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March 30, 2020

Mr. Kevin McKnight
Wisconsin Department of Natural Resources
Remediation and Redevelopment Program
625 E CTY Y, Suite 700
Oshkosh, WI 54901-9731

Subject: Per- and Polyfluoroalkyl Substances (PFAS) Groundwater Sampling Results
Former Tecumseh Facility - 1604 Michigan Avenue, New Holstein, Wisconsin
BRRTS #02-08-363333

Dear Kevin:

On February 19, 2020, TRC Environmental (TRC), on behalf of Tecumseh Products Company (TPC) collected groundwater samples from the former Tecumseh facility in New Holstein, Wisconsin (site) to evaluate if per- and polyfluoroalkyl substances (PFAS) were present in the groundwater near the former chromium plating line. This data notification provides the Wisconsin Department of Natural Resources (WDNR) and the current property owner (City of New Holstein) with a summary of the results and includes the following items:

- DNR Form 4400-249 (Sample Results Notification)
- Figure identifying sample locations and results
- Table summarizing the analytical results
- Level 4 laboratory analytical report
- Summary and recommendations

Summary

On February 19, 2020, TRC collected groundwater samples from five existing monitoring wells in the area of the former chromium plating line at the site. The work was completed in accordance with the Groundwater Sampling Plan dated September 30, 2019, and which was approved by WDNR on December 3, 2019. The only deviation from the Sampling Plan was that groundwater levels were not collected the day of sampling because of a malfunction with the water level indicator. This deviation does not affect the data quality or the interpretation of the results because the direction of groundwater flow has been defined by other investigative work on this area of the site.

The wells included in the February 2020 sampling, and their position relative to the former chromium plating line and direction of groundwater flow are as follows:

- **NH-26:** Former northern plating line source area
- **TEC-4:** Former plating line source area
- **MW-E:** Downgradient from former plating line
- **NH-7:** Downgradient from former northern plating line
- **MW-D:** Background (upgradient from former plating line)

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Wisconsin Department of Natural Resources
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Results

The groundwater samples were submitted to Eurofins Test America – Sacramento for analysis for the list of 36 PFAS compounds included in Wisconsin's laboratory certification program. The laboratory report is enclosed.

PFAS were detected in the groundwater samples, and the results are summarized in the enclosed table and figure. PFOS, PFBS, PFOA¹ were the most frequently detected compounds, and PFOS was detected at the highest concentration (940 ng/L) in NH-26. The results align with the conceptual model of the former chromium plating line processes as a source of PFAS to the environment. The PFAS concentrations were highest in the wells located near the former plating lines (NH-26 and TEC-4); the PFAS concentrations have decreased at downgradient wells (MW-E and NH-7), and PFAS are essentially absent in the background well (MW-D).

Wisconsin has proposed setting a NR 140 Groundwater Enforcement Standard (ES) for PFOS + PFOA of 20 ng/L. The concentrations of PFOS detected at the site are greater than the proposed standard; however, the sampling results indicate that the concentrations of PFOS (and other PFAS) diminish as groundwater moves downgradient from the former chromium plating line.

Recommendations

The results from the sampling indicate a historical release of PFAS at the site, and further investigation is needed to define the degree and extent of contamination. If WDNR agrees with this conclusion, we recommend that WDNR establish a unique BRRTS number for the PFAS impacts at this site and that TPC prepare a workplan for additional investigation to assess the degree and extent of the PFAS impacts at the site.

If you have any questions, please contact me at 608-826-3677 or ASellwood@trccompanies.com.

Sincerely,

TRC



Alyssa Sellwood, PE
Project Manager

cc: Casey Langenfeld, City of New Holstein
Christopher Harvey, TRC
Jason Smith, TPC

¹ Perfluorooctanesulfonic acid (PFOS), perfluorobutanesulfonic acid (PFBS), and perfluorooctanoic acid (PFOA)

Site Investigation Sample Results Notification

Form 4400-249 (R 03/14)

Page 1 of 2

Notice: This form may be used to comply with the requirements of s. NR 716.14 (2), Wis. Adm. Code; however, use of this form is not required. An alternate format may be used. The rule requires that notification be provided to 1) property owners when someone else is conducting the sampling, 2) to occupants of property belonging to the responsible person, and 3) to owners and occupants of property that does not belong to the responsible person but has been affected by contamination arising on his or her property. Notification is required within 10 business days of receiving the sample results. Personal information collected will be used for program administration and may be provided to requesters to the extent required by Wisconsin's Open Records law [ss. 19.31-19.39, Wis. Stats.].

NOTE: Under s. NR 716.14, Wis. Adm. Code, the responsible party must also submit sample results and other required information to the DNR. We recommend that copies of the sample results notifications be included with that submittal, along with all attachments. Using the same format used for data presentation for a closure request may be helpful to all parties. See s. NR 716.14, Wis. Adm. Code for the full list of information to be submitted to the DNR.

