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CERTIFIED MAIL - RETURN RECEIPT REQUESTED

APR 02 2020

Colonel Christopher J. King
Vice Commander
377 ABW/CC
2000 Wyoming Blvd SE
Kirtland AFB, NM 87117

**RE: REQUEST FOR EXTENSION
RESPONSE TO DISAPPROVAL FOR THE
ETHYLENE DIBROMIDE IN-SITU BIODEGRADATION REPORT
BULK FUELS FACILITY SOLID WASTE MANAGEMENT UNIT ST-106/SS-111
KIRTLAND AIR FORCE BASE, NEW MEXICO
EPA ID# NM6213820974
HWB-KAFB-20-001**

Dear Colonel King:

Thank you for your letter of March 26, 2020, regarding the NMED Disapproval of the EDB Bioremediation Report for KAFB. Our Disapproval cited several deficiencies in the report as well as several observations concerning the study itself. The intent of the pilot study was not only to determine if the bioaugmentation and biostimulation enhanced EDB biodegradation, but also to ascertain the scalability of the approach and its potential inclusion of this option in any array of feasible remedial alternatives.

At the conclusion of the pilot study many questions remained. It was clear that EDB biodegradation had occurred, but the study also raised other questions concerning breakdown products and the physical design of the wells that are important considerations in any decision to move forward with the technology. This does not represent a failure of the pilot. In fact, it is to be expected that pilots such as this answer the immediate question, provide insights for

future work, and identify additional questions that must be answered before a decision is made on the acceptability of the approach.

We agree, as I mentioned in a follow up e-mail to your staff, that the scope of the pilot was not to determine the extent of LNAPL. However, the presence or absence of LNAPL is very important to the success or failure of biodegradation and was prominently highlighted in the workplan. As you mention, the presence and distribution of LNAPL in the vadose and saturated zones is critical to defining the nature and extent of contamination and evaluating potential corrective measures. Bioremediation can be one potential component of any corrective measure. Understanding the limits of this technology and how the technology could be most efficiently deployed must be a goal during the study phase. Understanding such issues at an early stage will allow us to efficiently and cost effectively proceed to a remedy evaluation and ultimate remedy selection. To that end, our comments in the March 4, 2020 Disapproval included questions and concerns that remain regarding the implementation and potential success of this technology. If some of our comments were misinterpreted by your staff, a teleconference would be helpful to resolve any misunderstandings. Your letter requests a meeting with NMED to discuss the Disapproval. We will reach out to your staff to arrange this teleconference.

Regarding the continuation of monitoring associated with this pilot, I want to acknowledge receipt of the In-Situ Bioremediation Long Term Monitoring Workplan and advise that this plan does not require NMED approval. We hope that you will use the information provided in our March 4, 2020 Disapproval to support the ongoing assessment of the efficacy of bioremediation. Once the results from this continued monitoring effort are available, please submit them as a supplement to the existing Report. This approach should make any extension of time for submittal of the revised report unnecessary. However, in order to assure KAFB has sufficient time to make the necessary changes to the Report and, in light of workload challenges associated with the COVID-19 pandemic, we are extending the due date for a response to our Disapproval to September 18, 2020.

I appreciate your dedication to this project, and we look forward to continued work with you and your staff toward its completion. Should you or your staff have any questions, please contact me at (505) 476-6035.

Sincerely,



Kevin M. Pierard, Chief
Hazardous Waste Bureau

cc: Stephanie Stringer, Director NMED RPD
Colonel David S. Miller, Base Commander KAFB
D. Cobrain, NMED HWB
B. Wear, NMED HWB
M. Suzuki, NMED HWB
L. King EPA Region 6 (6LCRRC)
S. Kottkamp, KAFB
K. Lynnes, KAFB

File: KAFB 2020 Bulk Fuels Facility Spill and Reading