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**From:** Richard, Philip E - DNR  
**Sent:** Thursday, January 7, 2021 5:49 AM  
**To:** Richard, Philip E - DNR  
**Subject:** Rhinelander landfill results and press release  
**Attachments:** 20201228104651300.pdf

# CITY OF RHINELANDER

City Hall  
135 S. Stevens St.  
Rhinelander WI 54501  
Telephone (715) 365-8600  
Fax (715) 365-8630  
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Home of the Hodag  
*December 23, 2020*

*For Immediate Release:*

## **City Receives Landfill PFAS Test Results**

In August 2020, the Rhinelander Common Council approved testing for PFAS and its variants at the legacy Rhinelander Landfill. Following the closure of two municipal drinking water wells in 2019, the City has engaged in a broader initiative to identify the extent and possible sources of PFAS groundwater contamination in the Rhinelander area. The testing is a collaborative effort between the City and University of Wisconsin-Madison Geo Engineering Laboratory, under the direction of Dr. James Tinjum. The sampling procedure utilizes the Michigan Department of Environmental Quality General PFAS Sampling Guidance and EPA groundwater sampling methods. Five internal leachate monitoring wells were targeted for groundwater sampling in the Fall. Results indicated trace amounts of PFAS and its variants that are similar to levels that the State of Michigan found in a state-wide study of their landfills.

“I am pleased to report that our first round of analytical samples of five samples from the City of Rhinelander Legacy Landfill contained relatively low-levels of PFAS, as might be expected for a common municipal solid waste landfill”, said Dr. James Tinjum.

A second round of sampling consisting of monitoring wells adjacent to the landfill is planned with results anticipated in the early part of 2021. As research develops on emerging contaminants, we continue to study this issue and current available options. Among these, a task to evaluate the soil and groundwater in close proximity to the City wells 7 and 8. A scope on this work is under consideration, in collaboration with external research funding being pursued by UW-Madison, and will be considered at a future date.

“We’re pleased to have researched the landfill as a potential source for PFAS contamination, said Mayor Chris Frederickson. The preliminary results indicating low-level, residual amounts of contamination there allow us to begin to focus our efforts on the next target area of concern, he added.”

The full results can be found on [RhinelanderCityHall.org](http://RhinelanderCityHall.org). To get engaged with the WATR—Water Action Team Rhinelander—search Facebook.com. Following the release of the PFAS Fate and Transport Whitepaper in August, analytical testing of the Rhinelander Legacy Landfill was recommended, along with an evaluation of the near-surface soil and groundwater conditions near City Wells 7 and 8. The above testing stage marks a progression down this remedial investigation pathway.

For questions regarding the testing and results, contact James Tinjum at [jmtinjum@wisc.edu](mailto:jmtinjum@wisc.edu) or 608.262.0785. For questions regarding the City’s efforts, contact Mayor Chris Frederickson at [mayor@rhinelandercityhall.org](mailto:mayor@rhinelandercityhall.org) or 715-365-8600.



# Laboratory Report

Environmental Health Division

D.F. Kurtycz, M.D., Medical Director - Prof. James J. Schauer, Ph.D., Director

**WSLH Sample: 531159005**

WDNR LAB ID:113133790    NELAP LAB ID:2091    EPA LAB ID:WI00007, WI00008    WI DATCP ID:105-415

### List of Abbreviations:

LOD = Level of detection  
LOQ = Level of quantification  
ND = None detected. Results are less than the LOD  
F next to result = Result is between LOD and LOQ  
Z next to result = Result is between 0 (zero) and LOD  
if LOD=LOQ, Limits were not statistically derived

Test results for NELAP accredited tests are certified to meet the requirements of the NELAC standards. For a list of accredited analytes

see <http://www.slh.wisc.edu/about/compliance/nelac-laboratory-accreditation>

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Results relate only to the items tested.

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The water microbiology unit analyzes samples as received and not all samples are tested for preservation before analysis is performed.

