

 **ENTERED**



SUSANA MARTINEZ
Governor
JOHN A. SANCHEZ
Lieutenant Governor

**NEW MEXICO
ENVIRONMENT DEPARTMENT**

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BUTCH TONGATE
Cabinet Secretary
J. C. BORREGO
Deputy Secretary

CERTIFIED MAIL – RETURN RECEIPT REQUESTED

April 23, 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: PRELIMINARY GROUNDWATER PLUME CAPTURE MODELING
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:

On December 29, 2017, Kirtland Air Force Base (“KAFB”) (the “Permittee”) committed to submitting *Preliminary Modeling Results* to the New Mexico Environment Department (“NMED”) by March 31, 2018. The Permittee also committed to submitting a final modeling report to NMED by May 15, 2018.

NMED is in receipt of the Permittee’s *Preliminary Modeling Results*, dated March 29, 2018, and supplemental explanatory information that the Permittee submitted on April 6, 2018. The *Preliminary Modeling Results* and supplemental explanatory materials include:

1. An explanation of the selection of the finite element numerical model FEFLOW as the Permittee’s preferred groundwater flow model;
2. A proposed Proof of Concept (“POC”) for the Permittee’s preferred use of the FEFLOW model to perform plume capture analysis in accordance with the U.S. Environmental Protection Agency’s (“EPA”) six-step guidance document, “Systematic Approach for Evaluation of Capture Zones at Pump and Treat Systems” EPA 600/R-08/003 January 2008; and

KAFB4681



3. An explanation of how FEFLOW can be downloaded for use in the viewer mode to load and inspect models, without the purchase of a license.

NMED has determined that FEFLOW is one of several models that are capable of performing rigorous numerical simulation of plume capture in accordance with EPA's six-step guidance. The Permittee is hereby authorized to use FEFLOW, as proposed in the *Preliminary Modeling Results* and supplemental explanatory materials, subject to the following conditions:

1. FEFLOW is a proprietary model that requires purchase of a license for full application. The Permittee shall describe in sufficient detail how it will:
 - a. oversee its contractor's use of FEFLOW and ensure that the contractor performs FEFLOW modeling in accordance with acceptable industry practices and standards;
 - b. provide NMED, upon request, with access to FEFLOW so that NMED can evaluate the modeling results; and
 - c. provide public transparency for use of the FEFLOW model in plume capture analysis.
2. The Permittee shall submit the additional information required in condition one (1) above by May 25, 2018.
3. The Permittee shall include performance assessment of plume capture, including FEFLOW simulation results, in semiannual reports submitted and subject to NMED approval.

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. M. Harner, KAFB
K. Lynnes, KAFB
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S. Clark, KAFB-AFCEC
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J. Kieling, NMED-HWB

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B. Salem, NMED-HWB
A. Romero, NMED-GWQB
M. Hunter, NMED-GWQB
D. McQuillan, NMED-OOTS

File: KAFB 2018 Bulk Fuels Facility Spill