

MDHHS Water Data Evaluation – Resolute Forest Products Fire, Menominee

October 15, 2022

Background

On October 6, 2022, a large fire started at Resolute Forest Products located at 701 4th Ave in Menominee, MI. The fire spread to the adjoining Tyco Fire Products facility which houses firefighting foam. MDHHS has partnered with local, state, and federal agencies to respond to the incident. On October 13, the Michigan governor declared a state of emergency for Menominee County. The Resolute Forest Products warehouse is located along the Menominee River near the inlet to Lake Michigan. Due to water runoff from the fire and the presence of chemicals stored in the affected buildings PFAS has been released to the river and lake. The water intake for the Menominee water treatment facility is located in Lake Michigan approximately three miles north of the site. The water treatment facility does not have the capacity to remove PFAS from the water. Unified Command agencies have conducted surface water sampling and sampling of raw and treated water at the treatment plant.

Data Evaluation

MDHHS reviewed the following water data reported through noon on **10/15/2022**.

Table 1. Water samples collected by EPA from the Menominee fire site and analyzed for PFAS.

Sample date	Sample ID	Sample type
10/12/2022	SWEF2210121335WB	Finished drinking water Menominee
10/8/2022	11 samples	Surface water across Menominee river
10/9/2022	SWIN2210091410JD	Raw drinking water Menominee
10/9/2022	MPF-SW10-100922	Surface water near MI DW intake

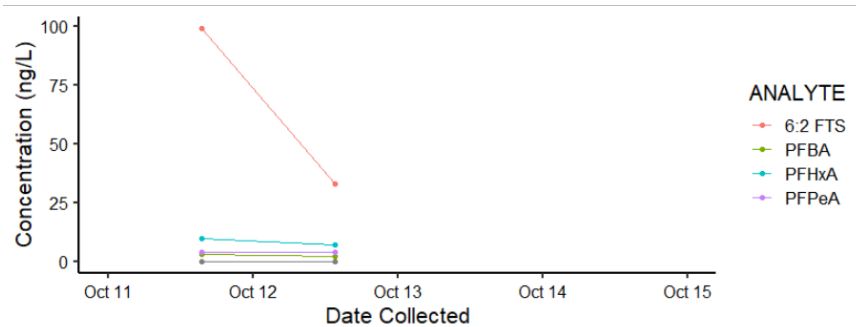
Table 2. Chemical detections for drinking water samples collected on October 12, 2022.

Chemical	Menominee River water (ng/L or ppt)	Surface water near DW intake (ng/L)	Raw DW at intake (ng/L or ppt)	Finished DW (ng/L or ppt)	MDHHS Comparison Value or MCL [1] (ng/L or ppt)	Other CV or risk assessment value (ng/L or ppt)
Date	10/8/22	10/8/22	10/9/22	10/12/22		
6:2FTS	2 - 362	68	1980	33		3300 [2]
PFHxA	0.85 – 2.91	J	14.8	7	400,000	
PFPeA	0.9 – 1.53	1.5J	3.62	4		51 [4]
PFBA	1.7 – 2.49	3.5J	2.96	2		7000 [3]
PFOA	1 – 4.9	2.9	9.38	ND	8	
PFOS	1.86	2.4	ND	ND	8	
PFOSA	2.1 – 6.3	ND	63.4	NA		20 [5]
4:2FTS	NA	NA	3.79	ND		
8:2FTS	NA	NA	2.2	ND		

ng/L = nanograms per liter, ND = Not detected, ppt = parts per trillion, NA = Not analyzed, * data might not be fully validate and could change.

Water Trend

Pre-incident concentration of PFAS in the drinking water were non-detect. Since start of measurements post-incident, level have been **decreasing** for all PFAS detected or have remained **unchanged**. No new PFAS have been detected in Michigan finished drinking water. Surface water PFAS previously detected are **decreasing**, some new PFAS were newly detected at low levels.



Conclusions

Unchanged from 10/14/22, conclusions for reference below:

- There is a completed exposure pathway to the drinking water from the Menominee Fire incident.
- At this time, risk assessment of PFAS would indicate there is no apparent public health concern.
 - All detections of PFAS in any sample is below the comparison value or from the risk assessment has a hazard quotient well below 1.
- Further sampling is needed to continue to evaluate municipal water quality for PFAS and other chemicals that were released.

Recommendations

Unchanged from 10/14/22, recommendations for reference below:

- Notify consumers of Menominee city water of the presence of PFAS in the water but no known health concern for those that are consuming it.
- Need for continued testing and ongoing monitoring of Public Water Supply
- Contingency Planning for mitigation or alternative water

References

1. <https://www.michigan.gov/-/media/Project/Websites/pfasresponse/documents/MPART/Reports/2019-Health-Based-Drinking-Water-Value-Recommendations-PFAS-MI.pdf?rev=0dc919f0d56d44f98d5bb1130a8c8907>
<https://www.michigan.gov/pfasresponse/drinking-water/mcl>
2. <https://stateofmichigan.sharepoint.com/:b:/r/sites/DHHS-Teams-Menominee-Michigan-Warehouse-Fire-Response/Shared%20Documents/Environmental%20Unit/Risk%20Assessments/221013%20Menominee%2062FTS%20Tox%20assessment.pdf?csf=1&web=1&e=AwRTPF>
3. <https://www.health.state.mn.us/communities/environment/risk/docs/guidance/gw/pfba2summ.pdf>
4. No toxicity value is available for risk assessment, Texas CEQ evaluated PFPeA like PFHxS for which we do have an MCL. <https://www.awwa.org/Portals/0/AWWA/ETS/Resources/Technical%20Reports/Summary-PFAS-Toxicological-Research.pdf?ver=2020-11-10-100756-377>
5. <https://www.dhs.wisconsin.gov/chemical/pfas.htm>