### Responsible Party

Inorganic Chemistry: Graham Anderson, Supervisor 608-224-6281  
Metals: Graham Anderson, Supervisor 608-224-6281  
Organics: Erin Mani, Supervisor 608-224-6269  
Environmental Toxicology: Dawn Perkins, Supervisor 608-224-6230  
Water Microbiology: Martin Collins, Supervisor 608-224-6239  
Radiochemistry: David Webb, Division Director 608-224-6227



**Wisconsin State  
Laboratory of Hygiene**  
UNIVERSITY OF WISCONSIN-MADISON

Wisconsin State Laboratory of Hygiene  
2601 Agriculture Drive, PO Box 7996  
Madison, WI 53707-7996  
(800)442-4618 - FAX (608)224-6213  
<http://www.slh.wisc.edu>

# Laboratory Report

Environmental Health Division

D.F. Kurtycz, M.D., Medical Director - Prof. James J. Schauer, Ph.D., Director

**WSLH Sample: 531159005**

Analyte	Analysis Method	Result	Units	LOD	LOQ
Prep Date:	Analysis Date:				
PFUnA (2058-94-8)		Invalid Result			
PFDS (335-77-3)		Invalid Result			
11Cl-PF3OUdS (763051-92-9)		Invalid Result			
PFDoA (307-55-1)		Invalid Result			
10:2 FTSA (120226-60-0)		Invalid Result			
PFDoS (79780-39-5)		Invalid Result			
PFTrDA (72629-94-8)		Invalid Result			
N-MeFOSA (31506-32-8)		Invalid Result			
N-MeFOSE (24448-09-7)		Invalid Result			
N-EtFOSA (4151-50-2)		Invalid Result			
N-EtFOSE (1691-99-2)		Invalid Result			
PFTeDA (376-06-7)		Invalid Result			
PFHxDA (67905-19-5)		Invalid Result			
PFODA (16517-11-6)		Invalid Result			
PFAS in Wet Solids					
PFBA (375-22-4)		Invalid Result			
PFPeA (2706-90-3)		Invalid Result			
PFBS (375-73-5)		Invalid Result			
4:2 FTSA (757124-72-4)		Invalid Result			
PFHxA (307-24-4)		Invalid Result			
PFPeS (2706-91-4)		Invalid Result			
HFPO-DA (13252-13-6)		Invalid Result			
PFHpA (375-85-9)		Invalid Result			
PFHxS (355-46-4)		Invalid Result			
DONA (919005-14-4)		Invalid Result			



# Laboratory Report

Environmental Health Division

D.F. Kurtycz, M.D., Medical Director - Prof. James J. Schauer, Ph.D., Director

**WSLH Sample: 531159005**

Report To:  
JAMES TINJUM  
UW MADISON  
2214 ENGINEERING HALL  
1415 ENGINEERING DR  
Madison, WI 53706

Invoice To:  
JAMES TINJUM  
UW MADISON  
2214 ENGINEERING HALL  
1415 ENGINEERING DR  
Madison, WI 53706  
Customer ID: 355368

Field #: L2  
Project No:  
Collection End: 10/12/2020 12:00:00 PM  
Collection Start:  
Collected By: JAMES TINJUM  
Date Received: 10/14/2020  
Date Reported: 12/11/2020  
Sample Reason:

ID#:  
Sample Location:  
Sample Description: CLOSED RHINELANDER LANDFILL  
(L2)  
Sample Type: MW-MONITORING WELL  
Waterbody:  
Point or Outfall:  
Sample Depth:  
Program Code:  
Region Code:  
County:

## Sample Comments

Customer Requests Cancellation

Analyte	Analysis Method	Result	Units	LOD	LOQ
Prep Date:	Analysis Date:				
6:2 FTSA (27619-97-2)		Invalid Result			
PFOA (335-67-1)		Invalid Result			
PFHpS (375-92-8)		Invalid Result			
PFOS (1763-23-1)		Invalid Result			
PFNA (375-95-1)		Invalid Result			
9CI-PF3ONS (756426-58-1)		Invalid Result			
8:2 FTSA (39108-34-4)		Invalid Result			
PFDA (335-76-2)		Invalid Result			
PFNS (68259-12-1)		Invalid Result			
N-MeFOSAA (2355-31-9)		Invalid Result			
N-EtFOSAA (2991-50-6)		Invalid Result			
FOSA (754-91-6)		Invalid Result			



Environmental Health Division

D.F. Kurtycz, M.D., Medical Director - Prof. James J. Schauer, Ph.D., Director

**WSLH Sample: 531159004**

WDNR LAB ID:113133790    NELAP LAB ID:2091    EPA LAB ID:WI00007, WI00008    WI DATCP ID:105-415

#### List of Abbreviations:

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LOQ = Level of quantification  
ND = None detected. Results are less than the LOD  
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Results relate only to the items tested.