Notification of Property Owners and Occupants:

This notification form has been provided to you in order to provide the results of environmental sampling that has been conducted on property that you own or occupy. Samples were collected in accordance with the methods identified in the site investigation work plan, in accordance with s. NR. 716.09 and 716.13, Wis. Adm. Code. This sampling was conducted as a result of contamination originating at the following location.

Site Information

Site Name	DNR ID # (BRRTS #)		
Tecumseh Products Co - New Holstein	02-08-363333		
Address	City	State	ZIP Code
1604 Michigan Avenue	New Holstein	WI	53061

Responsible Party

The person(s) responsible for completing this environmental investigation is:

Property Owner			
Tecumseh Product Company LLC (Historical Property Owner)			
Address	City	State	ZIP Code
2700 West Wood Street	Paris	TN	38242
Contact Person	Phone Number (include area code)		
Jason Smith	(731) 644-8127		

Person or company that collected samples

TRC Environmental

Sample Results (Results Attached)

Reason for Sampling: Routine Other (define) Site Investigation

The contaminants that have been identified at this time on property that you own or occupy include:

Contaminant	In Soil?		In Groundwater?		This sampling event included sampling of a drinking water well.
	Yes	No	Yes	No	
Gasoline	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/> Yes <input checked="" type="radio"/> No
Diesel or Fuel Oil	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Solvents	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Heavy Metals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Pesticides	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Other: PFAS	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	

Contaminants in Vapor

	Yes	No
Indoor Air	<input type="radio"/>	<input type="radio"/>
Sub-slab	<input type="radio"/>	<input type="radio"/>
Exterior Soil Gas	<input type="radio"/>	<input type="radio"/>

Site Investigation Sample Results Notification

Form 4400-249 (R 03/14)

Page 2 of 2

Attached are:

- A map that shows the locations from which samples were collected. (The map needs to meet the requirements of s. NR 716.15 (4), Wis. Adm. Code.)
- A data table with specific contaminant levels at each sample location and whether or not the sample results exceed state standards.
- A copy of the laboratory results.

You are not identified as the person that is responsible for this contamination. However, your cooperation is important. Property owners may become legally responsible for contamination if they do not allow access to the person that is responsible so that person may complete the environmental investigation and clean up activities.

Option for written exemption: You have the option of requesting a written liability exemption from the DNR for contamination that originated on another property, or on property that you lease. To do this, you must present an adequate environmental assessment of your property and pay a \$700 fee for review of this information. If you are interested in this option, please see DNR publication # RR 589, "When Contamination Crosses a Property Line - Rights and Responsibilities of Property Owners", available at: dnr.wi.gov/files/PDF/pubs/rr/rr589.pdf.

Contact Information

Please address questions regarding this notification, or requests for additional information to the contact person listed above, or to one of the following contacts:

Environmental Consultant

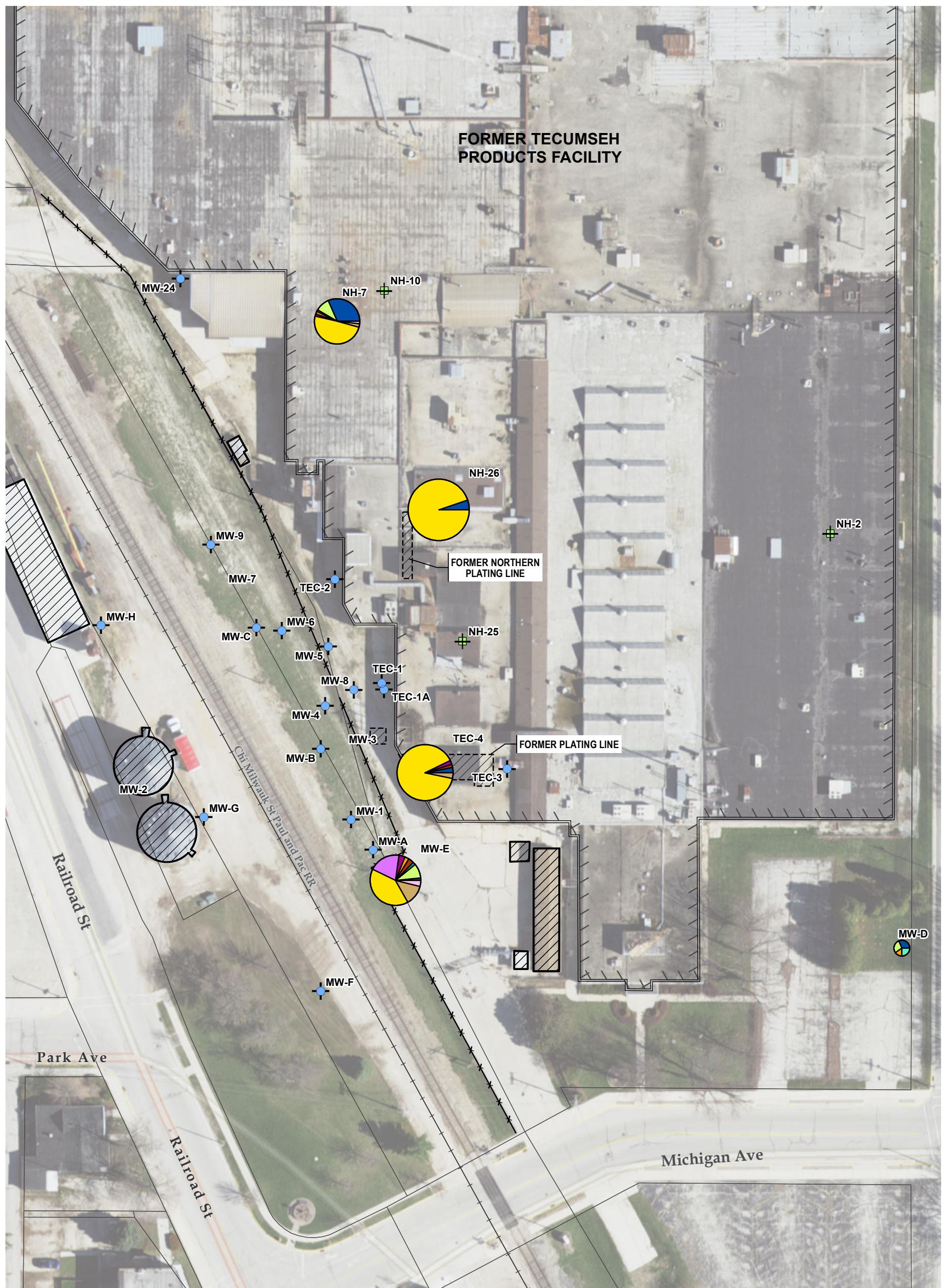
Company Name TRC Environmental	Contact Person Last Name Sellwood	First Name Alyssa
Address 708 Heartland Trail	City Madison	State ZIP Code WI 53717
Phone # (inc. area code) (608) 826-3677	Email asellwood@trccompanies.com	

