

## **ANALYTICAL RESULTS SUMMARY**

GENERAL CHEMISTRY

**PROJECT NAME : R36720**

**TETRA TECH, EMI**

**240 Continental Drive, Suite 200**

**Newark, DE - 19713**

**Phone No: 302-738-7551**

**ORDER ID : P4506**

**ATTENTION : Ava Heiss**



**Laboratory Certification ID # 20012**



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## Cover Page

**Order ID :** P4506

**Project ID :** R36720

**Client :** Tetra Tech, EMI

### Lab Sample Number

P4506-01  
P4506-02  
P4506-03  
P4506-04  
P4506-05  
P4506-06  
P4506-07  
P4506-08

### Client Sample Number

MC0JX3  
MC0JX4  
MC0JX5  
MC0JX6  
MC0JX7  
MC0JX8  
MC0JX9  
MC0JY0

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Signature : N. N. Pandya

NYDOH CERTIFICATION NO - 11376



NJDEP CERTIFICATION NO - 20012



284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

## **CASE NARRATIVE**

**Tetra Tech, EMI**

**Project Name: R36720**

**Project # N/A**

**Chemtech Project # P4506**

**Test Name: TSS**

### **A. Number of Samples and Date of Receipt:**

8 Water samples were received on 10/23/2024.

### **B. Parameters:**

According to the Chain of Custody document, the following analyses were requested: TSS. This data package contains results for TSS.

### **C. Analytical Techniques:**

The analysis of TSS was based on method SM2540 D.

### **D. QA/ QC Samples:**

The Holding Times were met for all analysis.

The Blank Spike met requirements for all samples.

The Duplicate analysis met criteria for all samples.

The Blank analysis did not indicate the presence of lab contamination.

The Calibration met the requirements.

### **E. Additional Comments:**

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I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature N. N. Pandya

**APPROVED**

Nimisha Pandya QA/QC Supervisor Pandya , 11/5/2024, 10:32:47 AM

## DATA REPORTING QUALIFIERS- INORGANIC

For reporting results, the following “ Results Qualifiers” are used:

<b>J</b>	Indicates the reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL), but greater than or equal to the Instrument Detection Limit (IDL).
<b>U</b>	Indicates the analyte was analyzed for, but not detected.
<b>ND</b>	Indicates the analyte was analyzed for, but not detected
<b>E</b>	Indicates the reported value is estimated because of the presence of interference
<b>M</b>	Indicates Duplicate injection precision not met.
<b>N</b>	Indicates the spiked sample recovery is not within control limits.
<b>S</b>	Indicates the reported value was determined by the Method of Standard Addition (MSA).
<b>*</b>	Indicates that the duplicate analysis is not within control limits.
<b>+</b>	Indicates the correlation coefficient for the MSA is less than 0.995.
<b>D</b>	Indicates the reported value is from a secondary analysis with a dilution factor. The original analysis exceeded the calibration range.
<b>M</b>	Method qualifiers “P” for ICP instrument “PM” for ICP when Microwave Digestion is used “CV” for Manual Cold Vapor AA “AV” for automated Cold Vapor AA “CA” for MIDI-Distillation Spectrophotometric “AS” for Semi -Automated Spectrophotometric “C” for Manual Spectrophotometric “T” for Titrimetric “NR” for analyte not required to be analyzed
<b>OR</b>	Indicates the analyte’s concentration exceeds the calibrated range of the instrument for that specific analysis.
<b>Q</b>	Indicates the LCS did not meet the control limits requirements
<b>H</b>	Sample Analysis Out Of Hold Time

## APPENDIX A

### QA REVIEW GENERAL DOCUMENTATION

Project #: P4506

Completed

For thorough review, the report must have the following:

#### GENERAL:

Are all original paperwork present (chain of custody, record of communication,airbill, sample management lab chronicle, login page)

✓

Check chain-of-custody for proper relinquish/return of samples

✓

Is the chain of custody signed and complete

✓

Check internal chain-of-custody for proper relinquish/return of samples /sample extracts

✓

Collect information for each project id from server. Were all requirements followed

✓

#### COVER PAGE:

Do numbers of samples correspond to the number of samples in the Chain of Custody on login page

✓

Do lab numbers and client Ids on cover page agree with the Chain of Custody

✓

#### CHAIN OF CUSTODY:

Do requested analyses on Chain of Custody agree with form I results

✓

Do requested analyses on Chain of Custody agree with the log-in page

✓

Were the correct method log-in for analysis according to the Analytical Request and Chain of Castody

✓

Were the samples received within hold time

✓

Were any problems found with the samples at arrival recorded in the Sample Management Laboratory Chronicle

✓

#### ANALYTICAL:

Was method requirement followed?