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#### Responsible Party

Inorganic Chemistry: Graham Anderson, Supervisor 608-224-6281

Metals: Graham Anderson, Supervisor 608-224-6281

Organics: Erin Mani, Supervisor 608-224-6269

Environmental Toxicology: Dawn Perkins, Supervisor 608-224-6230

Water Microbiology: Martin Collins, Supervisor 608-224-6239

Radiochemistry: David Webb, Division Director 608-224-6227



# Laboratory Report

Environmental Health Division

D.F. Kurtycz, M.D., Medical Director - Prof. James J. Schauer, Ph.D., Director

**WSLH Sample: 531159004**

## PFAS in Wet Solids

Analyte	Analysis Method	Result	Units	LOD	LOQ
Prep Date: 11/09/20 11:15	Analysis Date: 11/23/20 16:32				
N-MeFOSA (31506-32-8)	WSLH PFAS in Wet Solids	<6.60	ng/Kg	6.60	10.3
N-MeFOSE (24448-09-7)	WSLH PFAS in Wet Solids	<1.51	ng/Kg	1.51	2.05
N-EtFOSA (4151-50-2)	WSLH PFAS in Wet Solids	<6.57	ng/Kg	6.57	10.3
N-EtFOSE (1691-99-2)	WSLH PFAS in Wet Solids	<1.31	ng/Kg	1.31	2.05
PFTeDA (376-06-7)	WSLH PFAS in Wet Solids	<1.04	ng/Kg	1.04	2.05
PFHxDA (67905-19-5)	WSLH PFAS in Wet Solids	<0.813	ng/Kg	0.813	2.05
PFODA (16517-11-6)	WSLH PFAS in Wet Solids	<1.95	ng/Kg	1.95	5.13



Environmental Health Division

D.F. Kurtycz, M.D., Medical Director - Prof. James J. Schauer, Ph.D., Director

**WSLH Sample: 531159004**

## PFAS in Wet Solids

Analyte	Analysis Method	Result	Units	LOD	LOQ
Prep Date: 11/09/20 11:15		Analysis Date: 11/23/20 16:32			
PFHxS (355-46-4)	WSLH PFAS in Wet Solids	6.60	ng/Kg	0.961	2.05
DONA (919005-14-4)	WSLH PFAS in Wet Solids	<1.02	ng/Kg	1.02	2.05
6:2 FTSA (27619-97-2)	WSLH PFAS in Wet Solids	<1.53	ng/Kg	1.53	2.05
The internal standard QC limit is exceeded.					
PFOA (335-67-1)	WSLH PFAS in Wet Solids	99.4	ng/Kg	2.50	5.13
PFHpS (375-92-8)	WSLH PFAS in Wet Solids	<1.31	ng/Kg	1.31	2.05
PFOS (1763-23-1)	WSLH PFAS in Wet Solids	<1.70	ng/Kg	1.70	2.05
PFNA (375-95-1)	WSLH PFAS in Wet Solids	<1.57	ng/Kg	1.57	2.05
9CI-PF3ONS (756426-58-1)	WSLH PFAS in Wet Solids	<1.45	ng/Kg	1.45	2.05
8:2 FTSA (39108-34-4)	WSLH PFAS in Wet Solids	<1.61	ng/Kg	1.61	2.05
PFDA (335-76-2)	WSLH PFAS in Wet Solids	<1.72	ng/Kg	1.72	2.05
PFNS (68259-12-1)	WSLH PFAS in Wet Solids	<1.77	ng/Kg	1.77	2.05
N-MeFOSAA (2355-31-9)	WSLH PFAS in Wet Solids	<1.51	ng/Kg	1.51	2.05
N-EtFOSAA (2991-50-6)	WSLH PFAS in Wet Solids	<1.02	ng/Kg	1.02	2.05
FOSA (754-91-6)	WSLH PFAS in Wet Solids	<1.59	ng/Kg	1.59	2.05
PFUnA (2058-94-8)	WSLH PFAS in Wet Solids	<1.04	ng/Kg	1.04	2.05
PFDS (335-77-3)	WSLH PFAS in Wet Solids	<1.71	ng/Kg	1.71	2.05
11CI-PF3OUdS (763051-92-9)	WSLH PFAS in Wet Solids	<1.07	ng/Kg	1.07	2.05
PFDoA (307-55-1)	WSLH PFAS in Wet Solids	<1.54	ng/Kg	1.54	2.05
10:2 FTSA (120226-60-0)	WSLH PFAS in Wet Solids	<1.54	ng/Kg	1.54	2.05
PFDoS (79780-39-5)	WSLH PFAS in Wet Solids	<2.74	ng/Kg	2.74	5.13
PFTTrDA (72629-94-8)	WSLH PFAS in Wet Solids	<0.953	ng/Kg	0.953	2.05