Select which agency: Natural Resources Agriculture, Trade and Consumer Protection

State of Wisconsin Department of Natural Resources

Contact Person Last Name McKnight	First Name Kevin	Phone # (inc. area code) (920) 424-7890
Address 625 East County Road Y, Suite 700	City Oshkosh	State ZIP Code WI 54901
<hr/> Kevin.Mcknight@wisconsin.gov		

FORMER TECUMSEH PRODUCTS FACILITY


LEGEND

● MONITORING WELL (TRC)

+ MONITORING WELL (R.E.)

— RAILROAD TRACKS

✕ FENCE

PFAS DISTRIBUTION PIE CHART (SEE NOTE 3)


PFBA	PFNA
PFDA	FOSA
PFHpS	PFOS
PFHpA	PFOA
PFHxS	PFPeS
PFHxA	PFPeA

6.2 FTS

PFBS



10 ng/L

100 ng/L

1000 ng/L

NOTES

1. BASE MAP IMAGERY FROM CALUMET COUNTY, SPRING 2015.
2. RESULTS ARE FROM GROUNDWATER SAMPLES COLLECTED ON 2/19/2020.
3. CHART AREA IS PROPORTIONAL TO LOG OF TOTAL PFAS CONCENTRATION (ng/L).

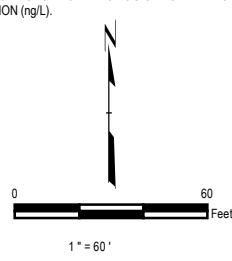
PROJECT:

**BRRRTS #02-08-363333
TECUMSEH PRODUCTS CO. (FORMER)
NEW HOLSTEIN, WISCONSIN**

SHEET TITLE:

PFAS GROUNDWATER RESULTS

DRAWN BY:	S. MAJOR	SCALE:	353537
CHECKED BY:	L. AUNER	1:720	FILE NO.
APPROVED BY:	A. SELLWOOD	DATE PRINTED:	353537_001_PieChart.mxd
DATE:	MARCH 2020		

FIGURE 1

 708 Heartland Trail, Suite 3000
Madison, WI 53717
Phone: 608.826.3600
www.trcsolutions.com

**Table 1: Former Tecumseh Facility - New Holstein, Wisconsin
Per- and Polyfluoroalkyl Substances (PFAS) Characterization
Summary of Water Sample Analytical Results
BRRTS# 02-08-363333**

