

# ANALYTICAL REPORT

## PREPARED FOR

Attn: Brad Puetz  
City of Sioux City  
PO BOX 447

Sioux City, Iowa 51101

Generated 2/17/2026 11:12:58 AM

## JOB DESCRIPTION

533 - IA9778054 - Finished Tap (South Bridge) / 02

## JOB NUMBER

810-179994-1

# Eurofins South Bend

## 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 Drinking Water and Wastewater Central, LLC Project Manager.

## Authorization



Generated  
2/17/2026 11:12:58 AM

---

Authorized for release by  
Traci Chlebowski, Senior Project Manager  
[Traci.Chlebowski@et.eurofinsus.com](mailto:Traci.Chlebowski@et.eurofinsus.com)  
(574)233-4777



# Table of Contents

Cover Page . . . . .	1
Table of Contents . . . . .	3
Definitions/Glossary . . . . .	4
Case Narrative . . . . .	5
Client Sample Results . . . . .	6
Lab Chronicle . . . . .	9
Certification Summary . . . . .	10
Method Summary . . . . .	11
Sample Summary . . . . .	12
Chain of Custody . . . . .	13
Receipt Checklists . . . . .	14

# Definitions/Glossary

Client: City of Sioux City

Job ID: 810-179994-1

Project/Site: 533 - IA9778054 - Finished Tap (South Bridge) / 02

## Qualifiers

### LCMS

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

## 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

# Case Narrative

Client: City of Sioux City  
Project: 533 - IA9778054 - Finished Tap (South Bridge) / 02

Job ID: 810-179994-1

**Job ID: 810-179994-1**

**Eurofins South Bend**

## Job Narrative 810-179994-1

### Receipt

The samples were received on 2/5/2026 9:45 AM. 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 was 1.4° C.

### LCMS

Method 533: In 533 sample, Finished Tap (South Bridge) FB (810-179994-2), Perfluorobutanoic acid (PFBA) (0.84 ng/L), Perfluorohexanoic acid (PFHxA) (0.73 ng/L), and Perfluoropentanoic acid (PFPeA) (0.75 ng/L) were detected over 1/3 the RL. This sample was re-analyzed with similar results. Results for these analytes are suspect in the associated Field Sample.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

### Organic Prep

Method 533: The pH of the following sample was adjusted to pH 7.5 in the laboratory: Finished Tap (South Bridge) / 02 (810-179994-1)

Method 533: The pH of the following sample was adjusted to pH 7.5 in the laboratory: Finished Tap (South Bridge) FB (810-179994-2)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Eurofins South Bend

# Client Sample Results

Client: City of Sioux City  
 Project/Site: 533 - IA9778054 - Finished Tap (South Bridge) / 02