# Laboratory Report

Environmental Health Division

D.F. Kurtycz, M.D., Medical Director - Prof. James J. Schauer, Ph.D., Director

**WSLH Sample: 531159004**

Report To:  
JAMES TINJUM  
UW MADISON  
2214 ENGINEERING HALL  
1415 ENGINEERING DR  
Madison, WI 53706

Invoice To:  
JAMES TINJUM  
UW MADISON  
2214 ENGINEERING HALL  
1415 ENGINEERING DR  
Madison, WI 53706  
Customer ID: 355368

Field #: L5  
Project No:  
Collection End: 10/13/2020 12:15:00 PM  
Collection Start:  
Collected By: JAMES TINJUM  
Date Received: 10/14/2020  
Date Reported: 12/11/2020  
Sample Reason:

ID#:  
Sample Location:  
Sample Description: CLOSED RHINELANDER LANDFILL  
(L5)  
Sample Type: MW-MONITORING WELL  
Waterbody:  
Point or Outfall:  
Sample Depth:  
Program Code:  
Region Code:  
County:

## PFAS in Wet Solids

Analyte	Analysis Method	Result	Units	LOD	LOQ
Prep Date: 11/09/20 11:15		Analysis Date: 11/23/20 16:32			
PFBA (375-22-4)	WSLH PFAS in Wet Solids	328	ng/Kg	33.8	51.3
Interference					
PFPeA (2706-90-3)	WSLH PFAS in Wet Solids	13.3	ng/Kg	1.12	2.05
Interference					
PFBS (375-73-5)	WSLH PFAS in Wet Solids	1.64F	ng/Kg	0.838	2.05
Interference					
Confirmation ion transition ratio failure					
4:2 FTSA (757124-72-4)	WSLH PFAS in Wet Solids	<2.42	ng/Kg	2.42	5.13
The internal standard QC limit is exceeded.					
PFHxA (307-24-4)	WSLH PFAS in Wet Solids	23.4	ng/Kg	1.33	2.05
PFPeS (2706-91-4)	WSLH PFAS in Wet Solids	<1.12	ng/Kg	1.12	2.05
HFPO-DA (13252-13-6)	WSLH PFAS in Wet Solids	<1.27	ng/Kg	1.27	2.05
PFHpA (375-85-9)	WSLH PFAS in Wet Solids	47.2	ng/Kg	1.07	2.05





Environmental Health Division

D.F. Kurtycz, M.D., Medical Director - Prof. James J. Schauer, Ph.D., Director

**WSLH Sample: 531159003**

WDNR LAB ID:113133790    NELAP LAB ID:2091    EPA LAB ID:WI00007, WI00008    WI DATCP ID:105-415

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Environmental Toxicology: Dawn Perkins, Supervisor 608-224-6230  
Water Microbiology: Martin Collins, Supervisor 608-224-6239  
Radiochemistry: David Webb, Division Director 608-224-6227



# Laboratory Report

Environmental Health Division

D.F. Kurtycz, M.D., Medical Director - Prof. James J. Schauer, Ph.D., Director

**WSLH Sample: 531159003**

Analyte	Analysis Method	Result	Units	LOD	LOQ
Prep Date:	Analysis Date:				
PFOA (335-67-1)		Invalid Result			
PFHpS (375-92-8)		Invalid Result			
PFOS (1763-23-1)		Invalid Result			
PFNA (375-95-1)		Invalid Result			
9Cl-PF3ONS (756426-58-1)		Invalid Result			
8:2 FTSA (39108-34-4)		Invalid Result			
PFDA (335-76-2)		Invalid Result			
PFNS (68259-12-1)		Invalid Result			
N-MeFOSAA (2355-31-9)		Invalid Result			
N-EtFOSAA (2991-50-6)		Invalid Result			
FOSA (754-91-6)		Invalid Result			
PFUnA (2058-94-8)		Invalid Result			
PFDS (335-77-3)		Invalid Result			
11Cl-PF3OUdS (763051-92-9)		Invalid Result			
PFDoA (307-55-1)		Invalid Result			
10:2 FTSA (120226-60-0)		Invalid Result			
PFDoS (79780-39-5)		Invalid Result			
PFTTrDA (72629-94-8)		Invalid Result			
N-MeFOSA (31506-32-8)		Invalid Result			
N-MeFOSE (24448-09-7)		Invalid Result			
N-EtFOSA (4151-50-2)		Invalid Result			
N-EtFOSE (1691-99-2)		Invalid Result			
PFTeDA (376-06-7)		Invalid Result			
PFHxDA (67905-19-5)		Invalid Result			
PFODA (16517-11-6)		Invalid Result			



