



NEW MEXICO
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BUTCH TONGATE
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Deputy Secretary

CERTIFIED MAIL – RETURN RECEIPT REQUESTED

August 7, 2018

Colonel Richard W. Gibbs
Base Commander
377 ABW/CC
2000 Wyoming Blvd SE
Kirtland AFB, NM 87117-5606

Mr. Chris Segura
Chief, Installation Support Section
AFCEC/CZOW
2050 Wyoming Blvd SE, Suite 124
Kirtland AFB, NM 87117-5270

**RE: PHASE 3 ETHYLENE DIBROMIDE IN SITU BIODEGRADATION PILOT TEST
NOTIFICATION LETTER
BULK FUELS FACILITY
SOLID WASTE MANAGEMENT UNIT ST-106/SS-111
KIRTLAND AIR FORCE BASE
EPA ID# NM9570024423, HWB-KAFB-13-MISC**

Dear Colonel Gibbs and Mr. Segura:

The New Mexico Environment Department (“NMED”) is in receipt of the Kirtland Air Force Base (“KAFB”) (“Permittee”) *Phase 3 Ethylene Dibromide In Situ Biodegradation Pilot Test Notification Letter* (“Letter”), dated July 23, 2018. The Letter summarizes the results of both the Phase 1 and 2 Ethylene Dibromide In Situ Biodegradation Pilot Tests, and notifies NMED of the intent to proceed with Phase 3. Specifically, the Letter states that several dehalogenating bacteria were identified in groundwater at the site, and that these organisms utilize molecular hydrogen as an electron acceptor and various halogenated compounds, including ethylene dibromide (“EDB”), as electron acceptors. The Letter notes that Phase 2 of the pilot test, biostimulation by the addition of lactate and diammonium phosphate, significantly enhanced the anaerobic degradation of ethylene dibromide. This enhanced degradation was most likely facilitated, at least in part, by stimulation of the dehalogenating groundwater bacteria. The Letter concludes that bioaugmentation, the addition of a bacterial culture, is not warranted at this time, and instead proposes to perform an additional biostimulation phase of the pilot test in lieu of bioaugmentation.

The Letter is hereby approved subject to the following conditions:



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1. Bioaugmentation shall remain as an approved, but deferred, component of the pilot test.
2. The biogeochemistry/LNAPL technical working group shall meet as soon as practicable to review pilot test results and to discuss the deferral of bioaugmentation.

If you have any questions regarding this letter, please contact NMED Chief Scientist Dennis McQuillan at (505) 827-2140.

Sincerely,



Juan Carlos Borrego
Deputy Secretary
Environment Department

cc: Col. J. Alvarez, KAFB
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File: KAFB 2018 Bulk Fuels Facility Spill