



RICK SNYDER  
GOVERNOR

STATE OF MICHIGAN  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
LANSING



C. HEIDI GREETHER  
DIRECTOR

October 19, 2018

CERTIFIED MAIL

Mr. Benjamin Marrs, PG, REM  
BRAC Program Management Division  
United States Department of the Air Force  
Air Force Civil Engineer Center - Building 1  
3515 South General McMullin Avenue  
San Antonio, Texas 78226

Dear Mr. Marrs:

SUBJECT: Violation Notice No. VN-008900  
Substantive Requirements Document (SRD) No. MIU990034  
Designated Name: USAF-Wurtsmith AFB

The Michigan Department of Environmental Quality (MDEQ), Water Resources Division (WRD), has determined that the USAF-Wurtsmith AFB is in violation of Part 31, Water Resources Protection, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA), MCL 324.3101 *et seq.*; the administrative rules promulgated thereunder being 2006 AACRS R 323.2101 *et seq.*, as amended; and SRD No. MIU990034, which was signed on April 15, 2016.

A review of groundwater data from compliance monitoring wells located in the area of Clark's Marsh document PFOS levels far exceeding the 12 nanograms per liter (ng/l) PFOS water quality standard at the groundwater surface water interface (GSI). Failure to meet water quality standards for discharges of venting groundwater is a violation of Section 3109(a) and other sections of Part 31; excerpt is below. The MDEQ has also determined that the discharge of venting groundwater is not in compliance with Part 201, Environmental Remediation, of the NREPA.

*Section 324.3109a. Mixing zones for discharges of venting groundwater; conditions not requiring permit; definitions.*

*(1) Notwithstanding any other provision of this part, or rules promulgated under this part, the department shall allow for a mixing zone for discharges of venting groundwater in the same manner as the department provides for a mixing zone for point source discharges. Mixing zones for discharges of venting groundwater shall not be less protective of public health or the environment than the level of protection provided for mixing zones from point source discharges.*

*(2) Notwithstanding any other provision of this part, if a discharge of venting groundwater is in compliance with the water quality standards provided for in this part and the rules promulgated under this part, a permit is not required under this part for the discharge if the discharge is provided for in either or both of the following:*

*(a) A remedial action plan that is approved by the department under part 201.*

*(b) A corrective action plan that is submitted to the department under part 213 that includes a mixing zone determination made by the department and that has been noticed in the department calendar.*

(3) As used in this section:

(a) "Mixing zone" means that portion of a water body where a point source discharge or venting groundwater is mixed with receiving water.

(b) "Venting groundwater" means groundwater that is entering a surface water of the state from a facility, as defined in section 20101.

The WRD identified the following groundwater PFOS concentrations that indicate exceedances of the GSI in Clark's Marsh.

Sample Type	Data Source	Sample Date	PFOS (ng/l)
FT02-MW9	USAF	2016	42,000
FT02-MW8D	USAF	2016	39,000
FT02-MW7D	USAF	2016	29,000
FT02-MW8S	USAF	2016	12,000
FT02-MW6S	USAF	2016	8,800
FT02-MW4D	USAF	2016	8,300
FT02-MW5	USAF	2016	7,400
FT02-MW5	USAF	2017	4,060
FT02-MW6D	USAF	2016	6,100
FT02-MW4S	USAF	2016	1,200
FT02-MW7S	USAF	2016	100

In this instance, pore water further supports that there are exceedances of water quality standards in venting groundwater to Clark's Marsh.

Sample Type	Data Source	Sample Date	PFOS (ng/l)
PW CM 02	MDEQ	9/4/2018	6,240
PW CM 04	MDEQ	9/4/2018	3,810
PW CM 05	MDEQ	9/4/2018	2,120
PW CM 03	MDEQ	9/4/2018	994
PW CM 01	MDEQ	9/4/2018	146
PW CM 06	MDEQ	9/4/2018	42.2

In addition, concentrations of PFOS in surface waters in the Clark's Marsh area exceed water quality standards, ranging from 83 ng/l to 1,410 ng/l.

The violations identified in this Violation Notice are continuing and are violations of Part 31 and SRD No. MIU990034.

The USAF-Wurtsmith AFB should take immediate action to achieve and maintain compliance with the terms and conditions of Part 31 and SRD No. MIU990034.

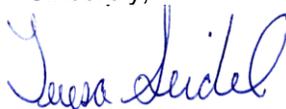
The USAF-Wurtsmith AFB shall submit a Compliance Plan addressing the above noted violations of Part 31 within 30 days of receipt of this Violation Notice. At a minimum, the Compliance Plan shall address the items below.

1. The USAF-Wurtsmith AFB shall provide a schedule for increasing the pumping rate and treatment capacity of the FT-02 Groundwater Pump and Treat System from the current designed capacity of 250 gallons per minute (gpm) (0.36 million gallons per day [MGD]) to the authorized flow maximum flow rate of 1,040 gpm (1.5 MGD) outlined in SRD No. MIU990034. The pumping rate and treatment capacity of FT-02 shall be required to be increased to 1,040 gpm on or before 18 months from the date of this Violation Notice.
2. The USAF-Wurtsmith AFB shall submit a plan to increase the size of the FT-02 plume capture zone from that area equal to or greater than the Provisional Health Advisory Value level for PFOS of 200 ng/L to the area equal to or greater than the GSI water quality standard of 12 ng/L, as is possible within the potential expansion capacity of the FT-02 treatment system to 1,040 gpm. Include justification for the placement of the additional extraction wells.
3. The USAF-Wurtsmith AFB should consider the ultimate endpoint for compliance to be the ability of the groundwater compliance monitoring wells to meet the 12 ng/L PFOS water quality standard.
4. The USAF-Wurtsmith AFB shall begin entering PFOS and PFAS compliance sampling data into MiWaters from groundwater compliance monitoring wells on a monthly basis.
5. The MDEQ is aware that the USAF-Wurtsmith AFB constructed an infiltration pit upgradient from the FT-02 plume capture zone and pumped PFAS contaminated wastewater collected at other locations on the base into the pit. No PFAS contaminated wastewater shall be applied to the FT-02 treatment system collection area.

If you have any factual information you would like us to consider regarding the violations identified in this Violation Notice, please provide them with your written response.

We anticipate and appreciate your cooperation in resolving this matter. Should you require further information regarding this Violation Notice or if you would like to arrange a meeting to discuss it, please contact me at 517-284-5470; seidelt@michigan.gov; or MDEQ, P.O. Box 30458, Lansing, Michigan 48909-7958.

Sincerely,



Teresa Seidel, Director  
Water Resources Division

cc: Mr. Phil Argiroff, MDEQ  
Mr. Tarek Buckmaster, MDEQ  
Ms. Christine Alexander, MDEQ  
Mr. Charlie Bauer, MDEQ