✓

Was client requirement followed?

✓

Does the case narrative summarize all QC failure?

✓

All runlogs and manual integration are reviewed for requirements

✓

All manual calculations and /or hand notations verified

✓

QA Review Signature: SOHIL JODHANI

Date: 11/05/2024

## LAB CHRONICLE

<b>OrderID:</b>	P4506	<b>OrderDate:</b>	10/23/2024 11:04:00 AM
<b>Client:</b>	Tetra Tech, EMI	<b>Project:</b>	R36720
<b>Contact:</b>	Ava Heiss	<b>Location:</b>	K61

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
<b>P4506-01</b>	<b>MC0JX3</b>	<b>WATER</b>			<b>10/21/24 14:40</b>			<b>10/23/24</b>
			TSS	SM2540 D			10/24/24 09:30	
<b>P4506-02</b>	<b>MC0JX4</b>	<b>WATER</b>			<b>10/21/24 14:00</b>			<b>10/23/24</b>
			TSS	SM2540 D			10/24/24 09:30	
<b>P4506-03</b>	<b>MC0JX5</b>	<b>WATER</b>			<b>10/21/24 15:45</b>			<b>10/23/24</b>
			TSS	SM2540 D			10/24/24 09:30	
<b>P4506-04</b>	<b>MC0JX6</b>	<b>WATER</b>			<b>10/21/24 12:00</b>			<b>10/23/24</b>
			TSS	SM2540 D			10/24/24 09:30	
<b>P4506-05</b>	<b>MC0JX7</b>	<b>WATER</b>			<b>10/21/24 13:00</b>			<b>10/23/24</b>
			TSS	SM2540 D			10/24/24 09:30	
<b>P4506-06</b>	<b>MC0JX8</b>	<b>WATER</b>			<b>10/21/24 14:30</b>			<b>10/23/24</b>
			TSS	SM2540 D			10/24/24 09:30	
<b>P4506-07</b>	<b>MC0JX9</b>	<b>WATER</b>			<b>10/21/24 12:30</b>			<b>10/23/24</b>
			TSS	SM2540 D			10/24/24 09:30	

LAB CHRONICLE

P4506-08	MC0JY0	WATER			10/21/24 12:25	10/23/24
			TSS	SM2540 D		10/24/24 09:30





# SAMPLE DATA

## Report of Analysis

Client:	Tetra Tech, EMI	Date Collected:	10/21/24 14:40
Project:	R36720	Date Received:	10/23/24
Client Sample ID:	MC0JX3	SDG No.:	P4506
Lab Sample ID:	P4506-01	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
TSS	2.80	J	1	1.00	4.00	mg/L		10/24/24 09:30	SM 2540 D-15

Comments: \_\_\_\_\_

U = Not Detected  
LOQ = Limit of Quantitation  
MDL = Method Detection Limit  
LOD = Limit of Detection  
D = Dilution  
Q = indicates LCS control criteria did not meet requirements  
H = Sample Analysis Out Of Hold Time

J = Estimated Value  
B = Analyte Found in Associated Method Blank  
\* = indicates the duplicate analysis is not within control limits.  
E = Indicates the reported value is estimated because of the presence of interference.  
OR = Over Range  
N = Spiked sample recovery not within control limits

## Report of Analysis

Client:	Tetra Tech, EMI	Date Collected:	10/21/24 14:00
Project:	R36720	Date Received:	10/23/24
Client Sample ID:	MC0JX4	SDG No.:	P4506
Lab Sample ID:	P4506-02	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
TSS	6.20		1	1.00	4.00	mg/L		10/24/24 09:30	SM 2540 D-15

Comments: \_\_\_\_\_

U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 D = Dilution  
 Q = indicates LCS control criteria did not meet requirements  
 H = Sample Analysis Out Of Hold Time

