



**DEPARTMENT OF THE AIR FORCE
377TH AIR BASE WING (AFGSC)**



Colonel David S. Miller, USAF
Commander
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JUN 26 2019

Ms. Evelyn Rosborough
NPDES Permits Branch (6WQ-PO)
Water Quality Protection Division
U.S. Environmental Protection Agency
1445 Ross Avenue, Suite 1200
Dallas TX 75202-2733

Dear Ms. Rosborough

The United States Air Force (USAF) is in receipt of the draft copy of the National Pollutant Discharge Elimination System (NPDES) permit (No. NM0031216) for Kirtland Air Force Base (AFB), New Mexico dated 22 March 2019, which would intermittently discharge water from a groundwater treatment plant. The USAF is implementing the investigation and remediation of a historical leak from a former Bulk Fuel Facility (BFF) pursuant to the Resource Conservation and Recovery Act (RCRA) corrective action provisions in Part 6 of KAFB's Hazardous Waste Treatment Facility Operating Permit No. NM9570024423 (hereafter referred to as RCRA Permit).

The RCRA Permit is enforced by the New Mexico Environment Department (NMED) Hazardous Waste Bureau, which is authorized to administer RCRA by the Environmental Protection Agency (EPA). The USAF has and is continuing to implement a number of interim cleanup measures. These interim measures (IMs) were put in place under the supervision of the NMED to reduce and/or prevent the migration of fuel constituents while the investigation phase is completed and long-term corrective action remedies are being evaluated and implemented.

The USAF comments and objections regarding specific conditions and requirements within the draft NPDES permit are provided below:

1. Background/General Information:

- a. The IM that is the subject of this NPDES permit application is a pump and treat system that was designed to capture and treat the ethylene dibromide (EDB) plume that has moved off-base in the groundwater. The USAF began operating this full-scale groundwater pump and treat system in late 2015. Currently, this system consists of four (4) extraction wells and a full-scale groundwater treatment system (GWTS) that uses sand filters and two (2) treatment trains consisting of 40,000 pounds of granular activated carbon each to treat the low concentration of EDB contaminated groundwater. The treatment capacity of the groundwater treatment plant is 800 gpm.

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- b. EDB is the only anthropogenic contaminant in the influent to the groundwater treatment plant. The combined influent to the groundwater treatment plant averages ~535 gpm at an average EDB concentration close to the detection limit of EDB [.002µg/L (J)]; below the maximum contaminant level (MCL) of .005µg/L]. The area of the regional aquifer that is impacted by the EDB plume from the BFF fuel leak is beneath neighborhoods with mixed residential and commercial land use. The influent from the four (4) extraction wells is not hazardous. The treated effluent is below MCLs for all fuel related constituents and naturally occurring metals, meets all New Mexico Water Groundwater Quality standards required by the Class V Underground Injection Control (UIC) Discharge Permit (DP-1839); and meets all federal Safe Drinking Water Act standards. As the quarterly monitoring data clearly indicate, the BFF pump and treatment system IM has been successful in shrinking the footprint of the off-base EDB plume.
- c. It is imperative that the USAF has redundant means for the disposition of the treated effluent to ensure the uninterrupted operation of this IM to ensure compliance with the corrective action requirements of the RCRA Permit. The treated groundwater is currently used to either irrigate the on-base golf course or discharged to the aquifer under DP-1839, which was issued by NMED's Groundwater Quality Bureau. The USAF plans to construct a second injection well under DP-1839 in 2019-2020.
- d. Because the irrigation of the golf course is seasonally limited to the warmer months and injection well infrastructure can be prone to biofouling, the USAF is applying for this NPDES Permit to have a tertiary method for managing the treated groundwater. The maximum discharge to the NPDES outfall would be 800 gpm, which is the maximum design capacity of the GWTS. The duration of the discharge is difficult to predict. It is the USAF's intent to use the NPDES outfall as the third discharge option. That is, during the summer months the golf course would receive the majority, if not all, of the treated water. Any water that is not used for irrigation would be discharged to an injection well. During the colder months or during other times where the golf course cannot accept the treated water (e.g. the course is saturated as a result of a heavy precipitation event or has an infrastructure failure) the treated water would be discharged to one or both injection wells after construction is complete. This proposed first-time issuance of the NPDES permit would only be used to discharge treated, non-hazardous groundwater in the unlikely event the two (2) primary disposal methods, golf course irrigation and underground injection, are temporarily unavailable.

