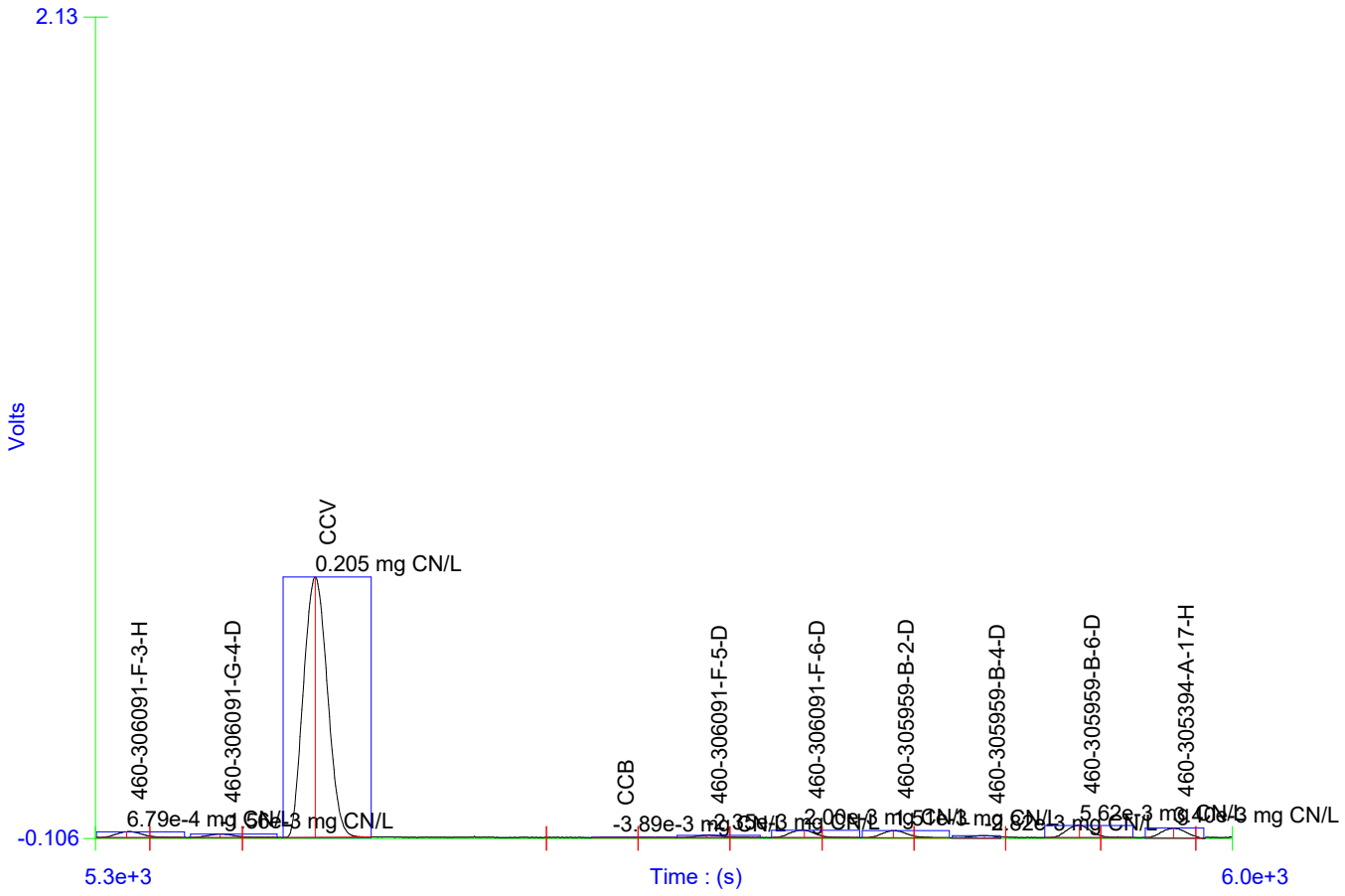
Channel 1 (Cyanide) - Set: 7 / 18



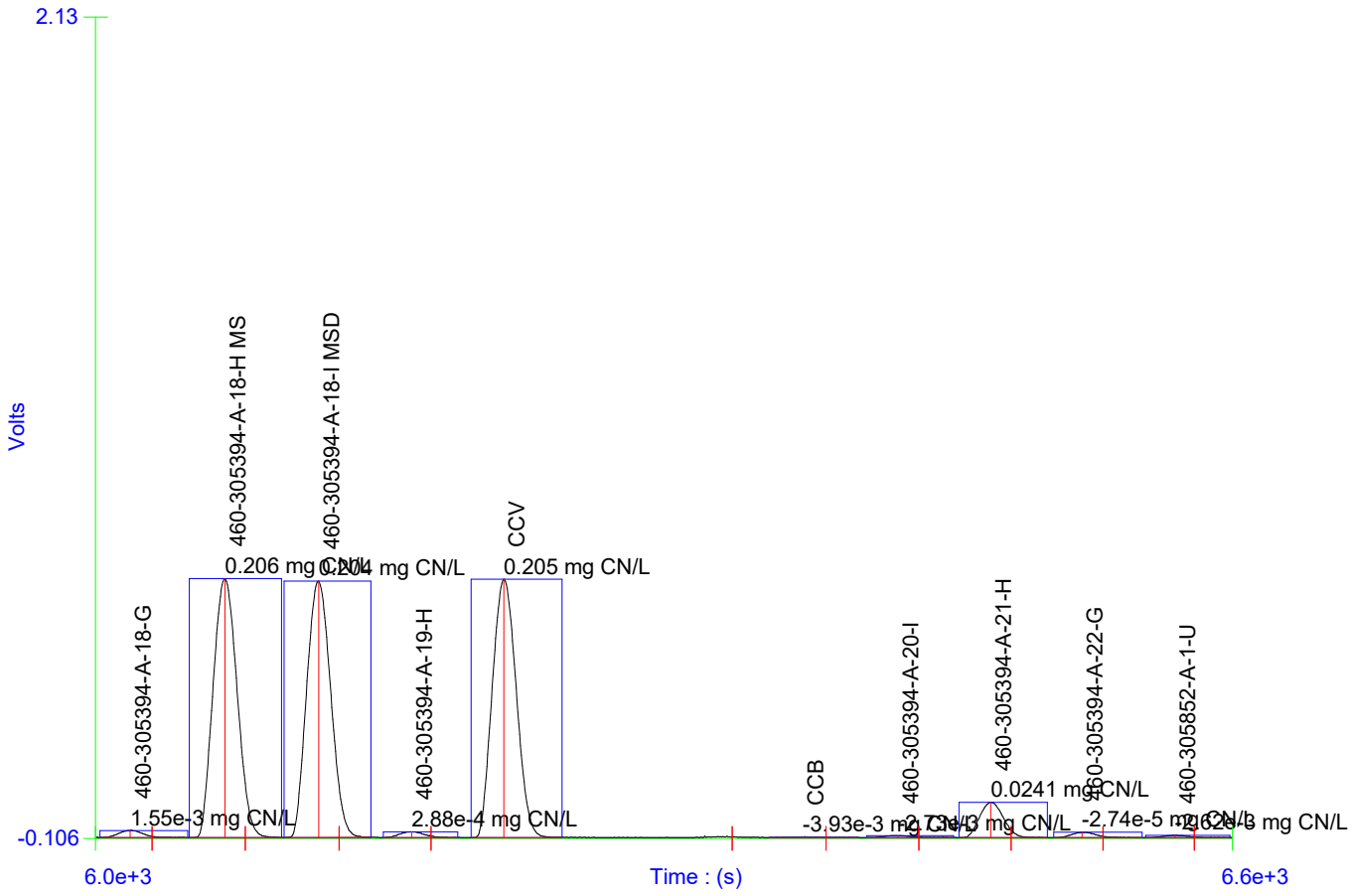
Channel 1 (Cyanide) - Set: 8 / 18



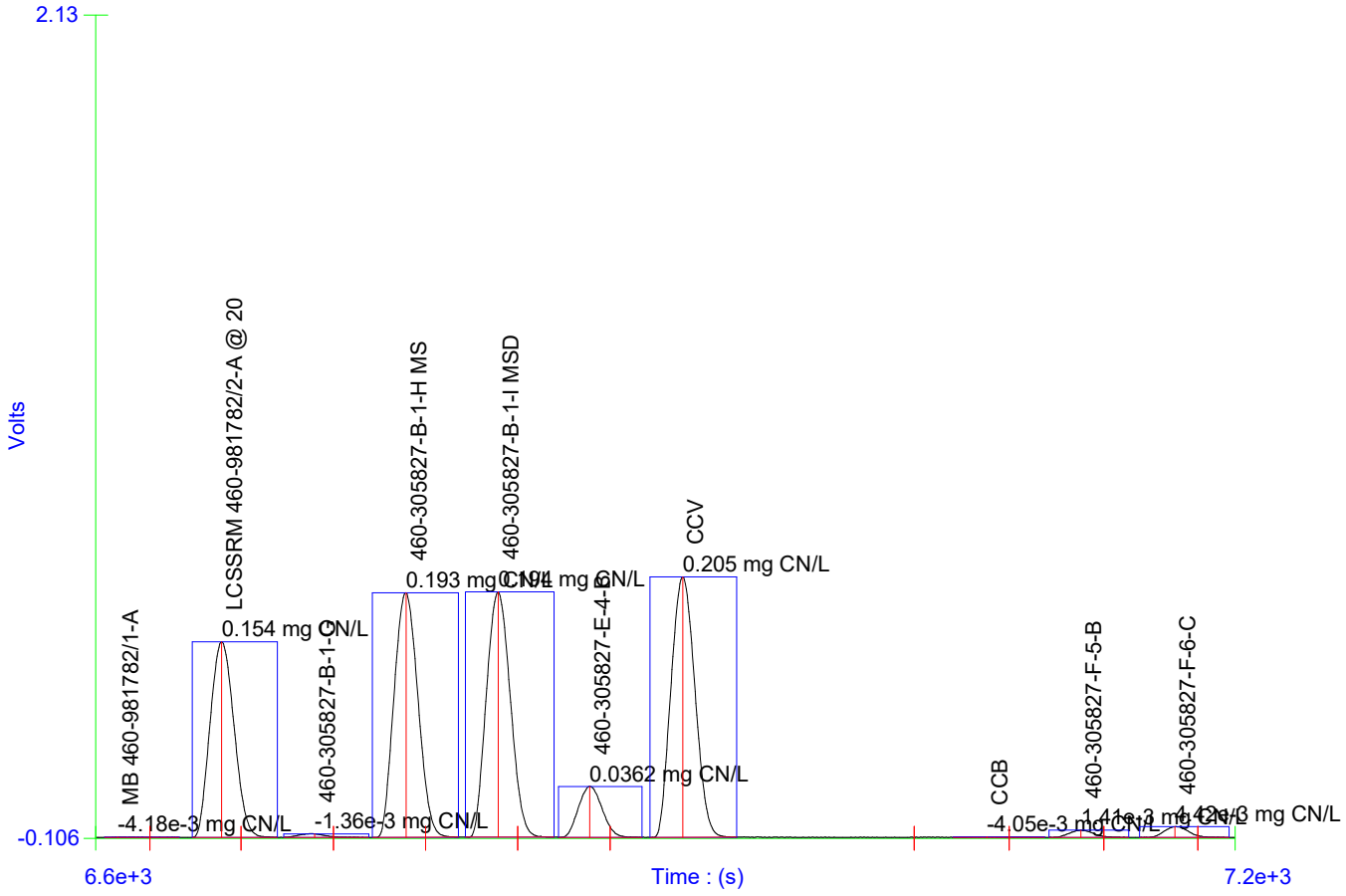
Channel 1 (Cyanide) - Set: 9 / 18



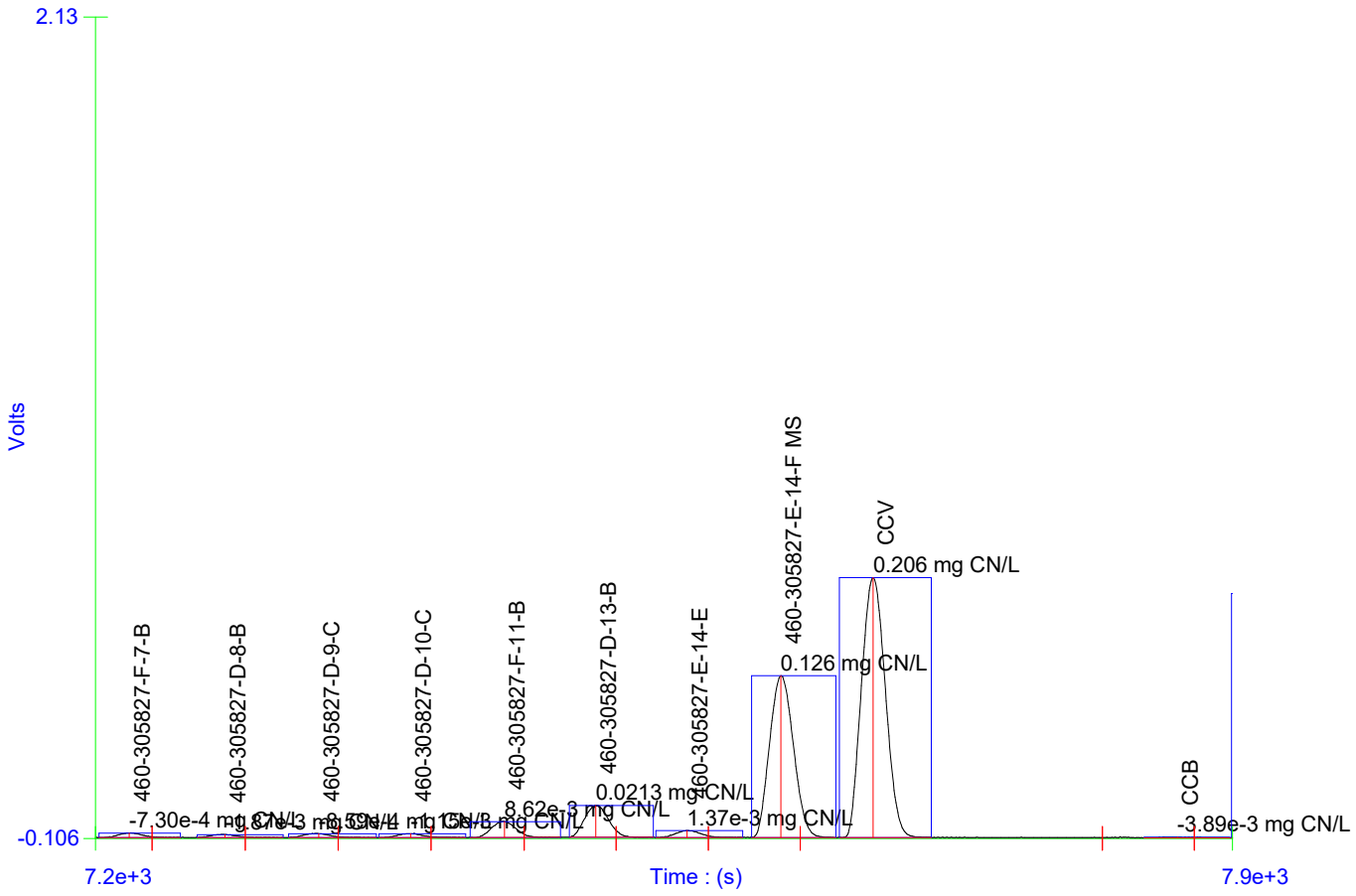
Channel 1 (Cyanide) - Set: 10 / 18



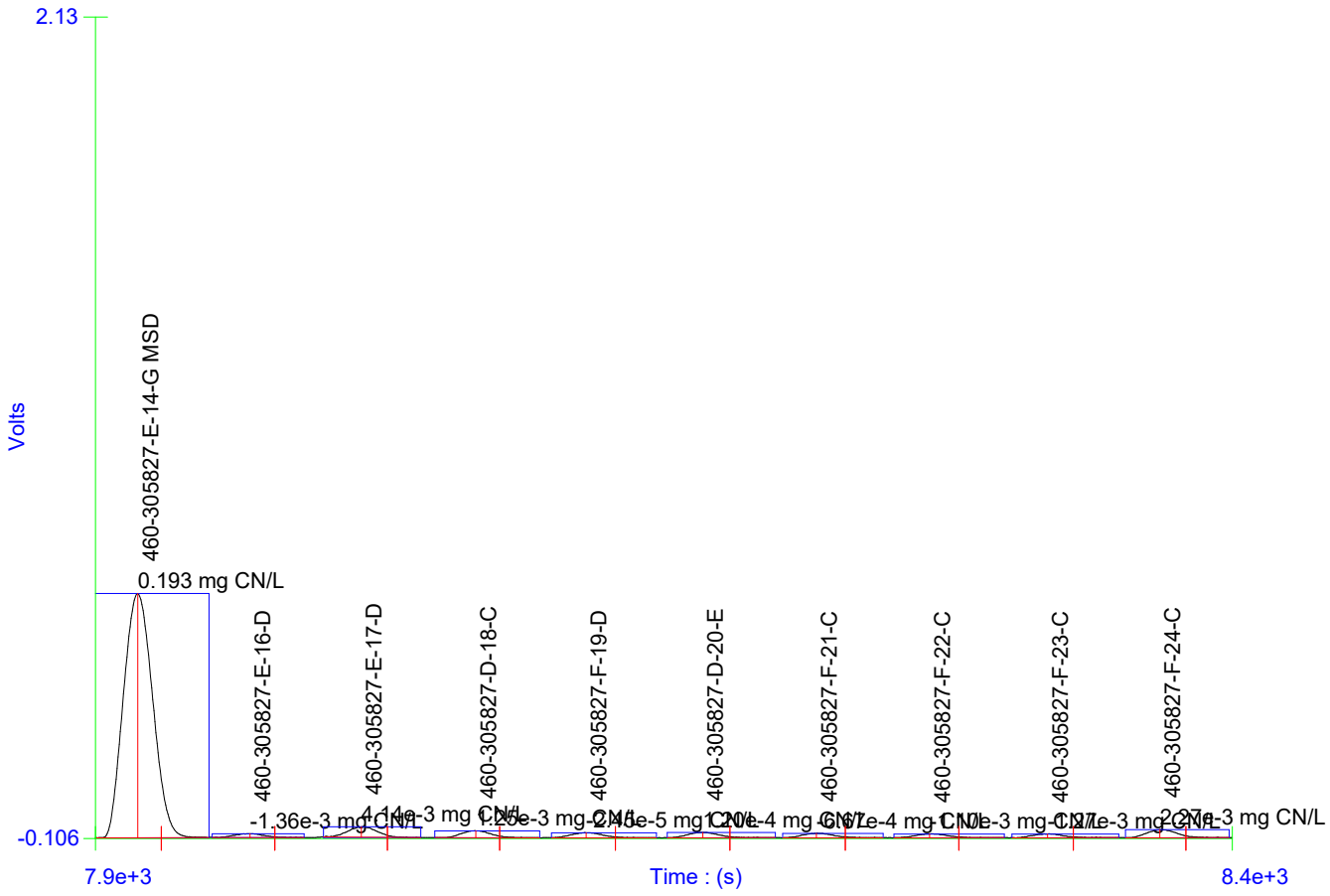
Channel 1 (Cyanide) - Set: 11 / 18



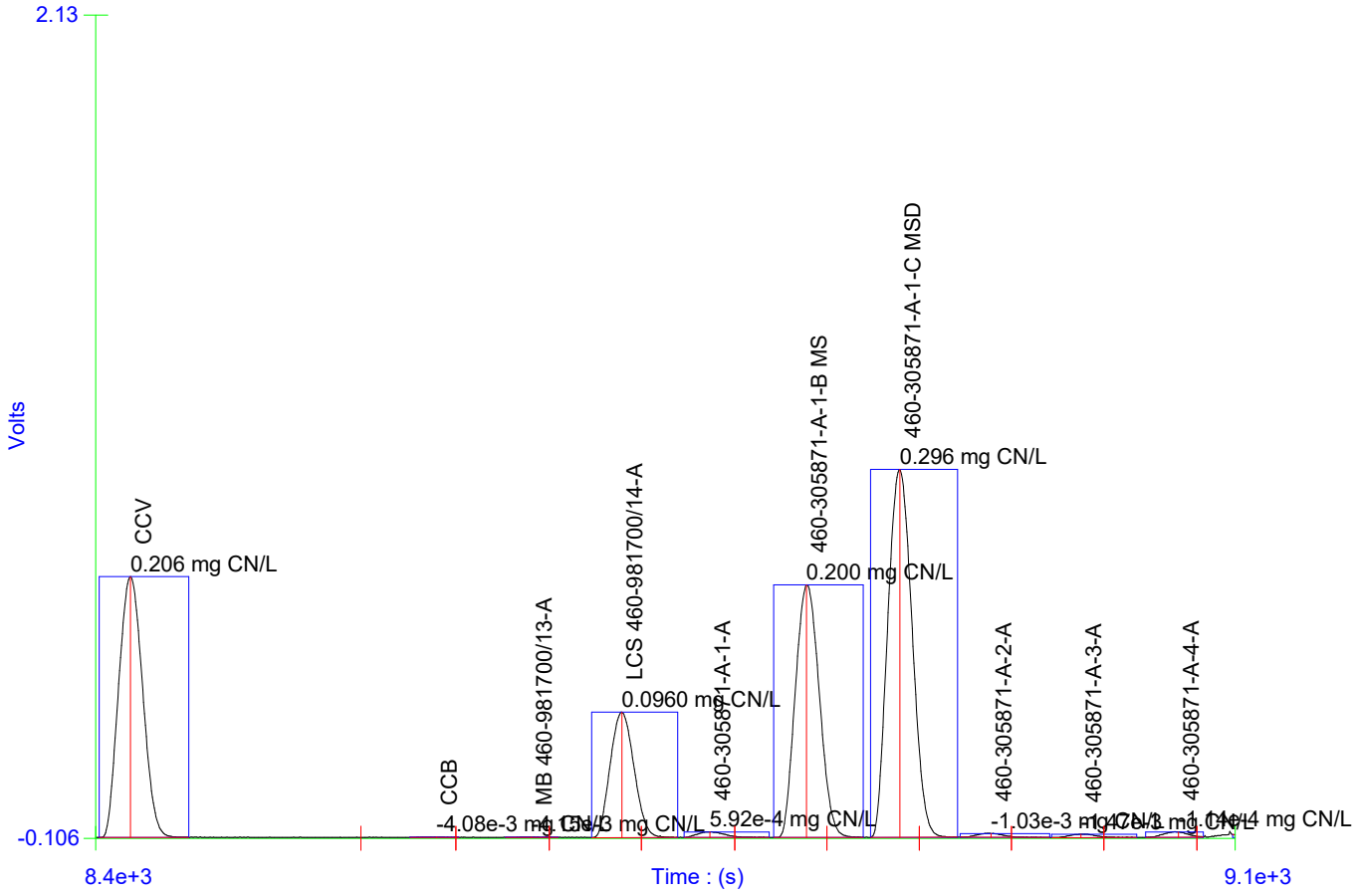
Channel 1 (Cyanide) - Set: 12 / 18