Parameter	Sample Result (ng/L)							WI Proposed Standard (ng/L)
	TEC-4 2/19/2020	NH-26 2/19/2020	NH-7 2/19/2020	MW-E 2/19/2020	MW-D 2/19/2020	RB-01 2/19/2020	FB-1 2/19/2020	
6:2 Fluorotelomer sulfonate (6:2 FTS)	<17	1.7 J	<1.6	<1.7	<1.6	<1.6	<1.7	-
Perfluorobutanesulfonic acid (PFBS)	10 J	52	14	1.7	0.50 J	<0.16	<0.17	-
Perfluorobutanoic acid (PFBA)	<2.9	10 B	4.5 B	10 B	0.45 J B	0.30 J B	0.60 J B	-
Perfluorodecanoic acid (PFDA)	<2.6	<0.25	<0.25	2.1	<0.26	<0.25	<0.26	-
Perfluoroheptanesulfonic Acid (PFHpS)	<1.6	3.4	<0.15	0.31 J	<0.16	<0.16	<0.16	-
Perfluoroheptanoic acid (PFHpA)	6.7 J	1.7	0.50 J	4.0	<0.21	<0.20	<0.21	-
Perfluorohexanesulfonic acid (PFHxS)	2.1 J B C	1.7 B	0.86 J B	2.9 B	0.24 J B	0.26 J B	0.22 J B	-
Perfluorohexanoic acid (PFHxA)	7.7 J	2.1	0.73 J	4.3	<0.48	<0.47	<0.48	-
Perfluorononanoic acid (PFNA)	<2.2	1.0 J	0.22 J	22	<0.22	<0.22	<0.22	-
Perfluorooctanesulfonamide (FOSA)	<2.9	<0.28	0.30 J	0.52 J	0.40 J	0.34 J	0.30 J	-
Perfluorooctanesulfonic acid (PFOS)	300	940	22 C	44	<0.44	<0.44	<0.45	20
Perfluorooctanoic acid (PFOA)	11 J	4.9	1.1 J	14	<0.70	<0.70	<0.71	20
Perfluoropentanesulfonic acid (PFPeS)	<2.5	<0.24	<0.24	0.52 J	<0.25	<0.25	<0.25	-
Perfluoropentanoic acid (PFPeA)	<4.1	2.6	0.78 J	4.4	<0.40	<0.40	<0.41	-

Notes:

Created By: B. Wachholz 3/11/2020

RB-01: Rinse Blank (quality control)

Checked By: L. Auner 3/11/2020

FB-1: Field Blank (quality control)

Samples analyzed by Eurofins TestAmerica - Sacramento for PFAS in Wisconsin 36 list.

Only parameters that were detected in at least one sample are included in the table.

J = Reported value was between the limit of detection and the limit of quantitation.

B = Compound was found in the blank and sample.

C = Transition mass ratio was outside of the established limits. Analyst judgement was used to positively identify the analyte, but there is some uncertainty in the results.

- = No standard proposed to date

BOLD = Greater than the limit of detection.



Environment Testing TestAmerica



ANALYTICAL REPORT

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Tel: (916)373-5600

Laboratory Job ID: 320-58833-1

Client Project/Site: PFAS Testing - Tecumseh New Holstein

For:

TRC Environmental Corporation.
708 Heartland Trail
Suite 3000
Madison, Wisconsin 53717

Attn: Ms. Meredith Westover

Authorized for release by:

3/4/2020 11:58:45 AM
Jim Knapp, Project Manager II
(630)758-0262
jim.knapp@testamericainc.com

Designee for

Sandie Fredrick, Project Manager II
(920)261-1660
sandie.fredrick@testamericainc.com

LINKS

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The
Expert

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www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: TRC Environmental Corporation.

Project/Site: PFAS Testing - Tecumseh New Holstein

Job ID: 320-58833-1

Qualifiers

LCMS	Qualifier Description
*	Isotope Dilution analyte is outside acceptance limits.
*	RPD of the LCS and LCSD exceeds the control limits
B	Compound was found in the blank and sample.
C	See Case Narrative
J	Reported value was between the limit of detection and the limit of quantitation.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
d	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
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)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
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)

Case Narrative

Client: TRC Environmental Corporation.
Project/Site: PFAS Testing - Tecumseh New Holstein

Job ID: 320-58833-1

Job ID: 320-58833-1

Laboratory: Eurofins TestAmerica, Sacramento

Narrative

Job Narrative 320-58833-1

Comments

No additional comments.

Receipt

The samples were received on 2/21/2020 9:10 AM; the samples arrived in good condition, properly preserved and, where required, on ice.

Receipt Exceptions

The container label for the following samples did not match the information listed on the Chain-of-Custody (COC): TEC-4 (320-58833-1), NH-26 (320-58833-2), NH-7 (320-58833-3), MW-E (320-58833-4), MW-D (320-58833-5), RB-01 (320-58833-6) and FB-1 (320-58833-7). The container labels list MH-7, while the COC lists NH-7.

Samples one and three (both containers) were received at the laboratory without a sample collection time documented.
TEC-4 (320-58833-1) and NH-7 (320-58833-3)

LCMS

Method 537 (modified): The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 320-359505 and analytical batch 320-359784 recovered outside control limits for the following analytes: Perfluoro-n-hexadecanoic acid (PFHxDA)

Method 537 (modified): Isotope Dilution Analyte (IDA) recovery is above the method recommended limit for M2-4:2 FTS and M2-6:2 FTS for the following samples: NH-26 (320-58833-2) and NH-7 (320-58833-3). Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

Method 537 (modified): The transition mass ratio for the indicated analyte was outside of the established ratio limits. The qualitative identification of the analyte has/have some degree of uncertainty. However, analyst judgement was used to positively identify the analyte.

