NEW MEXICO
ENVIRONMENT DEPARTMENT

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CERTIFIED MAIL – RETURN RECEIPT REQUESTED

January 5, 2015

Wayne L. Bitner
Chief, Environmental Restoration
2000 Wyoming Blvd SE
Kirtland AFB NM 87117-5600

RE: Approval with Conditions, Request for Temporary Permission to Discharge to KAFB-7, Kirtland Air Force Base, Bulk Fuels Facility, DP-1839

Dear Mr. Bitner:

The New Mexico Environment Department (NMED) is in receipt of Kirtland Air Force Base's (KAFB) *Request for Temporary Permission to Discharge for Pilot Test KAFB-7 Gravity Injection*, dated December 21, 2015, (Request). Hereafter, KAFB will be referred to as the "Permittee." The Request pertains to a 120 day pilot test of the discharge, *i.e.*, injection, of a maximum of 500 gallons per minute (gpm) of treated groundwater to the retrofitted groundwater extraction well KAFB-7. NMED has reviewed the Request and hereby issues an associated approval pursuant to Subsection B of 20.6.2.3106 NMAC of the New Mexico Water Quality Control Commission Regulations, with the conditions specified below.

The Request is associated with the Permittee's groundwater discharge permit application titled *Class V Underground Injection Control (UIC) Permit* (Application), received by NMED on December 4, 2015, proposing up to five injection wells to support the ethylene dibromide (EDB) plume Interim Measure (IM) for the historical fuel leak from the former Bulk Fuels Facility (BFF) at KAFB. The Permittee's stated objective of the pilot test is twofold: to evaluate the feasibility of using KAFB-7 as an injection well, and to have an additional winter 2016 water disposition option for the treated groundwater from the full-scale groundwater treatment system (GWTS).

The NMED deemed the Class V UIC permit application administratively complete on December 17, 2015, and issued an associated public notice on December 22, 2015. The NMED refers to the pending associated discharge permit as DP-1839. Class V groundwater remediation UIC wells (as defined in 20.6.2.5002.B(5)(d)(i) NMAC) are used to inject groundwater that has been treated to meet applicable groundwater quality standards. All UIC wells must operate in conformance with appropriate and applicable ground and surface water protection requirements as required by 20.6.2.5003.B NMAC.

The water to be injected is treated groundwater from extraction wells KAFB-106228, KAFB-106233 and KAFB-106234 that has been impacted with EDB and possibly other constituents of concern (COCs). The extraction wells are intended to collapse the downgradient portion of the dissolved phase contaminant plume, with extracted groundwater treated prior to injection using granular activated carbon to remove all organic constituents to below the drinking water standards specified below. The scope of this approval for temporary discharge for a period of 120 days is limited to the authorization of the injection of sufficiently treated groundwater to KAFB-7 and is not intended to define, limit, or approve the design of the GWTS. The proposed discharge location is within the boundaries of KAFB, south of Southgate Avenue and Ordnance Street SE, in Township T10N, Range R4E, Section S6, Albuquerque, Bernalillo County.

Temporary permission to discharge is hereby granted for 120 days from the initiation of injection of the treated groundwater, pursuant to Subsection B of 20.6.2.3106 NMAC. NMED considers the Permittee to have shown the good cause necessary for a temporary permission to discharge by demonstrating that the discharge will expedite the arrest the migration of the EDB plume.

This approval is contingent on the Permittee discharging and reporting as described in the Request and upon the following conditions:

1. Prior to initiating the discharge, the Permittee must verbally notify NMED of the date the temporary discharge is to commence.
2. Prior to occurrence, the Permittee must notify NMED in writing of any increase of the discharge volume or any process modification that would result in any significant modification in the temporary discharge of water contaminants. (20.6.2.3107.C NMAC)
3. Anthropogenic chemicals in injected water shall not exceed the more stringent value of either New Mexico Water Quality Control Commission standards (Section 20.6.2.3103 NMAC) or the Safe Drinking Water Act maximum contaminant levels (MCLs) for drinking water. For NMWQCC listed Toxic Pollutants without 3103 standards or MCLs, injected water shall not exceed the most current Tap Water Limits in Table A-1 of the NMED Risk Assessment Guidance. The contaminants of concern (COCs) associated with the EDB plume and their applicable standard are:
    a. Benzene: 5 µg/L
    b. Ethylene dibromide (EDB): 0.05 µg/L
    c. Iron: 1 mg/L
    d. Manganese: 0.2 mg/L
    e. Toluene: 750 µg/L
    f. Total xylenes: 620 µg/L