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 \* = indicates the duplicate analysis is not within control limits.  
 E = Indicates the reported value is estimated because of the presence of interference.  
 OR = Over Range  
 N =Spiked sample recovery not within control limits

## Report of Analysis

Client:	Tetra Tech, EMI	Date Collected:	10/21/24 15:45
Project:	R36720	Date Received:	10/23/24
Client Sample ID:	MC0JX5	SDG No.:	P4506
Lab Sample ID:	P4506-03	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
TSS	16.9		1	1.00	4.00	mg/L		10/24/24 09:30	SM 2540 D-15

Comments:

U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 D = Dilution  
 Q = indicates LCS control criteria did not meet requirements  
 H = Sample Analysis Out Of Hold Time

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 \* = indicates the duplicate analysis is not within control limits.  
 E = Indicates the reported value is estimated because of the presence of interference.  
 OR = Over Range  
 N = Spiked sample recovery not within control limits

## Report of Analysis

Client:	Tetra Tech, EMI	Date Collected:	10/21/24 12:00
Project:	R36720	Date Received:	10/23/24
Client Sample ID:	MC0JX6	SDG No.:	P4506
Lab Sample ID:	P4506-04	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
TSS	11.1		1	1.00	4.00	mg/L		10/24/24 09:30	SM 2540 D-15

Comments: \_\_\_\_\_

U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 D = Dilution  
 Q = indicates LCS control criteria did not meet requirements  
 H = Sample Analysis Out Of Hold Time

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 \* = indicates the duplicate analysis is not within control limits.  
 E = Indicates the reported value is estimated because of the presence of interference.  
 OR = Over Range  
 N = Spiked sample recovery not within control limits

## Report of Analysis

Client:	Tetra Tech, EMI	Date Collected:	10/21/24 13:00
Project:	R36720	Date Received:	10/23/24
Client Sample ID:	MC0JX7	SDG No.:	P4506
Lab Sample ID:	P4506-05	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
TSS	23.3		1	1.00	4.00	mg/L		10/24/24 09:30	SM 2540 D-15

Comments: \_\_\_\_\_

U = Not Detected  
LOQ = Limit of Quantitation  
MDL = Method Detection Limit  
LOD = Limit of Detection  
D = Dilution  
Q = indicates LCS control criteria did not meet requirements  
H = Sample Analysis Out Of Hold Time

J = Estimated Value  
B = Analyte Found in Associated Method Blank  
\* = indicates the duplicate analysis is not within control limits.  
E = Indicates the reported value is estimated because of the presence of interference.  
OR = Over Range  
N = Spiked sample recovery not within control limits

## Report of Analysis

Client:	Tetra Tech, EMI	Date Collected:	10/21/24 14:30
Project:	R36720	Date Received:	10/23/24
Client Sample ID:	MC0JX8	SDG No.:	P4506
Lab Sample ID:	P4506-06	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
TSS	2.50	J	1	1.00	4.00	mg/L		10/24/24 09:30	SM 2540 D-15

Comments: \_\_\_\_\_

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

H = Sample Analysis Out Of Hold Time

J = Estimated Value

B = Analyte Found in Associated Method Blank

\* = indicates the duplicate analysis is not within control limits.

E = Indicates the reported value is estimated because of the presence of interference.

OR = Over Range

N = Spiked sample recovery not within control limits

## Report of Analysis

Client:	Tetra Tech, EMI	Date Collected:	10/21/24 12:30
Project:	R36720	Date Received:	10/23/24
Client Sample ID:	MC0JX9	SDG No.:	P4506
Lab Sample ID:	P4506-07	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
TSS	1.60	J	1	1.00	4.00	mg/L		10/24/24 09:30	SM 2540 D-15

Comments: \_\_\_\_\_

U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 D = Dilution  
 Q = indicates LCS control criteria did not meet requirements  
 H = Sample Analysis Out Of Hold Time

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 \* = indicates the duplicate analysis is not within control limits.  
 E = Indicates the reported value is estimated because of the presence of interference.  
 OR = Over Range  
 N = Spiked sample recovery not within control limits



## Report of Analysis

Client:	Tetra Tech, EMI	Date Collected:	10/21/24 12:25
Project:	R36720	Date Received:	10/23/24
Client Sample ID:	MC0JY0	SDG No.:	P4506
Lab Sample ID:	P4506-08	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
TSS	1.70	J	1	1.00	4.00	mg/L		10/24/24 09:30	SM 2540 D-15