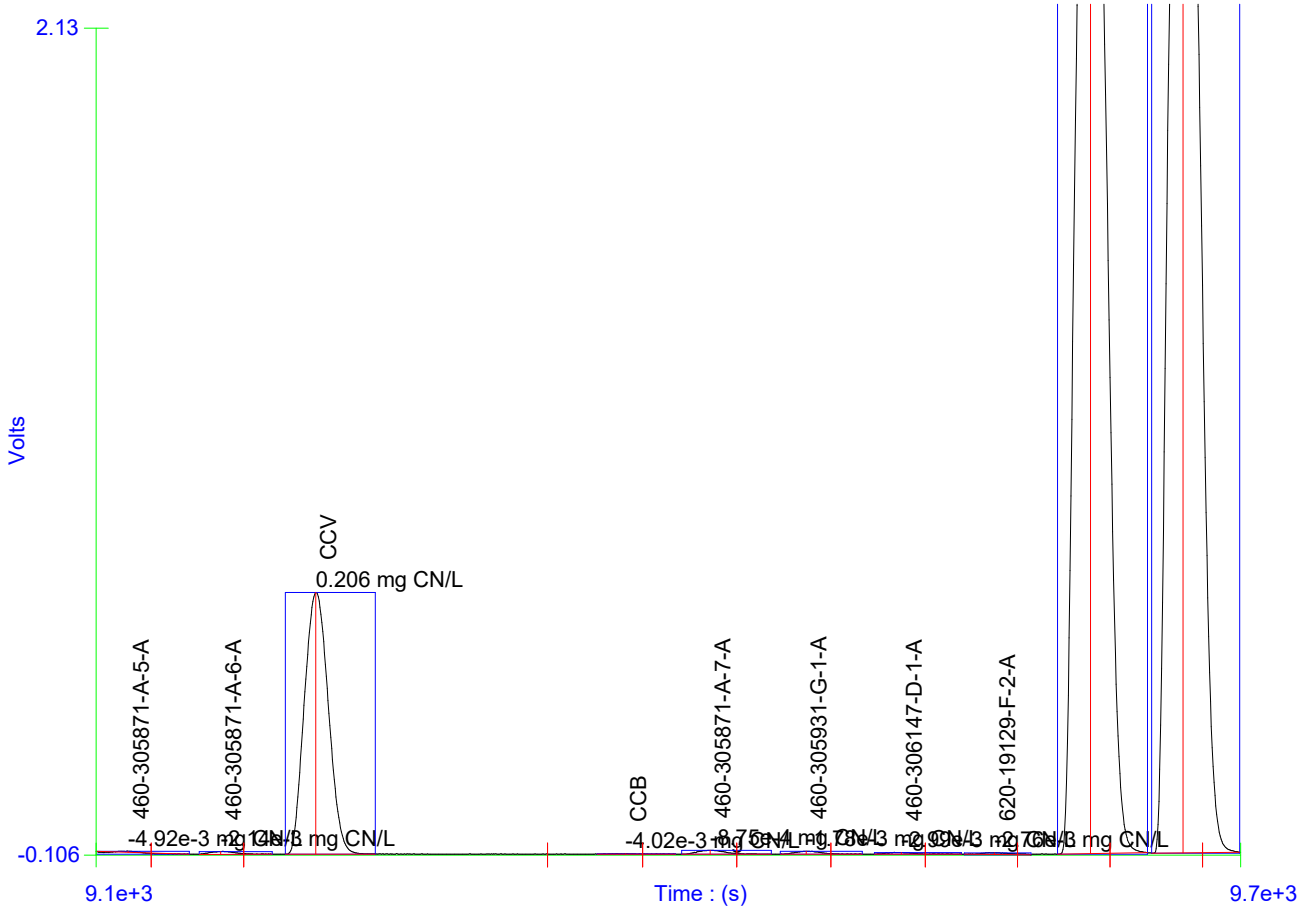
Channel 1 (Cyanide) - Set: 13 / 18



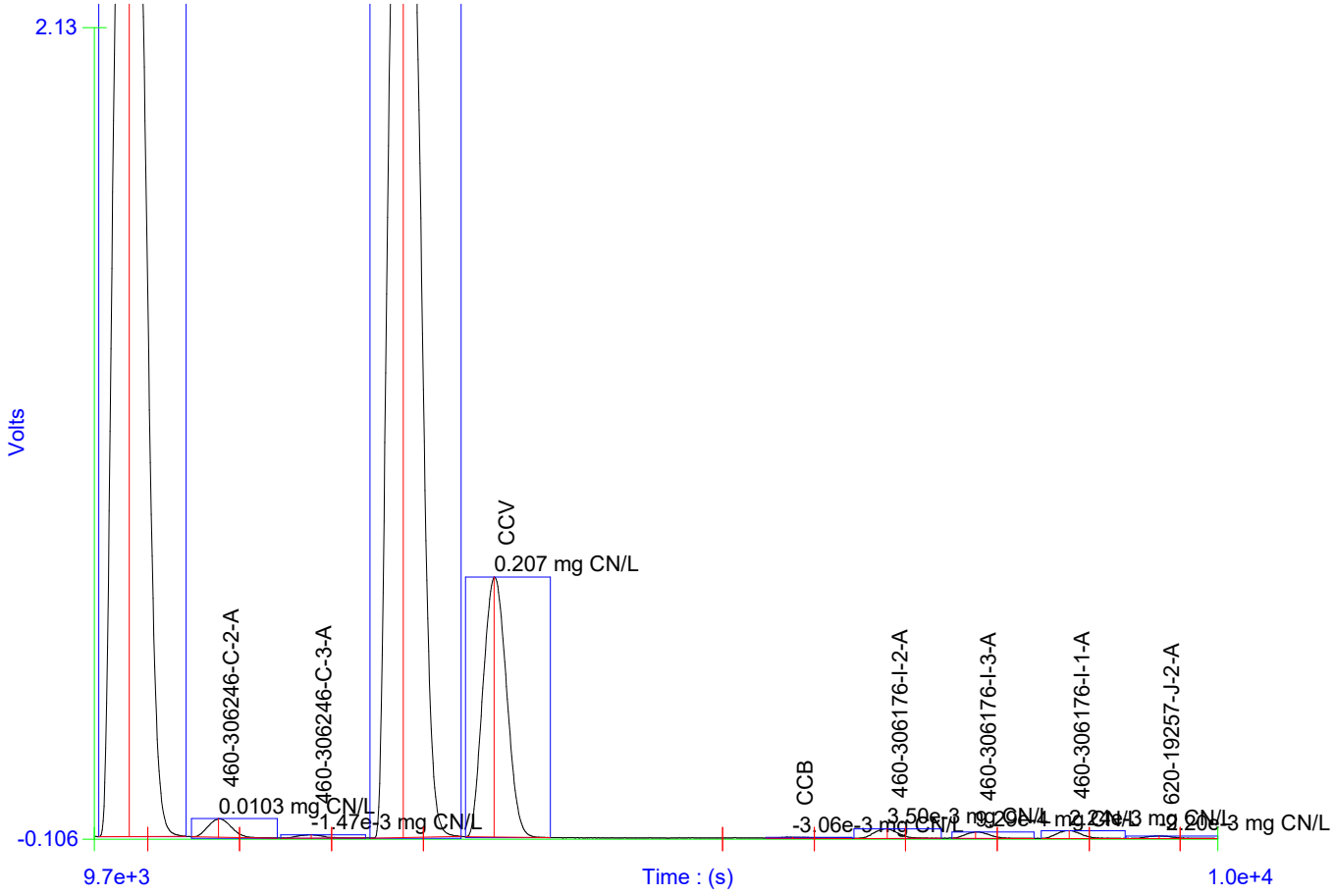
Channel 1 (Cyanide) - Set: 14 / 18



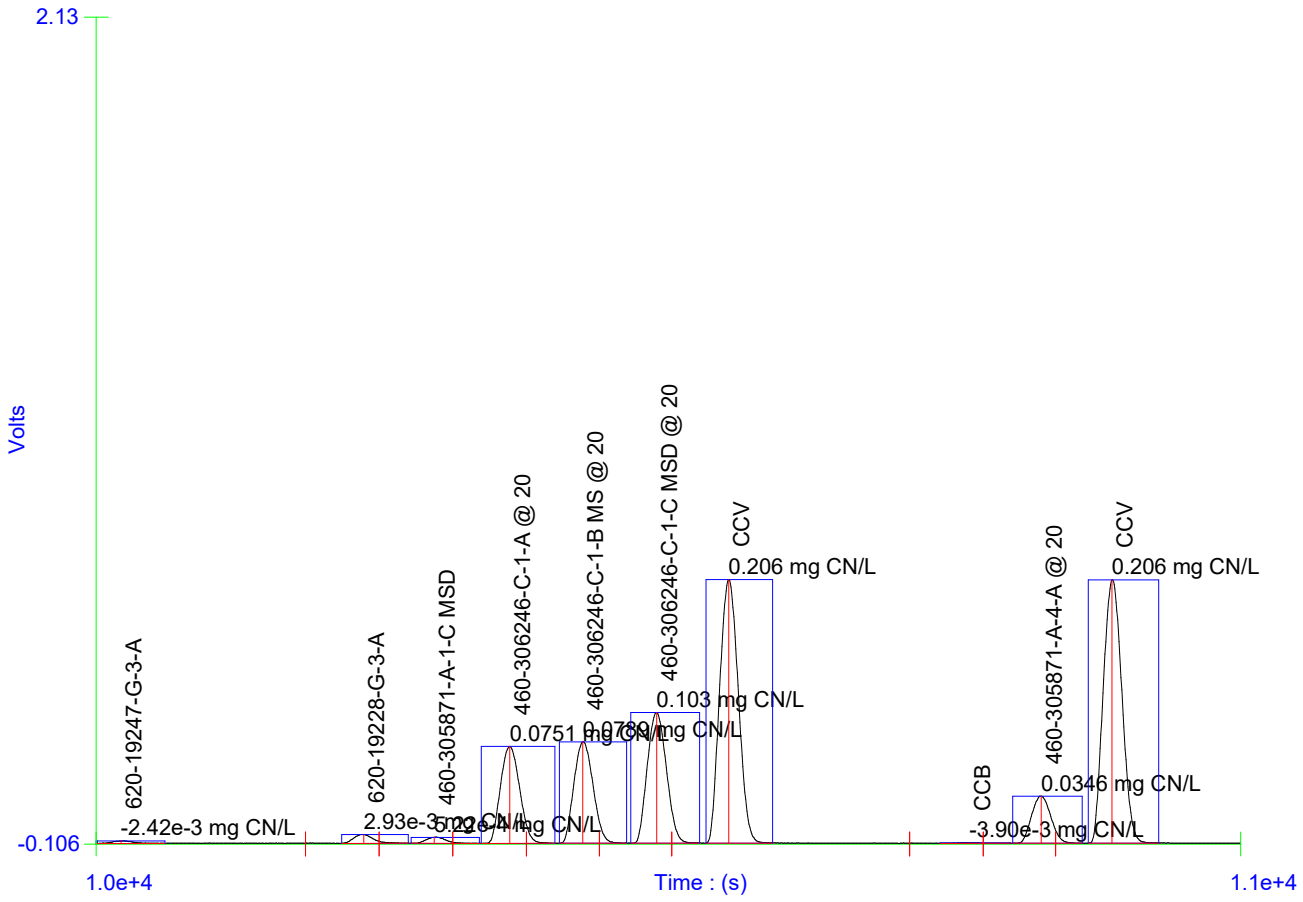
Channel 1 (Cyanide) - Set: 15 / 18



Channel 1 (Cyanide) - Set: 16 / 18



Channel 1 (Cyanide) - Set: 17 / 18

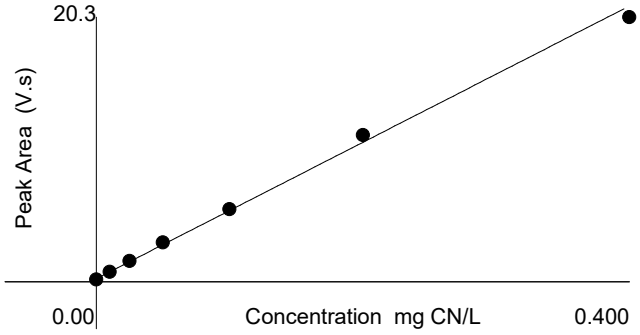


Channel 1 (Cyanide) - Set: 18 / 18

Table : 1 (Cyanide)

	Known Conc. (mg CN/L)	Rep.	Peak Area (V.s)	Peak Height (V)	% RSD	% Residual	Det. Conc (mg CN/L)	Detection Date	Detection Time
1	0.400	1	20.3	1.25	0.0	4.1	0.383	6/23/2024	2:05:00 PM
2	0.200	1	11.3	0.719	0.0	-5.2	0.210	6/23/2024	2:05:55 PM
3	0.100	1	5.55	0.353	0.0	-1.6	0.101	6/23/2024	2:06:47 PM
4	0.0500	1	3.02	0.192	0.0	-5.7	0.0530	6/23/2024	2:07:40 PM
5	0.0250	1	1.60	0.101	0.0	-3.4	0.0260	6/23/2024	2:08:33 PM
6	0.0100	1	0.759	0.0481	0.0	0.4	9.98e-3	6/23/2024	2:09:25 PM
7	0.00	1	0.173	0.0108			-1.20e-3	6/23/2024	2:10:18 PM