NH-7 (320-58833-3)

Method 537 (modified): Several Isotope Dilution Analyte (IDA) recovery are above the method recommended limit for the following sample: MW-E (320-58833-4). Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

Method 537 (modified): Results for samples TEC-4 (320-58833-1) and NH-26 (320-58833-2) were reported from the analysis of a diluted extract due to high concentration of the target analyte in the analysis of the undiluted extract. The dilution factor was applied to the labeled internal standard area counts and these area counts were within acceptance limits

Method 537 (modified): Isotope Dilution Analyte (IDA) recovery is above the method recommended limit for M2-4:2 FTS and M2-6:2 FTS the following sample: TEC-4 (320-58833-1). Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

Method 537 (modified): Results for sample TEC-4 (320-58833-1) were reported from the analysis of a diluted extract due to high concentration of the target analyte in the analysis of the undiluted extract. The dilution factor was applied to the labeled internal standard area counts and these area counts were within acceptance limits

Method 537 (modified): The transition mass ratio for the indicated analyte was outside of the established ratio limits. The qualitative identification of the analyte has some degree of uncertainty. However, analyst judgment was used to positively identify the analytes.
TEC-4 (320-58833-1)

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

Organic Prep

Case Narrative

Client: TRC Environmental Corporation.
Project/Site: PFAS Testing - Tecumseh New Holstein

Job ID: 320-58833-1

Job ID: 320-58833-1 (Continued)

Laboratory: Eurofins TestAmerica, Sacramento (Continued)

Method 3535: There was Insufficient sample volume to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 320-359505.

3535_PFC
Water
320-359505

Method 3535: The following sample was yellow prior to extraction:
TEC-4 (320-58833-1)

3535_PFC
Water
320-359505

Method 3535: The following samples were yellow after the final volume: TEC-4 (320-58833-1) and NH-26 (320-58833-2).

3535_PFC
Water
320-359505

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

Detection Summary

Client: TRC Environmental Corporation.

Job ID: 320-58833-1

Project/Site: PFAS Testing - Tecumseh New Holstein

Client Sample ID: MW-E (Continued)

Lab Sample ID: 320-58833-4

Analyte	Result	Qualifier	LOQ	LOD	Unit	Dil Fac	D	Method	Prep Type
Perfluoroheptanesulfonic Acid (PFHpS)	0.31	J	1.7	0.16	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	44		1.7	0.45	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonamide (FOSA)	0.52	J	1.7	0.29	ng/L	1		537 (modified)	Total/NA

Client Sample ID: MW-D

Lab Sample ID: 320-58833-5

Analyte	Result	Qualifier	LOQ	LOD	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	0.45	J B	1.6	0.29	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.50	J	1.6	0.16	ng/L	1		537 (modified)	Total/NA
Perfluorohexamenesulfonic acid (PFHxS)	0.24	J B	1.6	0.14	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonamide (FOSA)	0.40	J	1.6	0.29	ng/L	1		537 (modified)	Total/NA

Client Sample ID: RB-01

Lab Sample ID: 320-58833-6

Analyte	Result	Qualifier	LOQ	LOD	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	0.30	J B	1.6	0.29	ng/L	1		537 (modified)	Total/NA
Perfluorohexamenesulfonic acid (PFHxS)	0.26	J B	1.6	0.14	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonamide (FOSA)	0.34	J	1.6	0.29	ng/L	1		537 (modified)	Total/NA

Client Sample ID: FB-1

Lab Sample ID: 320-58833-7

Analyte	Result	Qualifier	LOQ	LOD	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	0.60	J B	1.7	0.29	ng/L	1		537 (modified)	Total/NA
Perfluorohexamenesulfonic acid (PFHxS)	0.22	J B	1.7	0.14	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonamide (FOSA)	0.30	J	1.7	0.29	ng/L	1		537 (modified)	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: TRC Environmental Corporation.