4. The Permittee shall submit documentation demonstrating that the GWTS effluent achieves the standards specified in Condition #3 above to NMED prior to the commencement of the temporary discharge.
5. After commencement of the temporary discharge, the GWTS effluent shall be sampled daily for the first week of operation with 24-hour analytical turnaround times. After the first week of operation, weekly samples shall be collected for the first month of operation with 5-day analytical turnaround times. After one month, and once it is determined that that constituents in effluent samples are not exceeding the standards specified in Condition #3, the sampling frequency may be reduced to monthly in accordance with Application Attachment D (*Monitoring and Contingency Plan),* Subsection 2.1.
6. Each time a new extraction well is brought on-line, the same sampling frequency specified in Condition #5 shall be utilized.
7. Should any COCs be detected above applicable standards in the effluent of the GWTS, the pumping shall cease immediately and the Permittee shall implement the response and notification procedures specified at Application Attachment D, Section 3 (*Contingency Plan*), Subsection 3.2. Should the concentrations of iron or manganese exceed applicable standards, the Permittee shall propose to NMED additional appropriate treatment methods for installation in addition to the GWTS.
8. Injected water shall not overtop the KAFB-7 well casing liner installed in 1979.
9. Water levels will be monitored with transducers in associated monitoring wells (KAFB-10523, KAFB-10524, KAFB-10507, KAFB-10508) as well as downhole in KAFB-7. System controls shall ensure shutdown of all associated components should conditions warrant.
10. The injection flow-rate monitoring, inspection, and calibration shall be performed in accordance with Application Attachment D, Subsection 2.2.
11. The injection of treated water into KAFB-7 shall be manually supervised for the first 24 hours of injection.
12. Well KAFB-7 shall be configured as represented in Application Figure 7.
13. All equipment placed in KAFB-7 shall be decontaminated utilizing a steam pressure wash prior to insertion in the well.
14. No chemicals shall be placed into KAFB-7 without the prior approval of NMED.
15. Access of unauthorized personnel to both the GWTS and KAFB-7 shall be restricted.
16. NMED representatives shall be allowed to inspect any treatment works and monitoring equipment, and to sample any associated effluent. (See 20.6.2.3107.D)
17. A final report shall be submitted to NMED within 60 days of cessation of the temporary discharge. The report shall include the following information:
    i. Total effluent volumes from the GWTS and injection volumes to KAFB-7, with any discrepancy explained.
    ii. Daily total injection volumes.
    iii. Effluent sampling analytical results.
    iv. Any operations and maintenance activities performed during the period.
    v. A comparison of injection flow rates and associated changes to hydraulic head.
    vi. Groundwater elevation contour map(s) illustrating the aquifer's response to injection, including maps illustrating changed to the aquifer resulting from the discharge changes referred to in Condition #2.

This approval does not relieve the Permittee of the responsibility to comply with any other applicable federal, state, and/or local laws, regulations, zoning requirements, and nuisance ordinances. Also, this approval does not relieve the Permittee of liability should its operation result in actual pollution of ground or surface waters.

If you have any questions, please contact Steve Pullen of the Ground Water Pollution Prevention Section at 505-827-2962.

Sincerely,

Michelle Hunter, Chief
Ground Water Quality Bureau

MH:sp

cc: (e-copies)
John Kieling, NMED-HWB
William Chavez, NMED-DI
Dennis McQuillan, NMED
Diane Agnew, NMED
Steve Huddleson, NMED-GWQB
Steve Pullen, NMED-GWQB
Caitlin LaChance, CB&I

files: Read
DP-1770
DP-1839