Figure : 1 (Cyanide)



Area = 52.3 * Conc + 0.239
Conc = 0.0191 * Area - 4.51e-3
Correlation Coefficient (r) = 0.99971

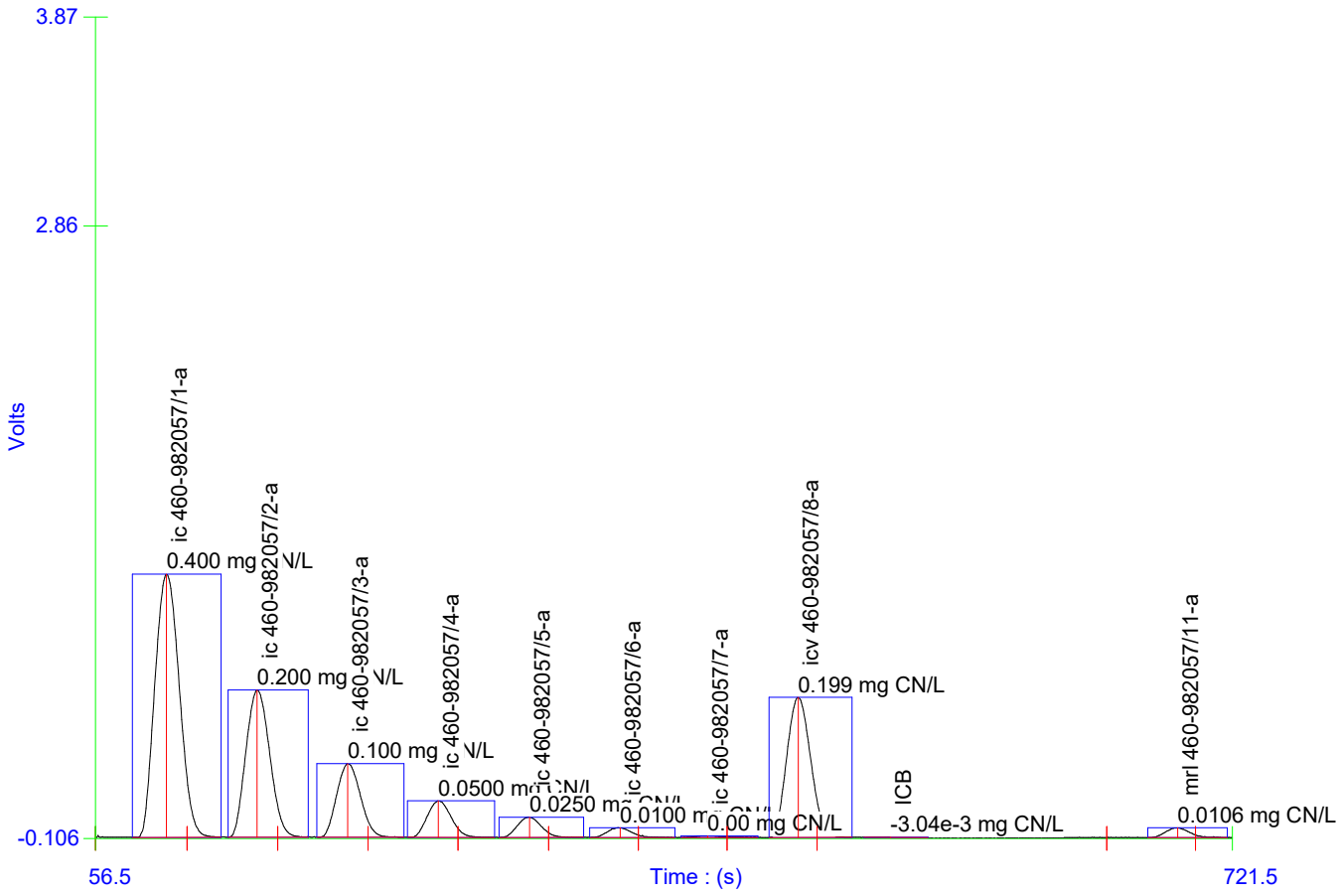
Weighting : 1/x

Original Run Filename: OM_6-25-2024_01-09-51PM.OMN Created: 6/25/2024 1:09:51 PM
Original Run Author's Signature: [EdiLachat]
Current Run Filename: OM_6-25-2024_01-09-51PM.OMN Last Modified: 6/25/2024 2:41:40 PM
Current Run Author's Signature: [EdiLachat]
Description: Default New Run

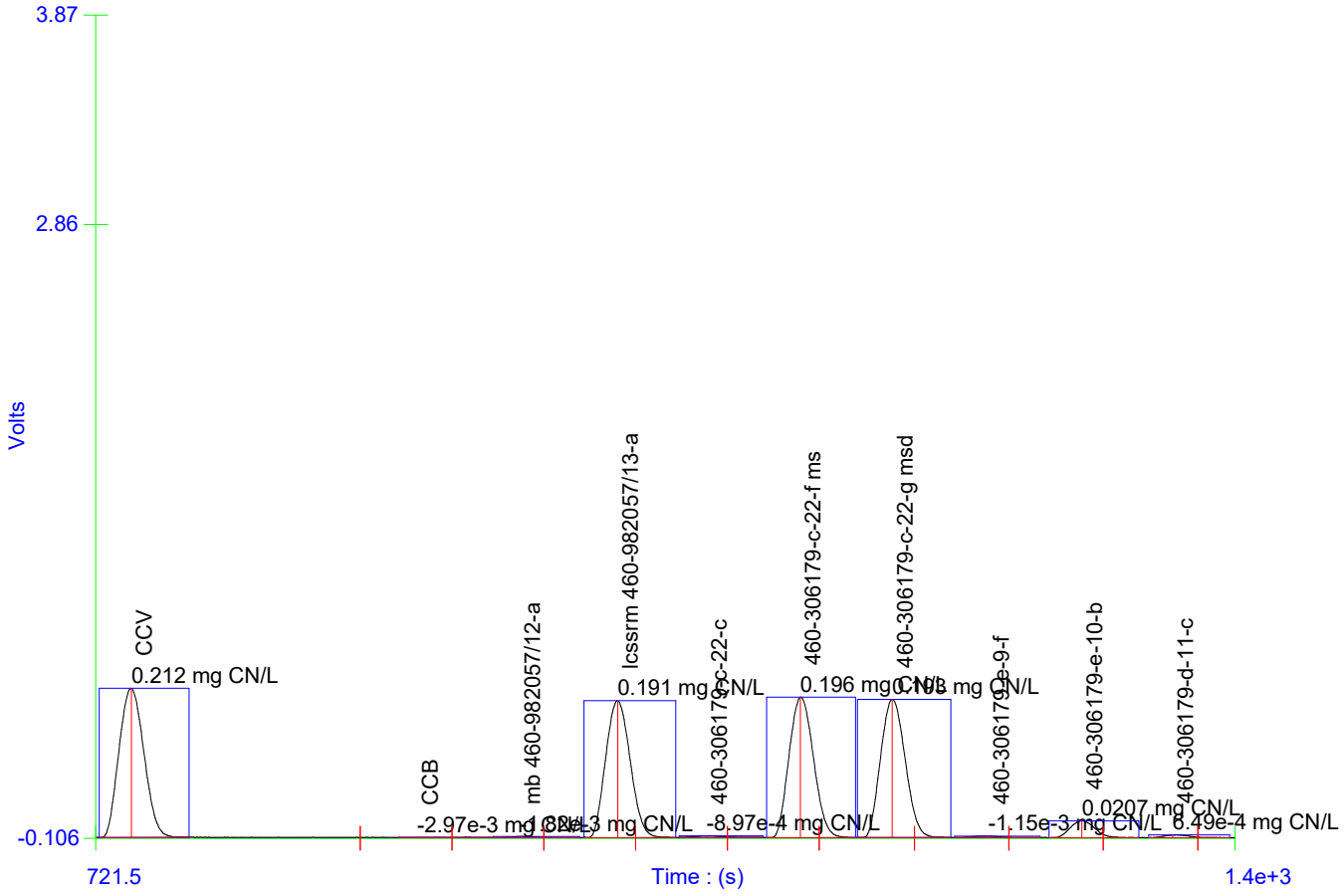
Sample	Cup No.	Channel 1 Cyanide Conc. (mg CN/L)	Channel 1 Cyanide Area (V.s)	Detection Time
ic 460-982057/1-a	1	0.400	21.0	6/25/2024@1:10:53 PM
ic 460-982057/2-a	2	0.200	11.5	6/25/2024@1:11:46 PM
ic 460-982057/3-a	3	0.100	5.70	6/25/2024@1:12:39 PM
ic 460-982057/4-a	4	0.0500	2.84	6/25/2024@1:13:32 PM
ic 460-982057/5-a	5	0.0250	1.58	6/25/2024@1:14:25 PM
ic 460-982057/6-a	6	0.0100	0.760	6/25/2024@1:15:18 PM
ic 460-982057/7-a	7	0.00	0.122	6/25/2024@1:16:11 PM
icv 460-982057/8-a	8	0.199	10.9	6/25/2024@1:17:03 PM
Calibration:	Table/Fig. : 1			
ICB	9	-3.04e-3	0.0217	6/25/2024@1:17:56 PM
mrl 460-982057/11-a	10	0.0106	0.759	6/25/2024@1:20:45 PM
CCV	S8	0.212	11.7	6/25/2024@1:21:37 PM
Known Conc:		0.200		
CCB	S9	-2.97e-3	0.0255	6/25/2024@1:24:28 PM
Known Conc:		0.00		
mb 460-982057/12-a	11	-1.82e-3	0.0879	6/25/2024@1:25:19 PM
lcssrm 460-982057/13-a	12	0.191	10.5	6/25/2024@1:26:11 PM
460-306179-c-22-c	13	-8.97e-4	0.137	6/25/2024@1:27:03 PM
460-306179-c-22-f ms	14	0.196	10.8	6/25/2024@1:27:54 PM
460-306179-c-22-g msd	15	0.193	10.6	6/25/2024@1:28:46 PM
460-306179-e-9-f	16	-1.15e-3	0.124	6/25/2024@1:29:39 PM
460-306179-e-10-b	17	0.0207	1.30	6/25/2024@1:30:32 PM
460-306179-d-11-c	18	6.49e-4	0.221	6/25/2024@1:31:25 PM
460-306179-c-12-d	19	3.99e-3	0.401	6/25/2024@1:32:18 PM
460-306179-c-13-c	20	-1.32e-3	0.115	6/25/2024@1:33:11 PM
CCV	S8	0.212	11.6	6/25/2024@1:34:03 PM
Known Conc:		0.200		
CCB	S9	-2.61e-3	0.0452	6/25/2024@1:36:54 PM
Known Conc:		0.00		
460-306179-e-14-c	21	-1.15e-3	0.124	6/25/2024@1:37:47 PM
460-306179-d-15-b	22	-4.46e-4	0.162	6/25/2024@1:38:40 PM
460-306179-e-16-d	23	2.95e-4	0.202	6/25/2024@1:39:32 PM
460-306179-d-17-a	24	-1.13e-3	0.125	6/25/2024@1:40:24 PM
460-306179-d-18-c	25	-1.69e-3	0.0947	6/25/2024@1:41:16 PM
460-306179-d-18-f ms	26	0.210	11.5	6/25/2024@1:42:08 PM
460-306179-d-18-g msd	27	0.212	11.6	6/25/2024@1:42:59 PM
460-306179-c-19-b	28	0.0326	1.94	6/25/2024@1:43:51 PM
460-306179-c-20-b	29	2.73e-3	0.333	6/25/2024@1:44:43 PM
460-306179-d-21-b	30	-1.85e-3	0.0861	6/25/2024@1:45:34 PM
CCV	S8	0.212	11.6	6/25/2024@1:46:27 PM
Known Conc:		0.200		
CCB	S9	-3.10e-3	0.0188	6/25/2024@1:49:18 PM
Known Conc:		0.00		
460-306179-c-23-b	31	-1.76e-3	0.0910	6/25/2024@1:50:11 PM
460-306179-c-24-d	32	-2.31e-3	0.0611	6/25/2024@1:51:05 PM
460-306179-d-25-a	33	-4.68e-4	0.161	6/25/2024@1:51:58 PM
460-306179-c-27-d	34	-1.24e-3	0.119	6/25/2024@1:52:51 PM
460-306180-c-2-a	35	4.52e-3	0.430	6/25/2024@1:53:44 PM
460-306180-c-4-a	36	2.65e-4	0.200	6/25/2024@1:54:36 PM
mb 460-982058/1-a	37	-2.24e-3	0.0649	6/25/2024@1:55:29 PM
lcssrm 460-982058/2-a	38	0.200	11.0	6/25/2024@1:56:22 PM
460-306215-e-1-d	39	-2.11e-3	0.0721	6/25/2024@1:57:14 PM
460-306215-e-1-e ms	40	0.116	6.46	6/25/2024@1:58:06 PM
CCV	S8	0.212	11.6	6/25/2024@1:58:58 PM
Known Conc:		0.200		
CCB	S9	-3.12e-3	0.0176	6/25/2024@2:01:49 PM
Known Conc:		0.00		
460-306215-e-1-f msd	41	0.188	10.4	6/25/2024@2:02:41 PM