Comments: \_\_\_\_\_

U = Not Detected  
LOQ = Limit of Quantitation  
MDL = Method Detection Limit  
LOD = Limit of Detection  
D = Dilution  
Q = indicates LCS control criteria did not meet requirements  
H = Sample Analysis Out Of Hold Time

J = Estimated Value  
B = Analyte Found in Associated Method Blank  
\* = indicates the duplicate analysis is not within control limits.  
E = Indicates the reported value is estimated because of the presence of interference.  
OR = Over Range  
N = Spiked sample recovery not within control limits



# QC RESULT SUMMARY

Preparation Blank Summary

Client: Tetra Tech, EMI

SDG No.: P4506

Project: R36720

Analyte	Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID:	LB133104BL						
TSS	mg/L	< 2.0000	2.0000	U	1	4	10/24/2024

Duplicate Sample Summary

<b>Client:</b>	Tetra Tech, EMI	<b>SDG No.:</b>	P4506
<b>Project:</b>	R36720	<b>Sample ID:</b>	P4491-02
<b>Client ID:</b>	COMPDUP	<b>Percent Solids for Spike Sample:</b>	0

Analyte	Units	Acceptance Limit	Sample Result	Conc. Qualifier	Duplicate Result	Conc. Qualifier	Dilution Factor	RPD/AD	Qual	Analysis Date
TSS	mg/L	+/-5	667		681		1	2.08		10/24/2024

## Laboratory Control Sample Summary

**Client:** Tetra Tech, EMI

**SDG No.:** P4506

**Project:** R36720

**Run No.:** LB133104

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID	LB133104BS							
TSS	mg/L	550	542		98	1	90-110	10/24/2024



# SHIPPING DOCUMENTS

## USEPA CLP COC (LAB COPY)

Date Shipped: 10/17/2024 10/22/2024

Carrier Name: FedEx

Airbill No: 779434549393

## CHAIN OF CUSTODY RECORD

DAS #: R36720

Cooler #: TSS WW

No: 3-102224-114642-0073

Lab: Chemtech Lab

Lab Contact: Yazmeen Gomez

Lab Phone: (908) 728-3147

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
ET-WW-01-20241021	MC0JX3	Waste Water/ START	Grab	TSS(14)	2847 (4 C) (1)	WW-01	10/21/2024 14:40	
ET-WW-02-20241021	MC0JX4	Waste Water/ START	Grab	TSS(14)	2850 (4 C) (1)	WW-02	10/21/2024 14:00	
ET-WW-03-20241021	MC0JX5	Waste Water/ START	Grab	TSS(14)	2853 (4 C) (1)	WW-03	10/21/2024 15:45	
ET-WW-04-20241021	MC0JX6	Waste Water/ START	Grab	TSS(14)	2856 (4 C) (1)	WW-04	10/21/2024 12:00	
ET-WW-05-20241021	MC0JX7	Waste Water/ START	Grab	TSS(14)	2859 (4 C) (1)	WW-05	10/21/2024 13:00	
ET-WW-06-20241021	MC0JX8	Waste Water/ START	Grab	TSS(14)	2862 (4 C) (1)	WW-06	10/21/2024 14:30	
ET-DUP-02-20241021	MC0JX9	Waste Water/ START	Grab	TSS(14)	2865 (4 C) (1)	DUP-02	10/21/2024 12:30	
ET-WW-08-20241021	MC0JY0	Waste Water/ START	Grab	TSS(14)	2868 (4 C) (1)	WW-08	10/21/2024 12:25	

Special Instructions: TSS WW	Shipment for Case Complete? N
	Samples Transferred From Chain of Custody #
Analysis Key: TSS=Total Suspended Solids	

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	Emet/START	10/22/24 1430	CR	950 10-23-24	IR. G. # 2-3-5
					Custody Seal Intact
					Temp Blank present

### Laboratory Certification

Certified By	License No.
CAS EPA CLP Contract	68HERH20D0011
Connecticut	PH-0830
DOD ELAP (L-A-B)	L2219
Maine	2024021
Maryland	296
New Hampshire	255423
New Jersey	20012
New York	11376
Pennsylvania	68-00548
Soil Permit	525-24-234-08441
Texas	T104704488