# Laboratory Report

Environmental Health Division

D.F. Kurtycz, M.D., Medical Director - Prof. James J. Schauer, Ph.D., Director

**WSLH Sample: 531159003**

Report To:  
JAMES TINJUM  
UW MADISON  
2214 ENGINEERING HALL  
1415 ENGINEERING DR  
Madison, WI 53706

Invoice To:  
JAMES TINJUM  
UW MADISON  
2214 ENGINEERING HALL  
1415 ENGINEERING DR  
Madison, WI 53706  
Customer ID: 355368

Field #: L1  
Project No:  
Collection End: 10/12/2020 11:30:00 AM  
Collection Start:  
Collected By: JAMES TINJUM  
Date Received: 10/14/2020  
Date Reported: 12/11/2020  
Sample Reason:

ID#:  
Sample Location:  
Sample Description: CLOSED RHINELANDER LANDFILL  
(L1)  
Sample Type: MW-MONITORING WELL  
Waterbody:  
Point or Outfall:  
Sample Depth:  
Program Code:  
Region Code:  
County:

## Sample Comments

Customer Requests Cancellation

Analyte	Analysis Method	Result	Units	LOD	LOQ
Prep Date:	Analysis Date:				
PFAS in Wet Solids					
PFBA (375-22-4)		Invalid Result			
PFPeA (2706-90-3)		Invalid Result			
PFBS (375-73-5)		Invalid Result			
4:2 FTSA (757124-72-4)		Invalid Result			
PFHxA (307-24-4)		Invalid Result			
PFPeS (2706-91-4)		Invalid Result			
HFPO-DA (13252-13-6)		Invalid Result			
PFHpA (375-85-9)		Invalid Result			
PFHxS (355-46-4)		Invalid Result			
DONA (919005-14-4)		Invalid Result			
6:2 FTSA (27619-97-2)		Invalid Result			



Environmental Health Division

D.F. Kurtycz, M.D., Medical Director - Prof. James J. Schauer, Ph.D., Director

**WSLH Sample: 531159002**

WDNR LAB ID:113133790    NELAP LAB ID:2091    EPA LAB ID:WI00007, WI00008    WI DATCP ID:105-415

### List of Abbreviations:

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LOQ = Level of quantification  
ND = None detected. Results are less than the LOD  
F next to result = Result is between LOD and LOQ  
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Environmental Toxicology: Dawn Perkins, Supervisor 608-224-6230

Water Microbiology: Martin Collins, Supervisor 608-224-6239

Radiochemistry: David Webb, Division Director 608-224-6227



Environmental Health Division

D.F. Kurtycz, M.D., Medical Director - Prof. James J. Schauer, Ph.D., Director

**WSLH Sample: 531159002**

## PFAS in Wet Solids

Analyte	Analysis Method	Result	Units	LOD	LOQ
Prep Date: 11/09/20 11:15	Analysis Date: 11/23/20 16:17				
N-MeFOSE (24448-09-7)	WSLH PFAS in Wet Solids	<1.58	ng/Kg	1.58	2.14
N-EtFOSA (4151-50-2)	WSLH PFAS in Wet Solids	<6.85	ng/Kg	6.85	10.7
N-EtFOSE (1691-99-2)	WSLH PFAS in Wet Solids	<1.36	ng/Kg	1.36	2.14
PFTeDA (376-06-7)	WSLH PFAS in Wet Solids	<1.08	ng/Kg	1.08	2.14
PFHxDA (67905-19-5)	WSLH PFAS in Wet Solids	<0.848	ng/Kg	0.848	2.14
PFODA (16517-11-6)	WSLH PFAS in Wet Solids	<2.03	ng/Kg	2.03	5.35