460-306181-a-2-b	42	-1.50e-3	0.105	6/25/2024@2:03:33 PM
460-306181-a-4-d	43	-5.27e-4	0.157	6/25/2024@2:04:25 PM
460-306181-a-6-c	44	0.117	6.52	6/25/2024@2:05:16 PM
mb 460-982045/1-a	45	-2.78e-4	0.171	6/25/2024@2:06:08 PM
lcs 460-982045/2-a	46	0.107	5.95	6/25/2024@2:07:01 PM
mb 460-982040/1-b	47	-8.44e-4	0.140	6/25/2024@2:07:55 PM
460-306246-c-1-i	48	1.18	64.1	6/25/2024@2:08:48 PM
460-306246-c-1-j ms	49	1.21	65.4	6/25/2024@2:09:41 PM
460-306246-c-1-k msd	50	1.22	65.8	6/25/2024@2:10:34 PM
CCV	S8	0.212	11.6	6/25/2024@2:12:32 PM
Known Conc:		0.200		
CCB	S9	-2.80e-3	0.0349	6/25/2024@2:15:24 PM
Known Conc:		0.00		
460-306246-c-2-c	51	0.0135	0.915	6/25/2024@2:16:16 PM
460-306246-c-3-c	52	-8.54e-4	0.140	6/25/2024@2:17:08 PM
460-306246-c-4-c	53	1.15	62.1	6/25/2024@2:18:00 PM
460-305781-b-1-e	54	0.0111	0.786	6/25/2024@2:18:52 PM
460-306264-a-1-b	55	0.0183	1.17	6/25/2024@2:19:43 PM
460-306401-a-1-b	56	9.07e-3	0.676	6/25/2024@2:20:35 PM
mb 460-982056/1-a	57	-5.66e-4	0.155	6/25/2024@2:21:27 PM
lcs 460-982056/2-a	58	0.110	6.13	6/25/2024@2:22:19 PM
460-305781-b-1-f	59	-2.66e-3	0.0423	6/25/2024@2:23:10 PM
460-305781-b-1-g ms	60	0.0378	2.23	6/25/2024@2:24:02 PM
CCV	S8	0.211	11.5	6/25/2024@2:24:55 PM
Known Conc:		0.200		
CCB	S9	-3.44e-3	4.29e-4	6/25/2024@2:27:46 PM
Known Conc:		0.00		
460-305781-b-1-h msd	61	-2.59e-3	0.0462	6/25/2024@2:28:39 PM
460-306264-a-1-c	62	0.0166	1.08	6/25/2024@2:29:34 PM
460-306401-a-1-c	63	-3.37e-3	4.18e-3	6/25/2024@2:30:26 PM
460-306246-c-1-i@20	64	0.120	6.64	6/25/2024@2:31:19 PM
460-306246-c-1-j ms@20	65	0.120	6.64	6/25/2024@2:32:12 PM
460-306246-c-1-k msd@20	66	0.123	6.82	6/25/2024@2:33:05 PM
460-306246-c-4-c@20	67	0.103	5.75	6/25/2024@2:33:57 PM
CCV	S8	0.212	11.6	6/25/2024@2:36:48 PM
Known Conc:		0.200		
CCB	S9	-3.01e-3	0.0234	6/25/2024@2:39:40 PM
Known Conc:		0.00		