2. Sampling Frequency

- a. While this is a "new industrial discharge" as defined by the EPA, it is not a typical one for the following reasons:
 - i. The area of the regional aquifer that is impacted by EDB from the BFF fuel leak is beneath neighborhoods with mixed residential and commercial land use. There are no known industrial sources of groundwater contamination and any de minimis residential and commercial use of pesticides and herbicides is highly unlikely to cause groundwater contamination in an aquifer that is approximately 500 feet below ground surface:
 - ii. The groundwater that is the source of the influent to the groundwater treatment plant is well characterized through quarterly monitoring and regular influent and effluent sampling:

- iii. The treatment process and the quality of the effluent are already heavily regulated by NMED under RCRA, the New Mexico Hazardous Waste Act and the New Mexico Water Quality Control Commission rules; and
- iv. The groundwater treatment plant is operated very conservatively to ensure there is never a discharge above regulatory standards. The GWTS consists of two treatment trains, each consisting of two 20,000 lb granulated activated carbon (GAC) vessels in series; i.e. in a lead/lag formation. If effluent from the lead tank into the lag tank ever hits 90% of MCL for any contaminant, the activated carbon will be changed out, thereby always ensuring there is a virgin tank in the lag position. [See attached 14 June 2018 *Operations and Maintenance Plan, Groundwater Treatment System, Bulk Fuels Facility, Solid Waste Management Unit ST-106/SS-111*, Section 1 (1.2)].

3. Objections to Specific Requirements

- a. Whole Effluent Toxicity (WET) Testing (48 Hour Acute no-observed-effect concentration (NOEC) Freshwater). The Tijeras Arroyo is a dry watercourse that is ephemeral in nature and only sees flow during heavy precipitation events. The Tijeras Arroyo does eventually flow into the Rio Grande River, although it is approximately 5-6 miles from the proposed discharge point in this NPDES permit.
- b. The USAF does not believe WET testing is warranted in this particular instance and respectfully requests that this requirement be removed prior to issuing the final NPDES permit. The ephemeral nature of Tijeras Arroyo, as outlined above, is highly unlikely to be changed by this discharge. As stated in the USAF's NPDES application, this NPDES outfall would only be used to discharge treated, non-hazardous groundwater in the unlikely event the two primary disposal methods, golf course irrigation and underground injection, are temporarily unavailable.
- c. In the unlikely event that conditions change, the proposed NPDES permit has the reopener clause in Part II (C) that allows EPA to require additional monitoring and/or testing.
- d. The table in Part I (A)(1) "Final Effluent Limits" contains numerous constituents that are not present in the effluent from the groundwater treatment plant based upon process knowledge, extensive analytical data collected pursuant to the RCRA Permit and DP-1839 and the attached analytical data from effluent samples collected on 22 May 2019 and 31 May 2019. Section V (C)(5)(C-Toxics) of the Fact Sheet states "that there is a reasonable potential for the following pollutants to be present in the effluent: Antimony, Arsenic, Nickel, Selenium, Thallium, Zinc, Mercury, 4,4' - DDT and derivatives, Toxaphene, Heptachlor, Heptachlor epoxide, Aldrin, Dieldrin, 2,3,7,8-TCDD (Dioxin), PCB's, Benzo(a)pyrene, Chlordane, Hexachlorobenzene, Ethylene dibromide, per- and polyflouroalkyl substances (PFAS) and Tetrachloroethylene." EPA has included these constituents, along with numerous others, in Part I (A)(1) of the draft permit.
- e. The USAF respectfully objects to the inclusion of the above referenced constituents on the analytical list (with the exception of the constituents in Table 2 "Constituents of Concern" in DP-1839, specifically ethylene dibromide, benzene, ethylbenzene, toluene, total xylenes, iron and manganese) and the proposed sampling frequencies) contained

within the referenced section of the draft permit. Alternatively, the USAF proposes that samples for these contaminants be collected only once within the first two years to verify the contaminants meet discharge standards. For consistency, the USAF proposes that the sampling of ethylene dibromide, benzene, ethylbenzene, toluene, total xylenes, iron and manganese coincide with the sampling frequency of the state issued DP-1839 permit with sample collection occurring monthly when discharge to the NPDES outfall occurs.

