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Governor

Howie C. Morales
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**NEW MEXICO
ENVIRONMENT DEPARTMENT**

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James C. Kenney
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Jennifer J. Pruett
Deputy Secretary

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

June 7, 2019

Colonel Stewart A. Hammons
Commander, 27th Special Operations Wing
110 E. Alison Avenue, Suite 1098
Cannon Air Force Base
New Mexico 88103

**RE: SUBSURFACE GEOPHYSICAL SURVEY REPORTING REQUIREMENT
CANNON AIR FORCE BASE, NEW MEXICO
EPA ID #NM7572124454
HWB-CAFB-MISC**

Dear Col. Hammons:

On May 6, 2019 New Mexico Environment Department (NMED) initiated communication with the United States Air Force Civil Engineering Center (AFCEC) via email (Email Subject: *Drilling Activity at CAFB* [Cannon Air Force Base]) regarding reported drilling operations observed at the eastern portion of CAFB. NMED expressed initial concern that the installation of additional groundwater monitoring wells for Facility-wide groundwater monitoring activities was occurring at CAFB without prior notification or NMED approval of a respective work plan. Subsequent email communication between NMED and AFCEC regarding this matter transpired as follows:

- On May 8, 2019 AFCEC responded to NMED's inquiry by email and indicated that the United States Geological Survey (USGS) in partnership with AFCEC had initiated a preliminary hydrogeophysical investigation that included the drilling of four exploratory borings at CAFB for the purpose of collecting geophysical survey data. AFCEC indicated that the geophysical survey would provide information on the surface of the Dockum Formation underlying the Ogallala aquifer at CAFB.

- NMED replied by email on May 8, 2019 and expressed that the installation of monitoring wells to collect groundwater data at the exploratory boring locations would yield cost-effective and useful data and information regarding Facility-wide groundwater conditions, lithology, and baseline groundwater conditions at the boring locations. NMED requested that the exploratory borings be converted to groundwater monitoring wells and offered a line of communication regarding the matter with AFCEC.
- AFCEC provided an email response on May 28, 2019 following completion of the geophysical investigation at CAFB. The response provided the rationale and intent of the geophysical investigation project work. In essence, AFCEC indicated USGS had access to resources and funding for a hydrogeophysical investigation at CAFB and took the lead on the logistics and execution of the project work. AFCEC indicated that the intended goal of the geophysical investigation was to develop a more thorough understanding of subsurface geology across the facility, obtain data on the saturated thickness/water availability in the Ogallala aquifer, and confirm the potential presence of paleochannels in the subsurface at CAFB. AFCEC indicated that downhole geophysical survey data was collected at the four exploratory borings and current Facility-wide groundwater monitoring wells. A need to expedite execution of the investigation project work was also implied by AFCEC. It was also expressed that the geophysical investigation was not promulgated as a compliance measure in accordance with requirements of the CAFB Resource Conservation and Recovery Act Corrective Action Permit (Permit) or the execution/administration duties of the United States Air Force (Permittee) environmental restoration program. However, AFCEC expressed its intent to provide a courtesy copy of the geophysical investigation data to NMED once received from USGS. A site map depicting the four exploratory boring locations was also provided as an attachment to AFCEC's email response.

As clarification, the Ogallala aquifer is currently the subject of Facility-wide groundwater monitoring at CAFB as required by the Cannon Air Force Base RCRA Permit. The monitoring provides essential groundwater contaminant and water quality data for the Ogallala aquifer related to corrective action conducted under the Permit at solid waste management units and areas of concern listed on the Permit. In support of, and as deemed necessary by NMED, any geologic, hydrogeologic, or geophysical investigations that yield information applicable to protection of human health and the environment at CAFB and the surrounding area are also subject to Permit authority. Furthermore, an implied need by the Permittee to expedite any environmental or geologic investigation work at CAFB is not an acceptable line of reasoning to forgo communication with NMED or to forgo due diligence requirements of the Permit. Failure to notify NMED of the intent to conduct corrective action or any other potentially related investigation at CAFB may result in the requirement to conduct additional investigation. Any conclusions derived from investigations, studies, or surveys unsanctioned by NMED may also result in invalidation of subsequent investigation project work based on any information collected during unsanctioned or "proprietary" investigations, surveys, or studies at CAFB.

Due to the pertinent nature of the geophysical investigation to ongoing corrective action and investigation at CAFB under the RCRA Permit, NMED hereby requires that the Permittee formally submit a report documenting the results of the recent USGS hydrogeophysical investigation completed at CAFB. Once received, NMED will review the report and provide comment. The required report must include, but is not limited to, the following information:

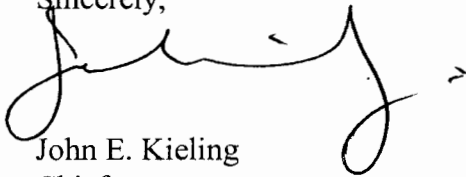
- a. A report discussing all hydrogeophysical investigation field activities, implemented geophysical and geologic methodology, geologic interpretations, data interpretations, findings and conclusions, and recommendations for further investigations, studies, or surveys;
- b. all geophysical data and respective data files and logs collected at the four exploratory borings and existing groundwater monitoring wells pertaining to any completed resistivity, conductivity, spontaneous-potential, gamma, neutron, and any other geophysical data collected during the investigation;
- c. downhole caliper data and logs for the exploratory borings and existing groundwater monitoring wells;
- d. all lithologic logs collected during advancement of the four exploratory borings and any pertinent lithologic logs for existing monitoring wells utilized for correlation of collected geophysical data;
- e. any downhole video camera logging documentation collected at boreholes or existing monitoring wells in support of geophysical project work;
- f. any subsurface geologic cross section interpretations derived from correlated geophysical data, data logs, and borehole lithologic log information;
- g. all geologic data and information collected during the investigation and descriptions of all investigation methods used;
- h. any documents that have not been previously submitted to NMED for the Facility record which were utilized as reference materials for the investigation such as prior corrective action investigation reports, prior monitoring and water supply well completion reports including lithologic and well completion logs, technical papers, reports, or memoranda documenting soil, water quality, geologic, and hydrogeologic conditions at CAFB and the surrounding region, water supply well survey information for CAFB and the surrounding area and all respective data and logs, Facility specific and regional groundwater resource studies, any other reports or data pertaining to subsurface geology, hydrogeologic, and water quality conditions at CAFB and the surrounding region;
- i. all field notes prepared during the geophysical investigation.

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The required report, supporting data, and information must be provided to the NMED no later than **October 31, 2019**.

If you have any questions regarding this letter, please contact Gabriel Acevedo at (505) 476-6043.

Sincerely,

A handwritten signature in black ink, appearing to read "John E. Kieling". The signature is fluid and cursive, with a large initial "J" and a long horizontal stroke.

John E. Kieling
Chief
Hazardous Waste Bureau

cc: D. Cobrain, NMED
B. Wear, NMED HWB
G. Acevedo, NMED HWB
L. King, EPA Region 6 (6LCRRC)
R. Lancaster, CAFB
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M. Fuchs, CAFB
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File: CAFB 2018 and Reading