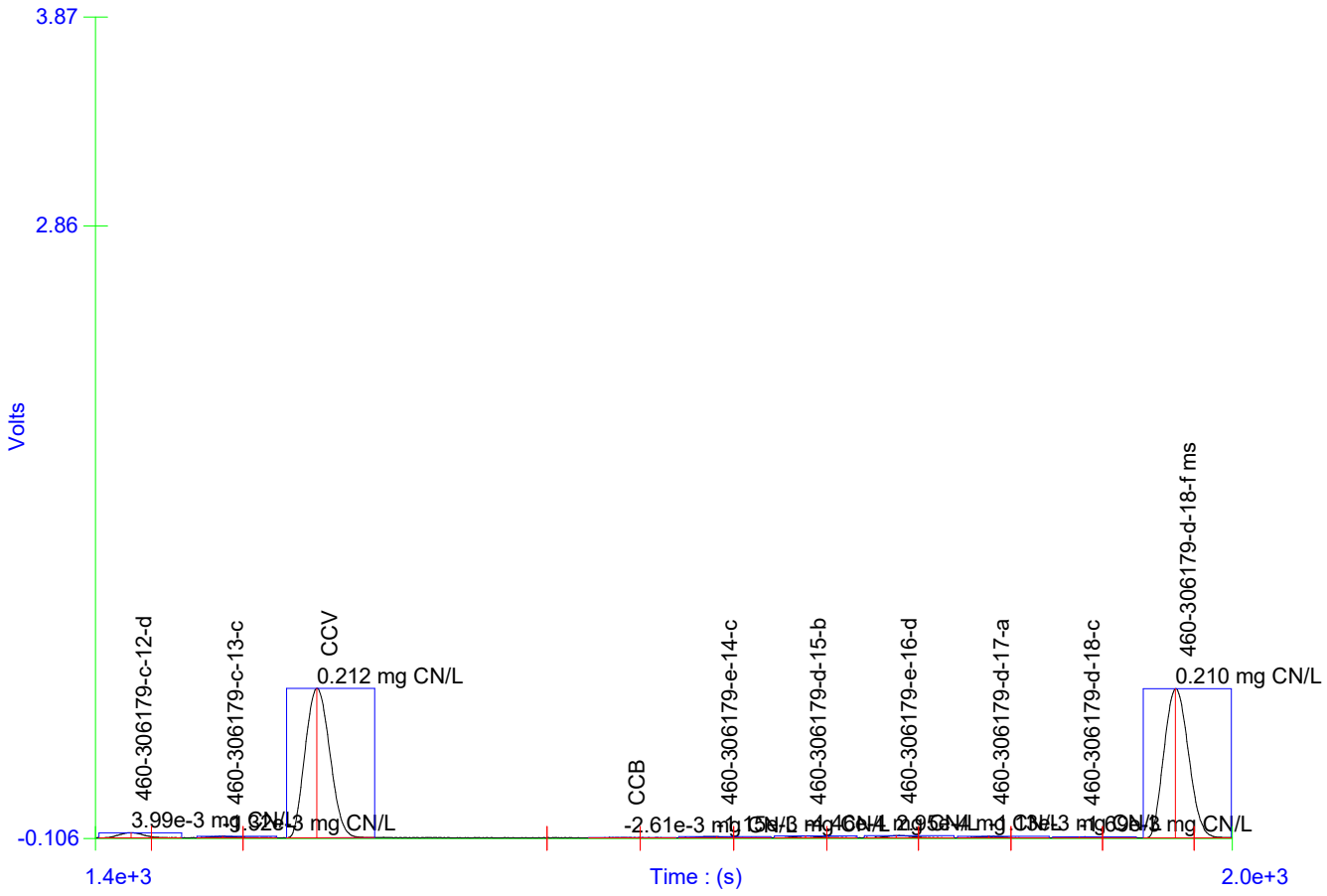
Channel 1 (Cyanide) - Set: 1 / 9



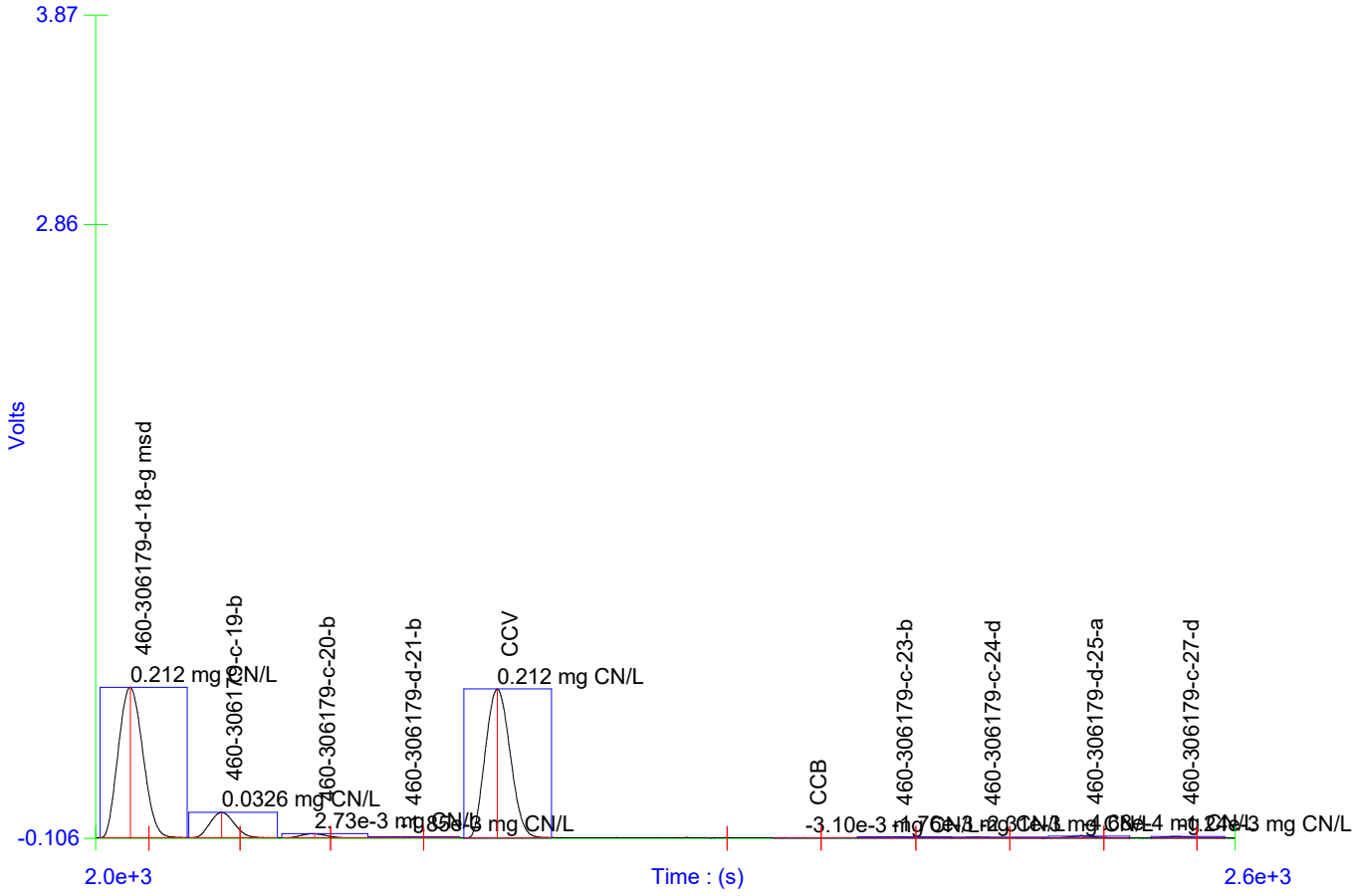
Channel 1 (Cyanide) - Set: 2 / 9



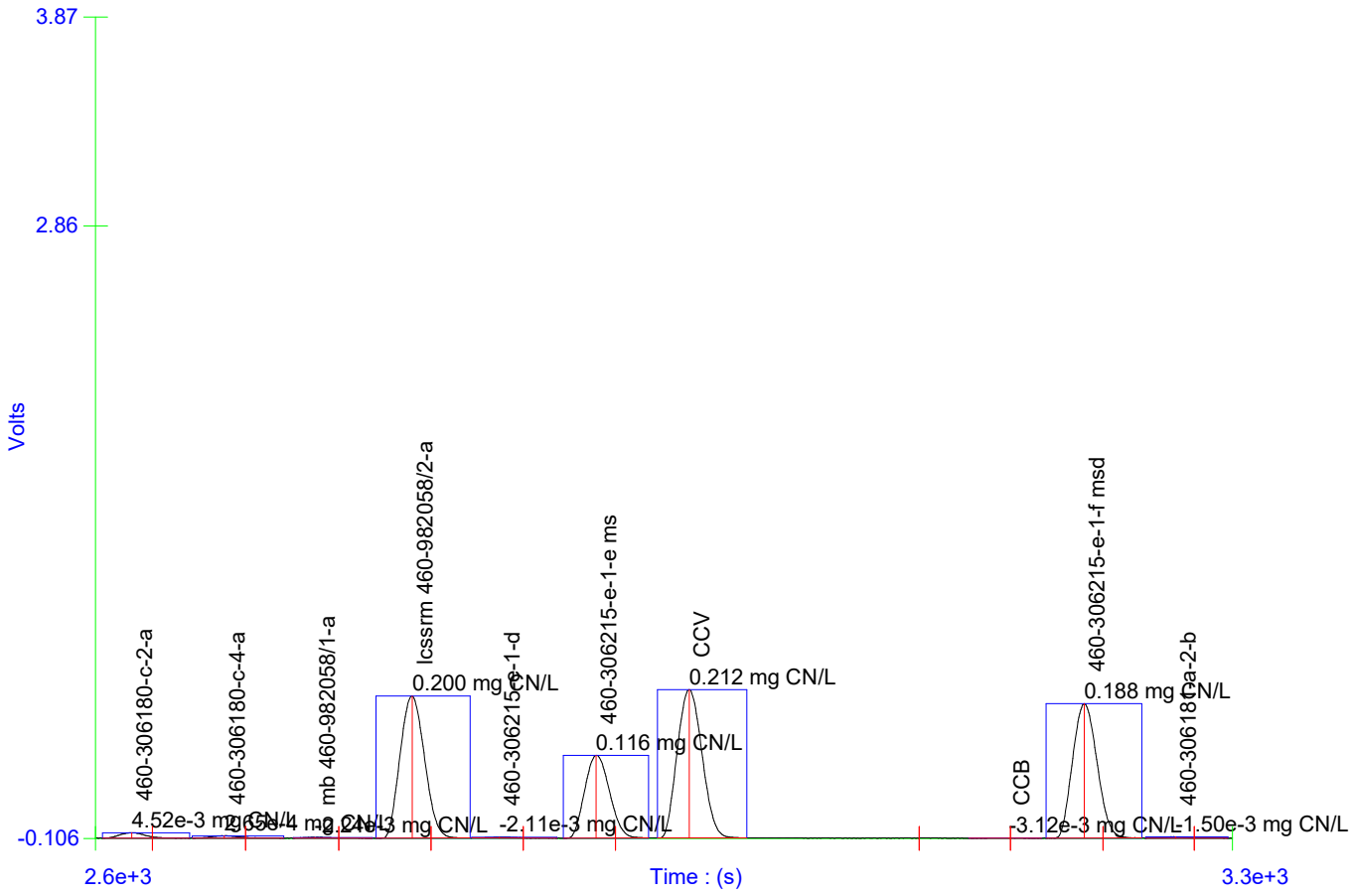
Channel 1 (Cyanide) - Set: 3 / 9



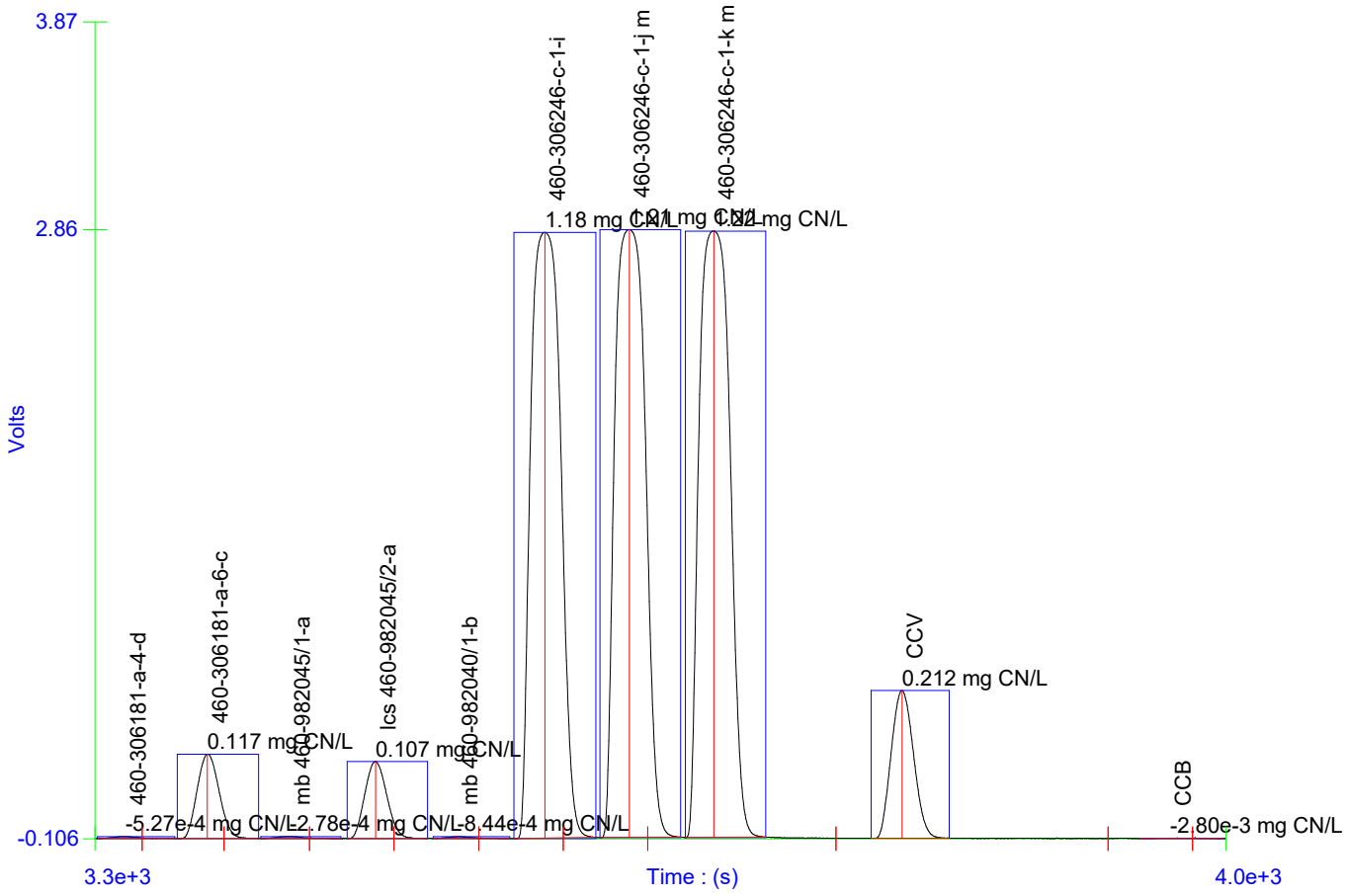
Channel 1 (Cyanide) - Set: 4 / 9



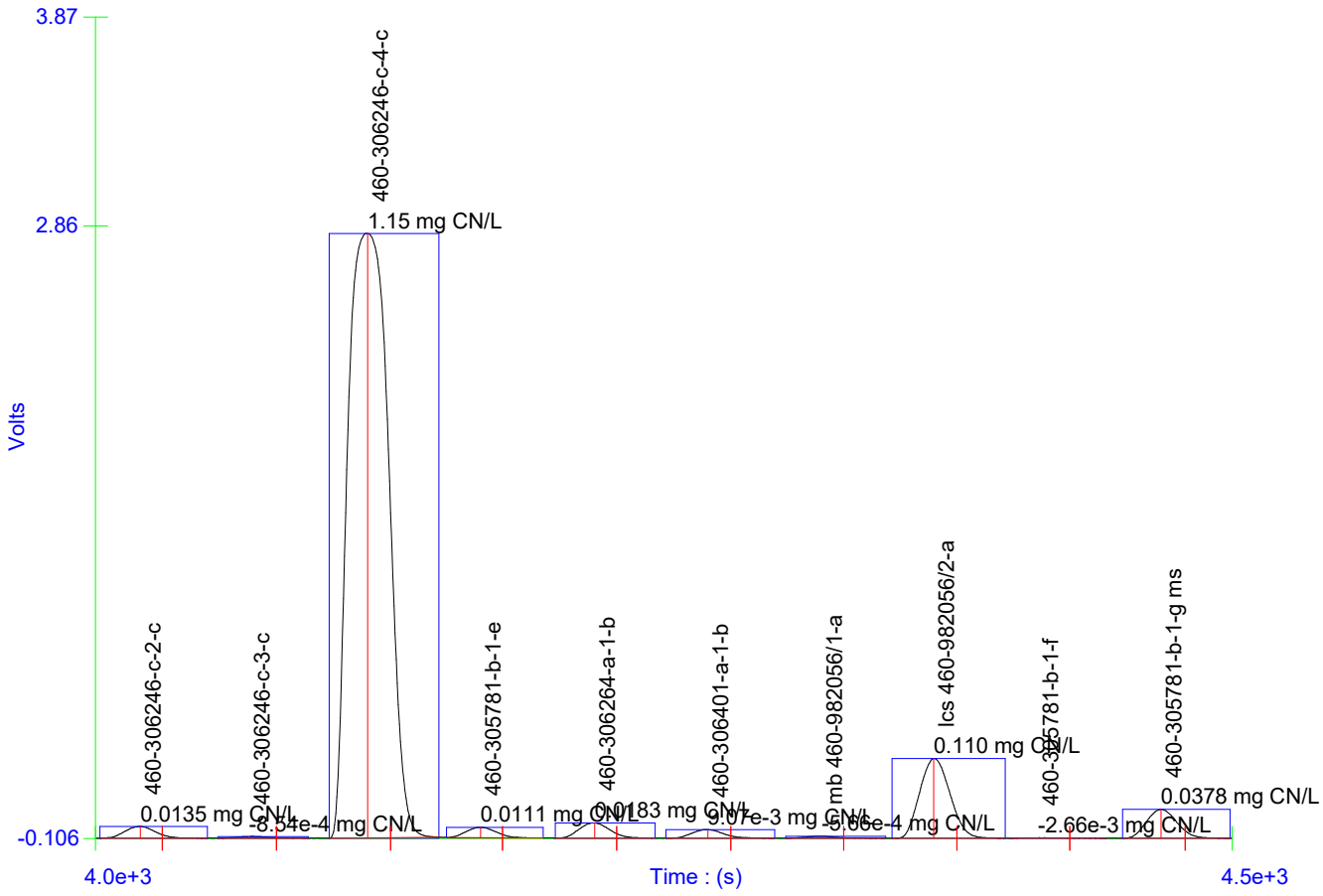
Channel 1 (Cyanide) - Set: 5 / 9



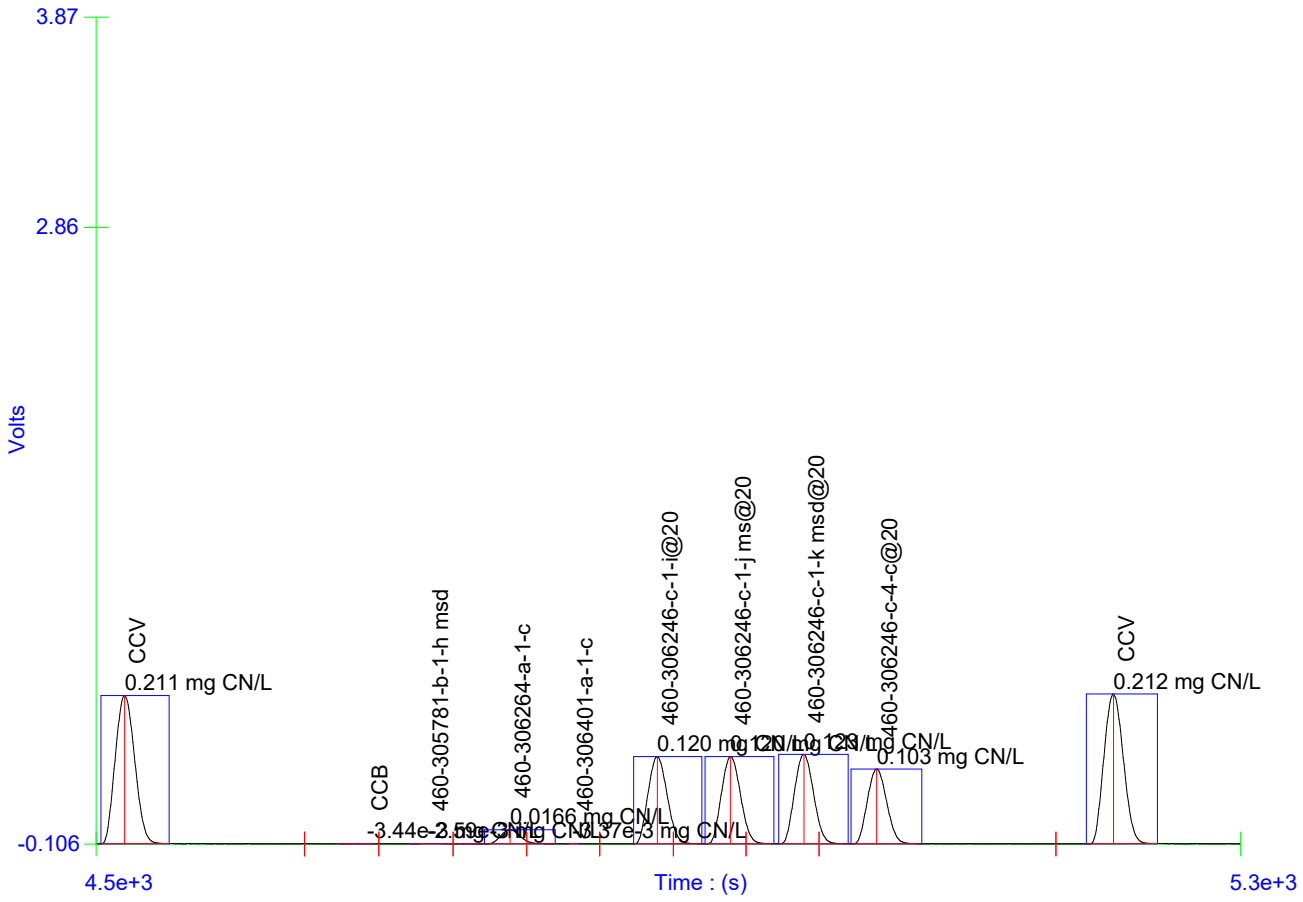
Channel 1 (Cyanide) - Set: 6 / 9



Channel 1 (Cyanide) - Set: 7 / 9



Channel 1 (Cyanide) - Set: 8 / 9

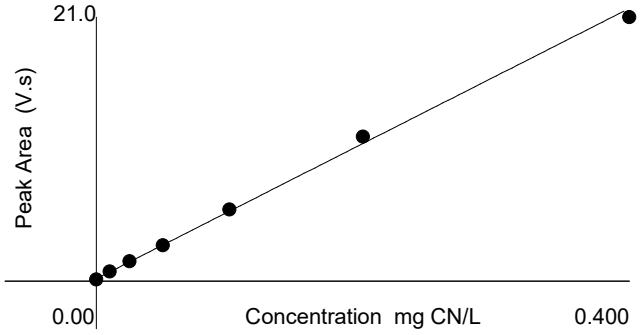


Channel 1 (Cyanide) - Set: 9 / 9

Table : 1 (Cyanide)

	Known Conc. (mg CN/L)	Rep.	Peak Area (V.s)	Peak Height (V)	% RSD	% Residual	Det. Conc (mg CN/L)	Detection Date	Detection Time
1	0.400	1	21.0	1.28	0.0	3.2	0.386	6/25/2024	1:10:53 PM
2	0.200	1	11.5	0.713	0.0	-4.9	0.210	6/25/2024	1:11:46 PM
3	0.100	1	5.70	0.357	0.0	-2.3	0.102	6/25/2024	1:12:39 PM
4	0.0500	1	2.84	0.177	0.0	1.4	0.0492	6/25/2024	1:13:32 PM
5	0.0250	1	1.58	0.0982	0.0	-3.1	0.0259	6/25/2024	1:14:25 PM
6	0.0100	1	0.760	0.0470	0.0	-4.5	0.0106	6/25/2024	1:15:18 PM
7	0.00	1	0.122	7.49e-3			-1.18e-3	6/25/2024	1:16:11 PM

Figure : 1 (Cyanide)



Area = 53.9 * Conc + 0.188
Conc = 0.0185 * Area - 3.44e-3
Correlation Coefficient (r) = 0.99979

Weighting : 1/x

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Edison Job No.: 460-306246-1

SDG No.:

Batch Number: 981700 Batch Start Date: 06/22/24 21:57 Batch Analyst: Govekar, Vipul B

Batch Method: 9012B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Matrix	Basis	InitialAmount	FinalAmount	SulfideCheck	ChlorineCheck	DistillpHCheck	WTcn6ppm_ICV 01209
ICV 460-981700/8		9012B, 9012B			6.0 mL	6.0 mL			>12	0.2 mL
CCV 460-981700/9		9012B, 9012B			6.0 mL	6.0 mL			>12	
MRL 460-981700/12		9012B, 9012B			6.0 mL	6.0 mL			>12	
MB 460-981700/13		9012B, 9012B			6.0 mL	6.0 mL			>12	
LCS 460-981700/14		9012B, 9012B			6.0 mL	6.0 mL			>12	
460-306246-C-1	EGCMW-06	9012B, 9012B	Water	T	6.0 mL	6.0 mL	N	N	>12	
460-306246-C-1 MS	EGCMW-06	9012B, 9012B	Water	T	6.0 mL	6.0 mL	N	N	>12	
460-306246-C-1 MSD	EGCMW-06	9012B, 9012B	Water	T	6.0 mL	6.0 mL	N	N	>12	
460-306246-C-2	EGCMW-07	9012B, 9012B	Water	T	6.0 mL	6.0 mL	N	N	>12	
460-306246-C-3	FB-061924	9012B, 9012B	Water	T	6.0 mg	6.0 mL	N	N	>12	
460-306246-C-4	DUP-01	9012B, 9012B	Water	T	6.0 mL	6.0 mL	N	N	>12	

Lab Sample ID	Client Sample ID	Method Chain	Matrix	Basis	WTcn6ppm_Pri 01233	WTcnCmplex-IM 01266				
ICV 460-981700/8		9012B, 9012B								
CCV 460-981700/9		9012B, 9012B			0.2 mL					
MRL 460-981700/12		9012B, 9012B			0.01 mL					
MB 460-981700/13		9012B, 9012B								
LCS 460-981700/14		9012B, 9012B				0.1 mL				
460-306246-C-1	EGCMW-06	9012B, 9012B	Water	T						
460-306246-C-1 MS	EGCMW-06	9012B, 9012B	Water	T		0.2 mL				
460-306246-C-1 MSD	EGCMW-06	9012B, 9012B	Water	T		0.2 mL				
460-306246-C-2	EGCMW-07	9012B, 9012B	Water	T						
460-306246-C-3	FB-061924	9012B, 9012B	Water	T						

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Edison Job No.: 460-306246-1

SDG No.:

Batch Number: 981700 Batch Start Date: 06/22/24 21:57 Batch Analyst: Govekar, Vipul B

Batch Method: 9012B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Matrix	Basis	WTcn6ppm_Pri 01233	WTcnCmplex-IM 01266				
460-306246-C-4	DUP-01	9012B, 9012B	Water	T						

Batch Notes	
Balance ID	#86
Pipette/Syringe/Dispenser ID	P-04 & P-89 & P-80
Thermometer ID	N2
Distillation Temperature	start temp 120 end temp 121 Degrees C
Sodium Hydroxide ID	C - 3294-24 Exp 12/14/24
Sulfamic Acid ID	C - 3293-24 Exp 12/14/24
Sulfuric Acid Reagent ID Number	C - 3292-24 Exp 12/14/24
Distillation Start Time	06/22/2024 18:05
Distillation End Time	06/22/2024 18:35

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Edison Job No.: 460-306246-1

SDG No.:

Batch Number: 982040 Batch Start Date: 06/25/24 07:59 Batch Analyst: Kreipke, Bridgitte J

Batch Method: FILTRATION Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Matrix	Basis	InitialAmount	FinalAmount				
MB 460-982040/1		FILTRATION, 9012B, 9012B			10 mL	10 mL				
460-306246-C-1	EGCMW-06	FILTRATION, 9012B, 9012B	Water	D	10 mL	10 mL				
460-306246-C-1 MS	EGCMW-06	FILTRATION, 9012B, 9012B	Water	D	10 mL	10 mL				
460-306246-C-1 MSD	EGCMW-06	FILTRATION, 9012B, 9012B	Water	D	10 mL	10 mL				
460-306246-C-2	EGCMW-07	FILTRATION, 9012B, 9012B	Water	D	10 mL	10 mL				
460-306246-C-3	FB-061924	FILTRATION, 9012B, 9012B	Water	D	10 mL	10 mL				
460-306246-C-4	DUP-01	FILTRATION, 9012B, 9012B	Water	D	10 mL	10 mL				

Batch Notes	
Pipette/Syringe/Dispenser ID	P-15, P-03
Filter ID	Agilent / Nylon 0.45 um

Basis	Basis Description
D	Dissolved

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Edison Job No.: 460-306246-1

SDG No.:

Batch Number: 982045 Batch Start Date: 06/25/24 08:09 Batch Analyst: Kreipke, Bridgitte J

Batch Method: 9012B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Matrix	Basis	InitialAmount	FinalAmount	SulfideCheck	ChlorineCheck	DistillpHCheck	WTcnCmplex-IM 01269
MB 460-982045/1		9012B, 9012B			6.0 mL	6.0 mL			>12	
LCS 460-982045/2		9012B, 9012B			6.0 mL	6.0 mL			>12	0.1 mL
MB 460-982040/1-A		9012B, 9012B			6.0 mL	6.0 mL			>12	
460-306246-C-1-G	EGCMW-06	9012B, 9012B	Water	D	6.0 mL	6.0 mL	N	N	>12	
460-306246-C-1-H MS	EGCMW-06	9012B, 9012B	Water	D	6.0 mL	6.0 mL	N	N	>12	0.2 mL
460-306246-C-1-F MSD	EGCMW-06	9012B, 9012B	Water	D	6.0 mL	6.0 mL	N	N	>12	0.2 mL
460-306246-C-2-B	EGCMW-07	9012B, 9012B	Water	D	6.0 mL	6.0 mL	N	N	>12	
460-306246-C-3-B	FB-061924	9012B, 9012B	Water	D	6.0 mL	6.0 mL	N	N	>12	
460-306246-C-4-B	DUP-01	9012B, 9012B	Water	D	6.0 mL	6.0 mL	N	N	>12	

Batch Notes	
Balance ID	#86
Pipette/Syringe/Dispenser ID	P-03, P15
Thermometer ID	N2
Distillation Temperature	start temp 121 end temp 120 Degrees C
Sodium Hydroxide ID	C - 3315-24 Exp 12/21/24
Sulfamic Acid ID	C - 3293-24 Exp 12/14/24
Sulfuric Acid Reagent ID Number	C - 3292-24 Exp 12/14/24
Distillation Start Time	06/25/2024 10:20
Distillation End Time	06/25/2024 10:50
Chlorination Start Time	01/01/1900 00:00
Chlorination End Time	01/01/1900 00:00
Batch Comment	No chlorination, could not delete timestamp.