Job ID: 320-58833-1

Project/Site: PFAS Testing - Tecumseh New Holstein

Client Sample ID: RB-01

Date Collected: 02/19/20 14:05

Lab Sample ID: 320-58833-6

Matrix: Water

Date Received: 02/21/20 09:10

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	<0.16		1.6	0.16	ng/L				1
Perfluoro-n-octadecanoic acid (PFODA)	<0.38		1.6	0.38	ng/L				1
Perfluoropentanesulfonic acid (PFPeS)	<0.25		1.6	0.25	ng/L				1
Perfluorohexamersulfonic acid (PFHxS)	0.26	J B	1.6	0.14	ng/L				1
Perfluoroheptanesulfonic Acid (PFHpS)	<0.16		1.6	0.16	ng/L				1
Perfluorooctanesulfonic acid (PFOS)	<0.44		1.6	0.44	ng/L				1
Perfluorononanesulfonic acid (PFNS)	<0.13		1.6	0.13	ng/L				1
Perfluorodecanesulfonic acid (PFDS)	<0.26		1.6	0.26	ng/L				1
Perfluorooctanesulfonamide (FOSA)	0.34	J	1.6	0.29	ng/L				1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.5		16	2.5	ng/L				1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<1.6		16	1.6	ng/L				1
4:2 FTS	<4.3		16	4.3	ng/L				1
6:2 FTS	<1.6		16	1.6	ng/L				1
8:2 FTS	<1.6		16	1.6	ng/L				1
NEtFOSA	<0.71		1.6	0.71	ng/L				1
NMeFOSA	<0.35		1.6	0.35	ng/L				1
NMeFOSE	<1.1		3.3	1.1	ng/L				1
NEtFOSE	<0.70		1.6	0.70	ng/L				1
Perfluorododecanesulfonic acid (PFDoS)	<0.37		1.6	0.37	ng/L				1
F-53B Major	<0.20		1.6	0.20	ng/L				1
HFPO-DA (GenX)	<1.2		3.3	1.2	ng/L				1
F-53B Minor	<0.26		1.6	0.26	ng/L				1
10:2 FTS	<0.16		1.6	0.16	ng/L				1
DONA	<0.15		1.6	0.15	ng/L				1
Isotope Dilution	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
13C4 PFBA	93		25 - 150						1
13C5 PFPeA	91		25 - 150						1
13C2 PFHxA	90		25 - 150						1
13C4 PFHpA	97		25 - 150						1
13C4 PFOA	88		25 - 150						1
13C5 PFNA	99		25 - 150						1
13C2 PFDA	87		25 - 150						1
13C2 PFHxDA	79		25 - 150						1
13C2 PFUnA	87		25 - 150						1
13C2 PFDoA	81		25 - 150						1
13C2 PFTeDA	89		25 - 150						1
18O2 PFHxS	100		25 - 150						1
13C4 PFOS	84		25 - 150						1
13C8 FOSA	94		25 - 150						1
d3-NMeFOSAA	87		25 - 150						1
d5-NEtFOSAA	82		25 - 150						1
M2-6:2 FTS	120		25 - 150						1
M2-8:2 FTS	98		25 - 150						1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: TRC Environmental Corporation.

Job ID: 320-58833-1

Project/Site: PFAS Testing - Tecumseh New Holstein

Client Sample ID: FB-1

Lab Sample ID: 320-58833-7

Matrix: Water

Date Collected: 02/19/20 15:40

Date Received: 02/21/20 09:10

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorododecanesulfonic acid (PFDoS)	<0.37		1.7	0.37	ng/L		02/24/20 11:22	02/25/20 11:06	1
F-53B Major	<0.20		1.7	0.20	ng/L		02/24/20 11:22	02/25/20 11:06	1
HFPO-DA (GenX)	<1.2		3.3	1.2	ng/L		02/24/20 11:22	02/25/20 11:06	1
F-53B Minor	<0.27		1.7	0.27	ng/L		02/24/20 11:22	02/25/20 11:06	1
10:2 FTS	<0.16		1.7	0.16	ng/L		02/24/20 11:22	02/25/20 11:06	1
DONA	<0.15		1.7	0.15	ng/L		02/24/20 11:22	02/25/20 11:06	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	85		25 - 150				02/24/20 11:22	02/25/20 11:06	1
13C5 PFPeA	88		25 - 150				02/24/20 11:22	02/25/20 11:06	1
13C2 PFHxA	87		25 - 150				02/24/20 11:22	02/25/20 11:06	1
13C4 PFHpA	96		25 - 150				02/24/20 11:22	02/25/20 11:06	1
13C4 PFOA	91		25 - 150				02/24/20 11:22	02/25/20 11:06	1
13C5 PFNA	93		25 - 150				02/24/20 11:22	02/25/20 11:06	1
13C2 PFDA	85		25 - 150				02/24/20 11:22	02/25/20 11:06	1
13C2 PFHxDA	81		25 - 150				02/24/20 11:22	02/25/20 11:06	1
13C2 PFUnA	79		25 - 150				02/24/20 11:22	02/25/20 11:06	1
13C2 PFDoA	86		25 - 150				02/24/20 11:22	02/25/20 11:06	1
13C2 PFTeDA	92		25 - 150				02/24/20 11:22	02/25/20 11:06	1
18O2 PFHxS	94		25 - 150				02/24/20 11:22	02/25/20 11:06	1
13C4 PFOS	80		25 - 150				02/24/20 11:22	02/25/20 11:06	1
13C8 FOSA	90		25 - 150				02/24/20 11:22	02/25/20 11:06	1
d3-NMeFOSAA	85		25 - 150				02/24/20 11:22	02/25/20 11:06	1
d5-NEtFOSAA	84		25 - 150				02/24/20 11:22	02/25/20 11:06	1
M2-6:2 FTS	114		25 - 150				02/24/20 11:22	02/25/20 11:06	1
M2-8:2 FTS	98		25 - 150				02/24/20 11:22	02/25/20 11:06	1
M2-4:2 FTS	101		25 - 150				02/24/20 11:22	02/25/20 11:06	1
d-N-MeFOSA-M	70		20 - 150				02/24/20 11:22	02/25/20 11:06	1
d-N-EtFOSA-M	42		20 - 150				02/24/20 11:22	02/25/20 11:06	1
d7-N-MeFOSE-M	24		10 - 120				02/24/20 11:22	02/25/20 11:06	1
d9-N-EtFOSE-M	21		10 - 120				02/24/20 11:22	02/25/20 11:06	1
13C3 HFPO-DA	80		25 - 150				02/24/20 11:22	02/25/20 11:06	1

Eurofins TestAmerica, Sacramento

QC Sample Results

Client: TRC Environmental Corporation.