Job ID: 810-179994-1

**Client Sample ID: Finished Tap (South Bridge) / 02**

**Lab Sample ID: 810-179994-1**

Date Collected: 02/04/26 11:03

Matrix: Drinking Water

Date Received: 02/05/26 09:45

PWSID Number: IA9778054

**Method: EPA 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane e-1-sulfonic acid	<0.78		1.9	0.78 ng/L		02/06/26 08:42	02/06/26 21:02	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.54		1.9	0.54 ng/L		02/06/26 08:42	02/06/26 21:02	1
<b>1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)</b>	<b>2.2</b>		1.9	0.64 ng/L		02/06/26 08:42	02/06/26 21:02	1
<b>1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)</b>	<b>2.2</b>		1.9	0.65 ng/L		02/06/26 08:42	02/06/26 21:02	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.57		1.9	0.57 ng/L		02/06/26 08:42	02/06/26 21:02	1
9-Chlorohexadecafluoro-3-oxanonane e-1-sulfonic acid	<0.92		1.9	0.92 ng/L		02/06/26 08:42	02/06/26 21:02	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.68		1.9	0.68 ng/L		02/06/26 08:42	02/06/26 21:02	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.88		1.9	0.88 ng/L		02/06/26 08:42	02/06/26 21:02	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.63		1.9	0.63 ng/L		02/06/26 08:42	02/06/26 21:02	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.77		1.9	0.77 ng/L		02/06/26 08:42	02/06/26 21:02	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.62		1.9	0.62 ng/L		02/06/26 08:42	02/06/26 21:02	1
<b>Perfluorobutanesulfonic acid (PFBS)</b>	<b>26</b>		1.9	0.63 ng/L		02/06/26 08:42	02/06/26 21:02	1
<b>Perfluorobutanoic acid (PFBA)</b>	<b>12</b>		1.9	0.49 ng/L		02/06/26 08:42	02/06/26 21:02	1
Perfluorodecanoic acid (PFDA)	<0.63		1.9	0.63 ng/L		02/06/26 08:42	02/06/26 21:02	1
Perfluorododecanoic acid (PFDoA)	<0.67		1.9	0.67 ng/L		02/06/26 08:42	02/06/26 21:02	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.57		1.9	0.57 ng/L		02/06/26 08:42	02/06/26 21:02	1
<b>Perfluoroheptanoic acid (PFHpA)</b>	<b>5.8</b>		1.9	0.68 ng/L		02/06/26 08:42	02/06/26 21:02	1
<b>Perfluorohexanesulfonic acid (PFHxS)</b>	<b>45</b>		1.9	0.63 ng/L		02/06/26 08:42	02/06/26 21:02	1
<b>Perfluorohexanoic acid (PFHxA)</b>	<b>41</b>		1.9	0.69 ng/L		02/06/26 08:42	02/06/26 21:02	1
Perfluorononanoic acid (PFNA)	<0.69		1.9	0.69 ng/L		02/06/26 08:42	02/06/26 21:02	1
<b>Perfluorooctanesulfonic acid (PFOS)</b>	<b>5.3</b>		1.9	0.66 ng/L		02/06/26 08:42	02/06/26 21:02	1
<b>Perfluorooctanoic acid (PFOA)</b>	<b>8.5</b>		1.9	0.70 ng/L		02/06/26 08:42	02/06/26 21:02	1
<b>Perfluoropentanesulfonic acid (PFPeS)</b>	<b>15</b>		1.9	0.66 ng/L		02/06/26 08:42	02/06/26 21:02	1
<b>Perfluoropentanoic acid (PFPeA)</b>	<b>26</b>		1.9	0.73 ng/L		02/06/26 08:42	02/06/26 21:02	1
Perfluoroundecanoic acid (PFUnA)	<0.67		1.9	0.67 ng/L		02/06/26 08:42	02/06/26 21:02	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFDoA	87		50 - 200	02/06/26 08:42	02/06/26 21:02	1
13C2-4:2-FTS	93		50 - 200	02/06/26 08:42	02/06/26 21:02	1
13C2-6:2-FTS	94		50 - 200	02/06/26 08:42	02/06/26 21:02	1
13C2-8:2-FTS	104		50 - 200	02/06/26 08:42	02/06/26 21:02	1
13C3 HFPO-DA	81		50 - 200	02/06/26 08:42	02/06/26 21:02	1
13C3 PFBS	99		50 - 200	02/06/26 08:42	02/06/26 21:02	1
13C3 PFHxS	99		50 - 200	02/06/26 08:42	02/06/26 21:02	1
13C4 PFBA	96		50 - 200	02/06/26 08:42	02/06/26 21:02	1
13C4 PFHpA	86		50 - 200	02/06/26 08:42	02/06/26 21:02	1
13C5 PFHxA	85		50 - 200	02/06/26 08:42	02/06/26 21:02	1
13C5 PFPeA	95		50 - 200	02/06/26 08:42	02/06/26 21:02	1

Eurofins South Bend

# Client Sample Results

Client: City of Sioux City  
 Project/Site: 533 - IA9778054 - Finished Tap (South Bridge) / 02

Job ID: 810-179994-1

**Client Sample ID: Finished Tap (South Bridge) / 02**

**Lab Sample ID: 810-179994-1**

Date Collected: 02/04/26 11:03

Matrix: Drinking Water

Date Received: 02/05/26 09:45

PWSID Number: IA9778054

**Method: EPA 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)**

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C6 PFDA	87		50 - 200	02/06/26 08:42	02/06/26 21:02	1
13C7 PFUnA	84		50 - 200	02/06/26 08:42	02/06/26 21:02	1
13C8 PFOA	89		50 - 200	02/06/26 08:42	02/06/26 21:02	1
13C8 PFOS	100		50 - 200	02/06/26 08:42	02/06/26 21:02	1
13C9 PFNA	88		50 - 200	02/06/26 08:42	02/06/26 21:02	1

**Method: TAL SOP Total PFCA-Sum - Total PFCA (Summary)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total PFOA and PFOS	14		2.0	0.20 ng/L			02/06/26 21:02	1