Environmental Health Division

D.F. Kurtycz, M.D., Medical Director - Prof. James J. Schauer, Ph.D., Director

**WSLH Sample: 531159002**

## PFAS in Wet Solids

Analyte	Analysis Method	Result	Units	LOD	LOQ
Prep Date: 11/09/20 11:15		Analysis Date: 11/23/20 16:17			
DONA (919005-14-4)	WSLH PFAS in Wet Solids	<1.06	ng/Kg	1.06	2.14
6:2 FTSA (27619-97-2)	WSLH PFAS in Wet Solids	<1.59	ng/Kg	1.59	2.14
The internal standard QC limit is exceeded.					
PFOA (335-67-1)	WSLH PFAS in Wet Solids	27.5	ng/Kg	2.60	5.35
PFHpS (375-92-8)	WSLH PFAS in Wet Solids	<1.36	ng/Kg	1.36	2.14
PFOS (1763-23-1)	WSLH PFAS in Wet Solids	6.35	ng/Kg	1.77	2.14
PFNA (375-95-1)	WSLH PFAS in Wet Solids	<1.64	ng/Kg	1.64	2.14
9CI-PF3ONS (756426-58-1)	WSLH PFAS in Wet Solids	<1.51	ng/Kg	1.51	2.14
8:2 FTSA (39108-34-4)	WSLH PFAS in Wet Solids	<1.68	ng/Kg	1.68	2.14
PFDA (335-76-2)	WSLH PFAS in Wet Solids	<1.79	ng/Kg	1.79	2.14
PFNS (68259-12-1)	WSLH PFAS in Wet Solids	<1.84	ng/Kg	1.84	2.14
N-MeFOSAA (2355-31-9)	WSLH PFAS in Wet Solids	<1.58	ng/Kg	1.58	2.14
N-EtFOSAA (2991-50-6)	WSLH PFAS in Wet Solids	5.53	ng/Kg	1.06	2.14
FOSA (754-91-6)	WSLH PFAS in Wet Solids	2.59	ng/Kg	1.65	2.14
PFUnA (2058-94-8)	WSLH PFAS in Wet Solids	<1.09	ng/Kg	1.09	2.14
PFDS (335-77-3)	WSLH PFAS in Wet Solids	<1.78	ng/Kg	1.78	2.14
11CI-PF3OUdS (763051-92-9)	WSLH PFAS in Wet Solids	<1.11	ng/Kg	1.11	2.14
PFDoA (307-55-1)	WSLH PFAS in Wet Solids	<1.61	ng/Kg	1.61	2.14
10:2 FTSA (120226-60-0)	WSLH PFAS in Wet Solids	<1.60	ng/Kg	1.60	2.14
PFDoS (79780-39-5)	WSLH PFAS in Wet Solids	<2.85	ng/Kg	2.85	5.35
PFTrDA (72629-94-8)	WSLH PFAS in Wet Solids	<0.993	ng/Kg	0.993	2.14
N-MeFOSA (31506-32-8)	WSLH PFAS in Wet Solids	<6.88	ng/Kg	6.88	10.7



**Wisconsin State  
Laboratory of Hygiene**  
UNIVERSITY OF WISCONSIN-MADISON

Wisconsin State Laboratory of Hygiene  
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(800)442-4618 - FAX (608)224-6213  
<http://www.slh.wisc.edu>

# Laboratory Report

Environmental Health Division

D.F. Kurtycz, M.D., Medical Director - Prof. James J. Schauer, Ph.D., Director

## WSLH Sample: 531159002

Report To:  
JAMES TINJUM  
UW MADISON  
2214 ENGINEERING HALL  
1415 ENGINEERING DR  
Madison, WI 53706

Invoice To:  
JAMES TINJUM  
UW MADISON  
2214 ENGINEERING HALL  
1415 ENGINEERING DR  
Madison, WI 53706  
Customer ID: 355368

Field #: SC1  
Project No:  
Collection End: 10/13/2020 1:00:00 PM  
Collection Start:  
Collected By: JAMES TINJUM  
Date Received: 10/14/2020  
Date Reported: 12/11/2020  
Sample Reason:

ID#:  
Sample Location:  
Sample Description: CLOSED RHINELANDER LANDFILL  
(SC1)  
Sample Type: MW-MONITORING WELL  
Waterbody:  
Point or Outfall:  
Sample Depth:  
Program Code:  
Region Code:  
County:

### PFAS in Wet Solids

Analyte	Analysis Method	Result	Units	LOD	LOQ
Prep Date: 11/09/20 11:15		Analysis Date: 11/23/20 16:17			
PFBA (375-22-4)	WSLH PFAS in Wet Solids	72.1	ng/Kg	35.3	53.5
Interference					
PFPeA (2706-90-3)	WSLH PFAS in Wet Solids	8.82	ng/Kg	1.16	2.14
Interference					
PFBS (375-73-5)	WSLH PFAS in Wet Solids	<0.873	ng/Kg	0.873	2.14
4:2 FTSA (757124-72-4)	WSLH PFAS in Wet Solids	<2.52	ng/Kg	2.52	5.35
The internal standard QC limit is exceeded.					
PFHxA (307-24-4)	WSLH PFAS in Wet Solids	13.3	ng/Kg	1.39	2.14
PFPeS (2706-91-4)	WSLH PFAS in Wet Solids	<1.16	ng/Kg	1.16	2.14
HFPO-DA (13252-13-6)	WSLH PFAS in Wet Solids	<1.33	ng/Kg	1.33	2.14
PFHpA (375-85-9)	WSLH PFAS in Wet Solids	7.97	ng/Kg	1.11	2.14
PFHxS (355-46-4)	WSLH PFAS in Wet Solids	1.12F	ng/Kg	1.00	2.14



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## Laboratory Report

Environmental Health Division

D.F. Kurtycz, M.D., Medical Director - Prof. James J. Schauer, Ph.D., Director

**WSLH Sample: 531159001**

WDNR LAB ID:113133790    NELAP LAB ID:2091    EPA LAB ID:WI00007, WI00008    WI DATCP ID:105-415

### List of Abbreviations:

LOD = Level of detection  
LOQ = Level of quantification  
ND = None detected. Results are less than the LOD  
F next to result = Result is between LOD and LOQ  
Z next to result = Result is between 0 (zero) and LOD  
if LOD=LOQ, Limits were not statistically derived

Test results for NELAP accredited tests are certified to meet the requirements of the NELAC standards. For a list of accredited analytes

see <http://www.slh.wisc.edu/about/compliance/nelac-laboratory-accreditation>

Results, LOD and LOQ values have been adjusted for analytical dilutions and percent moisture where applicable.

Results relate only to the items tested.

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The water microbiology unit analyzes samples as received and not all samples are tested for preservation before analysis is performed.

### Responsible Party

Inorganic Chemistry: Graham Anderson, Supervisor 608-224-6281

Metals: Graham Anderson, Supervisor 608-224-6281

Organics: Erin Mani, Supervisor 608-224-6269

Environmental Toxicology: Dawn Perkins, Supervisor 608-224-6230

Water Microbiology: Martin Collins, Supervisor 608-224-6239

Radiochemistry: David Webb, Division Director 608-224-6227





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## Laboratory Report

Environmental Health Division

D.F. Kurtycz, M.D., Medical Director - Prof. James J. Schauer, Ph.D., Director

**WSLH Sample: 531159001**

### PFAS in Wet Solids

Analyte	Analysis Method	Result	Units	LOD	LOQ
Prep Date: 11/09/20 11:15	Analysis Date: 11/23/20 16:03				
PFTrDA (72629-94-8)	WSLH PFAS in Wet Solids	<0.927	ng/Kg	0.927	2.00
N-MeFOSA (31506-32-8)	WSLH PFAS in Wet Solids	<6.41	ng/Kg	6.41	9.98
N-MeFOSE (24448-09-7)	WSLH PFAS in Wet Solids	<1.47	ng/Kg	1.47	2.00
N-EtFOSA (4151-50-2)	WSLH PFAS in Wet Solids	<6.39	ng/Kg	6.39	9.98
N-EtFOSE (1691-99-2)	WSLH PFAS in Wet Solids	<1.27	ng/Kg	1.27	2.00
PFTeDA (376-06-7)	WSLH PFAS in Wet Solids	<1.01	ng/Kg	1.01	2.00
PFHxDA (67905-19-5)	WSLH PFAS in Wet Solids	<0.791	ng/Kg	0.791	2.00
PFODA (16517-11-6)	WSLH PFAS in Wet Solids	<1.89	ng/Kg	1.89	4.99