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Edison Job No.: 460-306246-1

SDG No.:

Batch Number: 982045 Batch Start Date: 06/25/24 08:09 Batch Analyst: Kreipke, Bridgitte J

Batch Method: 9012B Batch End Date:

Basis	Basis Description
D	Dissolved

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Edison Job No.: 460-306246-1

SDG No.:

Batch Number: 982057 Batch Start Date: 06/25/24 09:03 Batch Analyst: Kreipke, Bridgitte J

Batch Method: 9012B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Matrix	Basis	InitialAmount	FinalAmount	DistillpHCheck	WTcn6ppm_ICV 01211	WTcn6ppm_Pri 01235	
ICV 460-982057/8		9012B, 9012B			6.0 mL	6.0 mL	>12	0.2 mL		
CCV 460-982057/9		9012B, 9012B			6.0 mL	6.0 mL	>12		0.2 mL	
MRL 460-982057/11		9012B, 9012B			6.0 mL	6.0 mL	>12		0.01 mL	
MB 460-982057/12		9012B, 9012B			6.0 mL	6.0 mL	>12			

Batch Notes	
Balance ID	#86
Pipette/Syringe/Dispenser ID	P-03, P15, P-80
Thermometer ID	N2
Distillation Temperature	start temp 120 end temp 121 Degrees C
Sodium Hydroxide ID	C - 3315-24 Exp 12/21/24
Sulfamic Acid ID	C - 3293-24 Exp 12/14/24
Sulfuric Acid Reagent ID Number	C - 3292-24 Exp 12/14/24
Distillation Start Time	06/25/2024 11:35
Distillation End Time	06/25/2024 12:05

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Shipping and Receiving Documents

Chain of Custody Record

674235

eurofins | Environment Testing America

Address: _____

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

TAL-8210

Client Contact	Project Manager: Chris Morris	Site Contact: Tom Johansen	Date: 6/19/24	COC No:
Company Name GEI Consultants Inc.	Tel/Email: cmorris@geiconsultants.com	Lab Contact: Melissa Haas	Carrier: Test America	1 of 1 COCs
Address 1000 New York Ave Suite B	Analysis Turnaround Time			Sampler: C. Hayes
City/State/Zip Huntington Station NY 11746	☐ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone 631-760-4300	TAT if different from Below Standard			Walk-in Client:
Fax 631-760-9301	☐ 2 weeks			Lab Sampling:
Project Name National Grid - Downstate	☐ 1 week			Job / SDG No.: 306246
Site. East Garden City	☐ 2 days			
PO# 1905774	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	9012B-Cyanide, Tot	Sample Specific Notes:
EGCMW-06	6/19/24	1045	G	GW	9			X	MS/MSD
EGCMW-07		1200	G	GW	3			X	
FB-061924		1330	G	GW	3			X	
DUP-01	↓	—	G	GW	3			X	

460-306246 Chain of Custody

Page 104 of 106

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☐ Disposal by Lab ☐ Archive for_____ Months

Special Instructions/QC Requirements & Comments: CAT B Report 2 Ambers - Turbid Sample - Lab Filter + preserve CN.

Custody Seals Intact ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd:_____ Corr'd:_____ Therm ID No :_____

Relinquished by	Company	Date/Time	Received by	Company	Date/Time
Chris Hayes	GEI	6/19/24			6/19/24 18:35
Relinquished by	Company	Date/Time	Received by	Company	Date/Time
				ETA 6/19/24	17:30
Relinquished by	Company	Date/Time	Received in Laboratory by	Company	Date/Time
	ETA 6/19/24	19:50		ETA	6/19 19:50

10/cs ZR #9 0.6/1.0

9:10:27 PM 6/26/2024

Eurofins TestAmerica Edison
Receipt Temperature and pH Log

Job Number: 306246

Number of Coolers: 1 IR Gun # 9

Cooler Temperatures

	RAW	CORRECTED		RAW	CORRECTED		RAW	CORRECTED
Cooler #1:	0.1 °C	1.0 °C	Cooler #4:	°C	°C	Cooler #7:	°C	°C
Cooler #2:	°C	°C	Cooler #5:	°C	°C	Cooler #8:	°C	°C
Cooler #3:	°C	°C	Cooler #6:	°C	°C	Cooler #9:	°C	°C

TALS Sample Number	Ammonia (pH<2)	COD (pH<2)	Nitrate Nitrite (pH<2)	Metals* (pH<2)	Hardness (pH<2)	Pest (pH 5-9)	EPH or QAM (pH<2)	Phenols (pH<2)	Sulfide (pH>9)	TKN (pH<2)	TOC (pH<2)	Total Cyanide (pH>12)	Total Phos (pH<2)	Other	Other
1												>12			
2												>12			
3												>12			
4												>12			

If pH adjustments are required record the information below:

Sample No(s). adjusted: _____

Preservative Name/Conc.: _____ Volume of Preservative used (ml): _____

Lot # of Preservative(s): _____ Expiration Date: _____

The appropriate Project Manager and Department Manager should be notified about the samples which were pH adjusted.

* *Samples for Metal analysis which are out of compliance must be acidified at least 24 hours prior to analysis.*

Initials: MS Date: 6/19/24

Login Sample Receipt Checklist

Client: GEI Consultants, Inc.

Job Number: 460-306246-1

Login Number: 306246
List Number: 1
Creator: Rivera, Kenneth

List Source: Eurofins Edison

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Site: Downstate OMM East Garden City
Laboratory: Eurofins, Edison, NJ
Report No.: 460-306246
Reviewer: Bethany DiCaprio/GEI Consultants
Date: July 11, 2024

Samples Reviewed and Evaluation Summary

FIELD ID	LAB ID	FRACTIONS VALIDATED
EGCMW-06	460-306246-01	Total and Dissolved Cyanide
EGCMW-07	460-306246-02	Total and Dissolved Cyanide
FB-061924	460-306246-03	Total and Dissolved Cyanide
DUP-01	460-306246-04	Total and Dissolved Cyanide

Associated QC Samples:
Field Blank: FB-061924
Field Duplicate Pair: EGCMW-06/DUP-01

The above-listed groundwater samples were collected on June 19, 2024 and were analyzed for total cyanide and dissolved cyanide by SW-846 method 9012B.

The data validation was performed based on the USEPA Region 2 Standard Operating Procedure (SOP) HW-3c Cyanide Data Validation, Revision 1, (September 2016), as well as by the method referenced by the data package and professional and technical judgment.

The data were evaluated based on the following parameters:

- Data Completeness
- Holding Times and Sample Preservation
- Initial and Continuing Calibration
- Blanks
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) Results
- Laboratory Duplicate Results
- Field Duplicate Results
- Laboratory Control Sample (LCS)/LCS Duplicate (LCSD) Results
- Quantitation Limits
- Sample Quantitation and Compound Identification

All results appear usable as reported or usable with minor qualification due to sample preservation nonconformances, comparison of total and dissolved results, and field duplicate precision outliers. These results were considered valid even though some were qualified as discussed below.

The validation findings were based on the following information.

Data Completeness

The data package was found to be complete.

Holding Times and Sample Preservation

All hold time criteria were met. It should be noted that samples for dissolved cyanide were filtered and preserved at the laboratory six days after sample collection took place. The results for dissolved cyanide were qualified as estimated (J/UJ) in samples EGCMW-06, EGCMW-07, DUP-01, and FB-061924 due to the elapsed time prior to preservation of the samples.

Initial and Continuing Calibration

All criteria were met.

Blanks

Contamination was not detected in the associated method blank and instrument blank samples and field blank sample.

MS/MSD Results

MS/MSD analyses were performed on sample EGCMW-06 for total and dissolved cyanide. The sample amount was greater than four times the spike amount, therefore recovery results could not be used to evaluate method accuracy. Precision criteria were met.

Laboratory Duplicate Results

MSD analysis was performed in lieu of the laboratory duplicate analysis.

LCS Results

All recovery criteria were met.

Field Duplicate Results

Samples EGCMW-06 and DUP-01 were submitted as the field duplicate pair with this sample group. The following table summarizes the RPD of the detected analytes, which were within the acceptance criteria with the exception of total cyanide. The results for total cyanide in samples EGCMW-06 and DUP-01 were qualified as estimated (J). The direction of the bias is indeterminate.

Analyte	EGCMW-06 (mg/L)	DUP-01 (mg/L)	RPD (%)
Total Cyanide	1.5	0.69	**74, Not within 2xRL**
Dissolved Cyanide	2.4	2.1	13.3
NC – Not calculable Criteria: When both results are ≥5x the RL, RPDs must be <30%. When results are < 5x the RL, professional judgment was used to qualify results in which the absolute difference between the original and field duplicate was >2XRL			

Quantitation Limits

Results were reported which were below the reporting limit (RL)/quantitation limit (QL) and above the method detection limit (MDL). If detected, these results were qualified as estimated (J) by the laboratory. No results below the RL were detected in this sample set.

The following table lists the sample dilutions that were performed.

Sample	Analysis	Dilution/Re-analyses Performed
EGCMW-06	Total Cyanide	A 20-fold dilution was performed due to high analyte level.
	Dissolved Cyanide	A 20-fold dilution was performed due to high analyte level.
DUP-01	Total Cyanide	A 20-fold dilution was performed due to high analyte level.
	Dissolved Cyanide	A 20-fold dilution was performed due to high analyte level.

Sample Quantitation and Compound Identification

Calculations were spot-checked; no discrepancies were noted.

A review of the total and dissolved cyanide results were performed. As the dissolved analyte should be at a minimum equivalent to or less than the total result, the following table summarizes the review nonconformances for sample levels which were greater than five times the reporting limit and the validation actions taken.

Sample	Dissolved Cyanide (mg/L)	Total Cyanide (mg/L)	Dissolved > Total Exceedance	Validation Actions
EGCMW-06	2.4	1.5	60 %D	Estimate (J) the positive results for dissolved and total cyanide in these samples. Total results would be expected to be biased low and dissolved results potentially biased high.
DUP-01	2.1	0.69	204 %D	

DATA VALIDATION QUALIFIERS

U - The analyte was analyzed for, but due to blank contamination was flagged as nondetect (U). The result is usable as a nondetect.

J - Data are flagged (J) when a QC analysis fails outside the primary acceptance limits. The qualified "J" data are not excluded from further review or consideration. However, only one flag (J) is applied to a sample result, even though several associated QC analyses may fail. The 'J' data may be biased high or low or the direction of the bias may be indeterminable.

UJ - The analyte was not detected above the reported sample quantitation limit. Data are flagged (UJ) when a QC analysis fails outside the primary acceptance limits. The qualified "UJ" data are not excluded from further review or consideration. However, only one flag is applied to a sample result, even though several associated QC analyses may fail. The 'UJ' data may be biased low.

JN - The analysis indicates the presence of a compound that has been "tentatively identified" (N) and the associated numerical value represents its approximate (J) concentration.

R - Data rejected (R) based on an unacceptable QC analysis should be excluded from further review or consideration. Data are rejected when associated QC analysis results exceed the expanded control limits of the QC criteria. The rejected data are known to contain significant errors based on documented information. The data user must not use the rejected data to make environmental decisions. The presence or absence of the analyte cannot be verified.

ATTACHMENT 4

HISTORICAL TOTAL CYANIDE CONCENTRATIONS

NATIONAL GRID

EAST GARDEN CITY FORMER STEWART AVENUE HOLDER STATION

HISTORICAL TOTAL CYANIDE GROUNDWATER RESULTS

Sample ID	EGCMW-03	EGCMW-06	EGCMW-07
Units	µg/L	µg/L	µg/L
Sample Date			
June 2011	14	972 D	17
September 2011	NA	1,590	27
April 2014	63	271	7
May 2015	74	1,020	8
June 2016	113	1,110 D	4 J
May 2017	27	850 D	6
May 2018	19	1,200	25
July 2020	110	1,000	13
May 2022	54	940	7.6
June 2024	NS	1500 J	10

Notes:

µg/L: micrograms per liter

J: Estimated value

D: Reported from reanalysis at secondary dilution

NA: Not available

NS: Not sampled

Shaded values exceed the NYSDEC Class GA Groundwater (200 µg/L)