- f. The NMED is responsible for anti-degradation requirements and NMED staff are intimately familiar with the BFF remediation project including the applicable permits, monitoring data, and quarterly reports. In a letter dated 11 December 2018, Ms. Sarah Holcomb, Point Source Regulation Section (PSRS) Program Manager for the NMED Surface Water Quality Bureau states:

"...data for pollutants in Group B on the permit application should be reported only for pollutants which you believe will be present or are limited directly by an effluent limitations guideline or NSPS or indirectly through limitations on an indicator pollutant. However, this facility is a new proposed discharger, so discharge data meeting NPDES requirements is not yet available. Therefore, the permittee will be required to sample for these pollutants, with EPA approved and sufficiently sensitive methods within the first two years of discharging."

- g. In accordance with the letter from NMED to EPA, the USAF has obtained samples for the referenced pollutants from the effluent of the groundwater treatment plant and request that EPA consider the sampling requirement for these pollutants (with the exception of Ethylene dibromide) to be satisfied and the conditions removed prior to the issuance of the final permit. The attached analytical data from effluent samples collected on 22 May 2019 and 31 May 2019 demonstrate that these pollutants are all below their respective regulatory standards for surface water discharge. As such, there is no reasonable expectation that these constituents would affect water quality in the receiving waters or their designated uses.

4. Procedural Defects

- a. The anti-degradation sampling requirement for PFAS is arbitrary. PFAS compounds are not present in the effluent and; therefore, do not pose a reasonable potential to cause or contribute to an exceedance of a water quality standard.
- b. The Fact Sheet provided with the Draft Permit does not provide any basis or explanation for inclusion of a PFAS anti-degradation sampling requirement. As such, the USAF has not been provided an adequate fact based rationale for the requirement. Fact sheets "shall" contain an explanation of the reasons "that such conditions are applicable". 40 CFR § 124.56(b).
- c. The New Mexico certifications requirement for PFAS is outside the scope of the State Certification authority under 40 CFR 124.53 and should not be incorporated as a NPDES permit requirement. PFAS is an unregulated contaminant for which there is currently no Federal standard. New Mexico recently adopted PFOA and PFOS as a toxic pollutant standard pursuant to 20.6.2 NMAC Groundwater and Surface Water Protection Standards

in December of 2018. However, water quality standards must be approved by EPA before they are used in NPDES permitting. 40 CFR § 131.21.

- d. A requirement is "arbitrary" if it is "in excess of statutory jurisdiction, authority, or limitations, or short of statutory right"; or "without observance of procedure required by law." 5 U.S.C. §706(2) (A), (C) – (D).

If you have any questions or concerns, please contact Mr. Scott Clark at (505) 846-9017 or at scott.clark@us.af.mil or Mr. Sheen Kottkamp at (505) 846-7674 or at sheen.kottkamp.1@us.af.mil.

Sincerely



DAVID S. MILLER, Colonel, USAF
Commander

Attachments:

1. Effluent Analytical Results
2. NMED Letter to EPA
3. GWTS Operations and Maintenance Plan (CD)

cc:

EPA (Larson, Nguyen, Dwyer), letter and CD
NMED (Kenney), letter
NMED-PSRS (Holcomb), letter
NMED-OOTS (McQuillan), letter
NMED-HWB (Kieling), letter
Isleta Pueblo (Lucero), letter
SAF-IEE (Lynnes), electronic only
AFCEC/CZ (Renaghan, Clark, Kottkamp), electronic only
USACE-ABQ District Office (Simpler, Phaneuf, Dreeland, Kunkel, Sanchez, Salazar), electronic only
Public Info Repository, Administrative Record/Information Repository (AR/IR) and File