Job ID: 320-58833-1

Project/Site: PFAS Testing - Tecumseh New Holstein

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCSD 320-359505/3-A

Client Sample ID: Lab Control Sample Dup

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 359784

Prep Batch: 359505

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	RPD Limit
NMeFOSE	40.0	44.0		ng/L		110	70 - 130	6	30
NEtFOSE	40.0	42.1		ng/L		105	71 - 131	11	30
Perfluorododecanesulfonic acid (PFDoS)	38.7	40.7		ng/L		105	67 - 127	1	30
F-53B Major	37.3	39.2		ng/L		105	75 - 135	0	30
HFPO-DA (GenX)	40.0	42.6		ng/L		107	51 - 173	2	30
F-53B Minor	37.7	40.0		ng/L		106	54 - 114	1	30
10:2 FTS	38.6	33.7		ng/L		87	64 - 142	2	30
DONA	37.7	47.9		ng/L		127	79 - 139	5	30

Isotope Dilution	LCSD	LCSD	Limits
	%Recovery	Qualifier	
13C4 PFBA	87		25 - 150
13C5 PFPeA	88		25 - 150
13C2 PFHxA	85		25 - 150
13C4 PFHpA	88		25 - 150
13C4 PFOA	104		25 - 150
13C5 PFNA	96		25 - 150
13C2 PFDA	93		25 - 150
13C2 PFHxDA	91		25 - 150
13C2 PFUnA	88		25 - 150
13C2 PFDoA	83		25 - 150
13C2 PFTeDA	97		25 - 150
18O2 PFHxS	100		25 - 150
13C4 PFOS	80		25 - 150
13C8 FOSA	92		25 - 150
d3-NMeFOSAA	91		25 - 150
d5-NEtFOSAA	90		25 - 150
M2-6:2 FTS	121		25 - 150
M2-8:2 FTS	102		25 - 150
M2-4:2 FTS	107		25 - 150
d-N-MeFOSA-M	56		20 - 150
d-N-EtFOSA-M	35		20 - 150
d7-N-MeFOSE-M	17		10 - 120
d9-N-EtFOSE-M	15		10 - 120
13C3 HFPO-DA	75		25 - 150

QC Association Summary

Client: TRC Environmental Corporation.

Project/Site: PFAS Testing - Tecumseh New Holstein

Job ID: 320-58833-1

LCMS

Prep Batch: 359505

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-58833-1	TEC-4	Total/NA	Water	3535	1
320-58833-2 - DL	NH-26	Total/NA	Water	3535	2
320-58833-2	NH-26	Total/NA	Water	3535	3
320-58833-3	NH-7	Total/NA	Water	3535	4
320-58833-4	MW-E	Total/NA	Water	3535	5
320-58833-5	MW-D	Total/NA	Water	3535	6
320-58833-6	RB-01	Total/NA	Water	3535	7
320-58833-7	FB-1	Total/NA	Water	3535	8
MB 320-359505/1-A	Method Blank	Total/NA	Water	3535	9
LCS 320-359505/2-A	Lab Control Sample	Total/NA	Water	3535	10
LCSD 320-359505/3-A	Lab Control Sample Dup	Total/NA	Water	3535	11

Analysis Batch: 359784

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-58833-2	NH-26	Total/NA	Water	537 (modified)	359505
320-58833-3	NH-7	Total/NA	Water	537 (modified)	359505
320-58833-4	MW-E	Total/NA	Water	537 (modified)	359505
320-58833-5	MW-D	Total/NA	Water	537 (modified)	359505
320-58833-6	RB-01	Total/NA	Water	537 (modified)	359505
320-58833-7	FB-1	Total/NA	Water	537 (modified)	359505
MB 320-359505/1-A	Method Blank	Total/NA	Water	537 (modified)	359505
LCS 320-359505/2-A	Lab Control Sample	Total/NA	Water	537 (modified)	359505
LCSD 320-359505/3-A	Lab Control Sample Dup	Total/NA	Water	537 (modified)	359505

Analysis Batch: 360091

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-58833-2 - DL	NH-26	Total/NA	Water	537 (modified)	359505

Analysis Batch: 360959

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-58833-1	TEC-4	Total/NA	Water	537 (modified)	359505

Lab Chronicle

Client: TRC Environmental Corporation.
Project/Site: PFAS Testing - Tecumseh New Holstein