**Client Sample ID: Finished Tap (South Bridge) FB**

**Lab Sample ID: 810-179994-2**

Date Collected: 02/04/26 11:03

Matrix: Drinking Water

Date Received: 02/05/26 09:45

**Method: EPA 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane e-1-sulfonic acid	<0.79		1.9	0.79 ng/L		02/12/26 07:25	02/12/26 22:32	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.55		1.9	0.55 ng/L		02/12/26 07:25	02/12/26 22:32	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.64		1.9	0.64 ng/L		02/12/26 07:25	02/12/26 22:32	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.65		1.9	0.65 ng/L		02/12/26 07:25	02/12/26 22:32	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.57		1.9	0.57 ng/L		02/12/26 07:25	02/12/26 22:32	1
9-Chlorohexadecafluoro-3-oxanonane e-1-sulfonic acid	<0.93		1.9	0.93 ng/L		02/12/26 07:25	02/12/26 22:32	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.68		1.9	0.68 ng/L		02/12/26 07:25	02/12/26 22:32	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.89		1.9	0.89 ng/L		02/12/26 07:25	02/12/26 22:32	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.63		1.9	0.63 ng/L		02/12/26 07:25	02/12/26 22:32	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.78		1.9	0.78 ng/L		02/12/26 07:25	02/12/26 22:32	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.62		1.9	0.62 ng/L		02/12/26 07:25	02/12/26 22:32	1
Perfluorobutanesulfonic acid (PFBS)	<0.63		1.9	0.63 ng/L		02/12/26 07:25	02/12/26 22:32	1
<b>Perfluorobutanoic acid (PFBA)</b>	<b>0.84 J</b>		1.9	0.50 ng/L		02/12/26 07:25	02/12/26 22:32	1
Perfluorodecanoic acid (PFDA)	<0.63		1.9	0.63 ng/L		02/12/26 07:25	02/12/26 22:32	1
Perfluorododecanoic acid (PFDoA)	<0.67		1.9	0.67 ng/L		02/12/26 07:25	02/12/26 22:32	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.57		1.9	0.57 ng/L		02/12/26 07:25	02/12/26 22:32	1
Perfluoroheptanoic acid (PFHpA)	<0.69		1.9	0.69 ng/L		02/12/26 07:25	02/12/26 22:32	1
Perfluorohexanesulfonic acid (PFHxS)	<0.63		1.9	0.63 ng/L		02/12/26 07:25	02/12/26 22:32	1
<b>Perfluorohexanoic acid (PFHxA)</b>	<b>0.73 J</b>		1.9	0.70 ng/L		02/12/26 07:25	02/12/26 22:32	1
Perfluorononanoic acid (PFNA)	<0.70		1.9	0.70 ng/L		02/12/26 07:25	02/12/26 22:32	1
Perfluorooctanesulfonic acid (PFOS)	<0.66		1.9	0.66 ng/L		02/12/26 07:25	02/12/26 22:32	1
Perfluorooctanoic acid (PFOA)	<0.71		1.9	0.71 ng/L		02/12/26 07:25	02/12/26 22:32	1
Perfluoropentanesulfonic acid (PFPeS)	<0.66		1.9	0.66 ng/L		02/12/26 07:25	02/12/26 22:32	1
<b>Perfluoropentanoic acid (PFPeA)</b>	<b>0.75 J</b>		1.9	0.74 ng/L		02/12/26 07:25	02/12/26 22:32	1

Eurofins South Bend

# Client Sample Results

Client: City of Sioux City  
 Project/Site: 533 - IA9778054 - Finished Tap (South Bridge) / 02