Environmental Health Division

D.F. Kurtycz, M.D., Medical Director - Prof. James J. Schauer, Ph.D., Director

**WSLH Sample: 531159001**

**PFAS in Wet Solids**

Analyte	Analysis Method	Result	Units	LOD	LOQ
Prep Date: 11/09/20 11:15		Analysis Date: 11/23/20 16:03			
PFHxS (355-46-4)	WSLH PFAS in Wet Solids	<0.935	ng/Kg	0.935	2.00
DONA (919005-14-4)	WSLH PFAS in Wet Solids	<0.990	ng/Kg	0.990	2.00
6:2 FTSA (27619-97-2)	WSLH PFAS in Wet Solids	<1.49	ng/Kg	1.49	2.00
The internal standard QC limit is exceeded.					
PFOA (335-67-1)	WSLH PFAS in Wet Solids	13.0	ng/Kg	2.43	4.99
The internal standard QC limit is exceeded.					
PFHpS (375-92-8)	WSLH PFAS in Wet Solids	<1.27	ng/Kg	1.27	2.00
PFOS (1763-23-1)	WSLH PFAS in Wet Solids	<1.65	ng/Kg	1.65	2.00
PFNA (375-95-1)	WSLH PFAS in Wet Solids	1.69F	ng/Kg	1.53	2.00
9CI-PF3ONS (756426-58-1)	WSLH PFAS in Wet Solids	<1.41	ng/Kg	1.41	2.00
8:2 FTSA (39108-34-4)	WSLH PFAS in Wet Solids	<1.57	ng/Kg	1.57	2.00
The internal standard QC limit is exceeded.					
PFDA (335-76-2)	WSLH PFAS in Wet Solids	<1.67	ng/Kg	1.67	2.00
PFNS (68259-12-1)	WSLH PFAS in Wet Solids	<1.72	ng/Kg	1.72	2.00
N-MeFOSAA (2355-31-9)	WSLH PFAS in Wet Solids	<1.47	ng/Kg	1.47	2.00
N-EtFOSAA (2991-50-6)	WSLH PFAS in Wet Solids	<0.990	ng/Kg	0.990	2.00
FOSA (754-91-6)	WSLH PFAS in Wet Solids	<1.54	ng/Kg	1.54	2.00
PFUnA (2058-94-8)	WSLH PFAS in Wet Solids	<1.01	ng/Kg	1.01	2.00
PFDS (335-77-3)	WSLH PFAS in Wet Solids	<1.66	ng/Kg	1.66	2.00
11CI-PF3OUdS (763051-92-9)	WSLH PFAS in Wet Solids	<1.04	ng/Kg	1.04	2.00
PFDoA (307-55-1)	WSLH PFAS in Wet Solids	<1.50	ng/Kg	1.50	2.00
10:2 FTSA (120226-60-0)	WSLH PFAS in Wet Solids	<1.49	ng/Kg	1.49	2.00
PFDoS (79780-39-5)	WSLH PFAS in Wet Solids	<2.66	ng/Kg	2.66	4.99



# Laboratory Report

Environmental Health Division

D.F. Kurtycz, M.D., Medical Director - Prof. James J. Schauer, Ph.D., Director

**WSLH Sample: 531159001**

Report To:  
JAMES TINJUM  
UW MADISON  
2214 ENGINEERING HALL  
1415 ENGINEERING DR  
Madison, WI 53706

Invoice To:  
JAMES TINJUM  
UW MADISON  
2214 ENGINEERING HALL  
1415 ENGINEERING DR  
Madison, WI 53706  
Customer ID: 355368

Field #: L2D  
Project No:  
Collection End: 10/13/2020 12:20:00 PM  
Collection Start:  
Collected By: JAMES TINJUM  
Date Received: 10/14/2020  
Date Reported: 12/11/2020  
Sample Reason:

ID#:  
Sample Location:  
Sample Description: CLOSED RHINELANDER LANDFILL  
(L2D)  
Sample Type: MW-MONITORING WELL  
Waterbody:  
Point or Outfall:  
Sample Depth:  
Program Code:  
Region Code:  
County:

**PFAS in Wet Solids**

Analyte	Analysis Method	Result	Units	LOD	LOQ
Prep Date: 11/09/20 11:15		Analysis Date: 11/23/20 16:03			
PFBA (375-22-4)	WSLH PFAS in Wet Solids	59.0	ng/Kg	32.9	49.9
Interference					
PFPeA (2706-90-3)	WSLH PFAS in Wet Solids	2.70	ng/Kg	1.09	2.00
Interference					
PFBS (375-73-5)	WSLH PFAS in Wet Solids	0.847F	ng/Kg	0.815	2.00
Interference					
4:2 FTSA (757124-72-4)	WSLH PFAS in Wet Solids	<2.35	ng/Kg	2.35	4.99
The internal standard QC limit is exceeded.					
PFHxA (307-24-4)	WSLH PFAS in Wet Solids	4.54	ng/Kg	1.29	2.00
The internal standard QC limit is exceeded.					
PFPeS (2706-91-4)	WSLH PFAS in Wet Solids	<1.09	ng/Kg	1.09	2.00
HFPO-DA (13252-13-6)	WSLH PFAS in Wet Solids	<1.24	ng/Kg	1.24	2.00
PFHpA (375-85-9)	WSLH PFAS in Wet Solids	2.06	ng/Kg	1.04	2.00