Job ID: 320-58833-1

Client Sample ID: TEC-4

Date Collected: 02/19/20 12:09
Date Received: 02/21/20 09:10

Lab Sample ID: 320-58833-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			300.7 mL	10.00 mL	359505	02/24/20 11:22	VP	TAL SAC
Total/NA	Analysis	537 (modified)		10			360959	02/28/20 11:08	RS1	TAL SAC

Client Sample ID: NH-26

Date Collected: 02/19/20 13:11
Date Received: 02/21/20 09:10

Lab Sample ID: 320-58833-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			307.4 mL	10.00 mL	359505	02/24/20 11:22	VP	TAL SAC
Total/NA	Analysis	537 (modified)		1			359784	02/25/20 10:21	AP1	TAL SAC
Total/NA	Prep	3535	DL		307.4 mL	10.00 mL	359505	02/24/20 11:22	VP	TAL SAC
Total/NA	Analysis	537 (modified)	DL	10			360091	02/26/20 11:33	S1M	TAL SAC

Client Sample ID: NH-7

Date Collected: 02/19/20 14:20
Date Received: 02/21/20 09:10

Lab Sample ID: 320-58833-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			308.5 mL	10.00 mL	359505	02/24/20 11:22	VP	TAL SAC
Total/NA	Analysis	537 (modified)		1			359784	02/25/20 10:30	AP1	TAL SAC

Client Sample ID: MW-E

Date Collected: 02/19/20 15:24
Date Received: 02/21/20 09:10

Lab Sample ID: 320-58833-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			301.7 mL	10.00 mL	359505	02/24/20 11:22	VP	TAL SAC
Total/NA	Analysis	537 (modified)		1			359784	02/25/20 10:39	AP1	TAL SAC

Client Sample ID: MW-D

Date Collected: 02/19/20 16:44
Date Received: 02/21/20 09:10

Lab Sample ID: 320-58833-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			303.4 mL	10.00 mL	359505	02/24/20 11:22	VP	TAL SAC
Total/NA	Analysis	537 (modified)		1			359784	02/25/20 10:48	AP1	TAL SAC

Client Sample ID: RB-01

Date Collected: 02/19/20 14:05
Date Received: 02/21/20 09:10

Lab Sample ID: 320-58833-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			305.5 mL	10.00 mL	359505	02/24/20 11:22	VP	TAL SAC
Total/NA	Analysis	537 (modified)		1			359784	02/25/20 10:57	AP1	TAL SAC

Eurofins TestAmerica, Sacramento

Lab Chronicle

Client: TRC Environmental Corporation.
Project/Site: PFAS Testing - Tecumseh New Holstein

Job ID: 320-58833-1

Client Sample ID: FB-1

Lab Sample ID: 320-58833-7

Matrix: Water

Date Collected: 02/19/20 15:40

Date Received: 02/21/20 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			301.3 mL	10.00 mL	359505	02/24/20 11:22	VP	TAL SAC
Total/NA	Analysis	537 (modified)		1			359784	02/25/20 11:06	AP1	TAL SAC

Laboratory References:

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Accreditation/Certification Summary

Client: TRC Environmental Corporation.

Job ID: 320-58833-1

Project/Site: PFAS Testing - Tecumseh New Holstein

Laboratory: Eurofins TestAmerica, Sacramento

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

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	4040	01-29-21
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 537 (modified)	Prep Method 3535	Matrix Water	Analyte DONA

Method Summary

Client: TRC Environmental Corporation.

Project/Site: PFAS Testing - Tecumseh New Holstein

Job ID: 320-58833-1

Method	Method Description	Protocol	Laboratory
537 (modified)	Fluorinated Alkyl Substances	EPA	TAL SAC
3535	Solid-Phase Extraction (SPE)	SW846	TAL SAC

Protocol References:

EPA = US Environmental Protection Agency

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

Laboratory References:

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: TRC Environmental Corporation.

Project/Site: PFAS Testing - Tecumseh New Holstein

Job ID: 320-58833-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
320-58833-1	TEC-4	Water	02/19/20 12:09	02/21/20 09:10	
320-58833-2	NH-26	Water	02/19/20 13:11	02/21/20 09:10	
320-58833-3	NH-7	Water	02/19/20 14:20	02/21/20 09:10	
320-58833-4	MW-E	Water	02/19/20 15:24	02/21/20 09:10	
320-58833-5	MW-D	Water	02/19/20 16:44	02/21/20 09:10	
320-58833-6	RB-01	Water	02/19/20 14:05	02/21/20 09:10	
320-58833-7	FB-1	Water	02/19/20 15:40	02/21/20 09:10	

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Login Sample Receipt Checklist

Client: TRC Environmental Corporation.

Job Number: 320-58833-1

Login Number: 58833

List Source: Eurofins TestAmerica, Sacramento

List Number: 1

Creator: Nuval, Mark-Anthony M

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	1023128
Sample custody seals, if present, are intact.	N/A	
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.	False	Refer to Job Narrative for details.
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.	N/A	
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	