Job ID: 810-179994-1

**Client Sample ID: Finished Tap (South Bridge) FB**

**Lab Sample ID: 810-179994-2**

Date Collected: 02/04/26 11:03

Matrix: Drinking Water

Date Received: 02/05/26 09:45

**Method: EPA 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroundecanoic acid (PFUnA)	<0.67		1.9	0.67 ng/L		02/12/26 07:25	02/12/26 22:32	1
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>			<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C2 PFDoA	81		50 - 200			02/12/26 07:25	02/12/26 22:32	1
13C2-4:2-FTS	79		50 - 200			02/12/26 07:25	02/12/26 22:32	1
13C2-6:2-FTS	87		50 - 200			02/12/26 07:25	02/12/26 22:32	1
13C2-8:2-FTS	89		50 - 200			02/12/26 07:25	02/12/26 22:32	1
13C3 HFPO-DA	82		50 - 200			02/12/26 07:25	02/12/26 22:32	1
13C3 PFBS	92		50 - 200			02/12/26 07:25	02/12/26 22:32	1
13C3 PFHxS	90		50 - 200			02/12/26 07:25	02/12/26 22:32	1
13C4 PFBA	89		50 - 200			02/12/26 07:25	02/12/26 22:32	1
13C4 PFHpA	82		50 - 200			02/12/26 07:25	02/12/26 22:32	1
13C5 PFHxA	84		50 - 200			02/12/26 07:25	02/12/26 22:32	1
13C5 PFPeA	89		50 - 200			02/12/26 07:25	02/12/26 22:32	1
13C6 PFDA	88		50 - 200			02/12/26 07:25	02/12/26 22:32	1
13C7 PFUnA	79		50 - 200			02/12/26 07:25	02/12/26 22:32	1
13C8 PFOA	87		50 - 200			02/12/26 07:25	02/12/26 22:32	1
13C8 PFOS	90		50 - 200			02/12/26 07:25	02/12/26 22:32	1
13C9 PFNA	88		50 - 200			02/12/26 07:25	02/12/26 22:32	1

# Lab Chronicle

Client: City of Sioux City  
 Project/Site: 533 - IA9778054 - Finished Tap (South Bridge) / 02

Job ID: 810-179994-1

**Client Sample ID: Finished Tap (South Bridge) / 02**

**Lab Sample ID: 810-179994-1**

Date Collected: 02/04/26 11:03

Matrix: Drinking Water

Date Received: 02/05/26 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			179328	IF	EA SB	02/06/26 08:42
Total/NA	Analysis	533		1	179450	MT	EA SB	02/06/26 21:02
Total/NA	Analysis	Total PFCA-Sum		1	180054	CM	EA SB	02/06/26 21:02

**Client Sample ID: Finished Tap (South Bridge) FB**

**Lab Sample ID: 810-179994-2**

Date Collected: 02/04/26 11:03

Matrix: Drinking Water

Date Received: 02/05/26 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			180250	ET	EA SB	02/12/26 07:25
Total/NA	Analysis	533		1	180372	MH	EA SB	02/12/26 22:32

**Laboratory References:**

EA SB = Eurofins South Bend, 110 S Hill Street, South Bend, IN 46617, TEL (574)233-4777



# Accreditation/Certification Summary

Client: City of Sioux City  
Project/Site: 533 - IA9778054 - Finished Tap (South Bridge) / 02

Job ID: 810-179994-1

## Laboratory: Eurofins South Bend

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
A2LA	ISO/IEC 17025	5794.01	07-31-26

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
Total PFCA-Sum		Drinking Water	Total PFOA and PFOS

Iowa State 098 11-01-27

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
Total PFCA-Sum		Drinking Water	Total PFOA and PFOS

# Method Summary

Client: City of Sioux City  
Project/Site: 533 - IA9778054 - Finished Tap (South Bridge) / 02

Job ID: 810-179994-1

Method	Method Description	Protocol	Laboratory
533	Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water	EPA	EA SB
Total PFCA-Sum	Total PFCA (Summary)	TAL SOP	EA SB
533	Extraction of Perfluorinated and Polyfluorinated Alkyl Acids	EPA	EA SB

**Protocol References:**

- EPA = US Environmental Protection Agency
- TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

**Laboratory References:**

- EA SB = Eurofins South Bend, 110 S Hill Street, South Bend, IN 46617, TEL (574)233-4777



# Sample Summary

Client: City of Sioux City  
Project/Site: 533 - IA9778054 - Finished Tap (South Bridge) / 02

Job ID: 810-179994-1

---

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	PWSID Number
810-179994-1	Finished Tap (South Bridge) / 02	Drinking Water	02/04/26 11:03	02/05/26 09:45	IA9778054
810-179994-2	Finished Tap (South Bridge) FB	Drinking Water	02/04/26 11:03	02/05/26 09:45	

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11



## Login Sample Receipt Checklist

Client: City of Sioux City

Job Number: 810-179994-1

**Login Number: 179994**

**List Source: Eurofins South Bend**

**List Number: 1**

**Creator: Moffitt, Heather**

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	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	
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	
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	
Samples do not require splitting or compositing.	True	
Were samples preserved to correct pH upon receipt, if applicable?	True	
Sample Preservative Verified	True	
Container provided by EEA	True	