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CERTIFIED MAIL - RETURN RECEIPT REQUESTED

March 27, 2019

Tim Davis
Chief, Environmental Officer
National Aeronautics and Space Administration
White Sands Test Facility
P.O. Box 20
Las Cruces, NM 88004-0020

Attention of: RE-18-089

**RE: DISAPPROVAL
AUGMENTED SOIL BACKGROUND STUDY ABBREVIATED
INVESTIGATION WORK PLAN
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
JOHNSON SPACE CENTER WHITE SANDS TEST FACILITY
DOÑA ANA COUNTY, NEW MEXICO
EPA ID #NM08800019434
HWB-NASA-18-011**

Dear Mr. Davis:

The New Mexico Environment Department (NMED) has received the National Aeronautics and Space Administration Johnson Space Center White Sands Test Facility (Permittee) *Augmented Soil Background Study Abbreviated Investigation Work Plan* (Work Plan), dated July 11, 2018. NMED has completed review of the Work Plan and hereby issues this Disapproval. The following comment must be addressed.

COMMENT

1. Background, Pages 3 and 4

Permittee Statement: “In accordance with the guidance, constituents that are representative of background concentrations are not retained as a contaminant of potential concern (COPC) and are eliminated from the risk screening process. Investigations at WSTF [White Sands Test Facility] commonly generate soil analytical data from subsurface soils greater than 12 ft bgs [feet below ground surface]. Because the initial SBS [Soil Background Study] did not establish background soil inorganic concentrations below 12 ft bgs, any soil inorganic analytical results obtained from deeper than 12 ft bgs during site investigations cannot be compared to the established soil BTVs [background threshold values]. Therefore, inorganic constituents identified in deeper soils that may represent background conditions cannot be eliminated as COPCs and therefore a risk screening will be performed which can potentially result in overly conservative calculations of site risk and/or hazard.”

NMED Comment: Per the NMED Risk Assessment Guidance for Site Investigations and Remediation (RA Guidance) (Volumes I and II), the maximum soil exposure interval for both human health and ecological risk is 10 ft bgs. Contamination detected beyond the maximum exposure interval is not factored into site risk or hazard; therefore, BTV are not necessary for risk evaluation at depths greater than the 0 to 10 ft bgs exposure interval.

The RA Guidance does require evaluation of contaminant concentrations regardless of depth for the soil-to-groundwater pathway evaluation. However, calculation of risk and hazard is not applicable to the soil-to-groundwater pathway evaluation. Only a point-to-point comparison of contaminant concentrations to soil-to-groundwater screening levels is required. Supporting lines of evidence may also be necessary to demonstrate that the soil-to-groundwater migration pathway is incomplete and are outlined in RA Guidance Section 4.9, Summary of Migration to Groundwater Pathway SL-SSLs [Soil leachate-based soil screening levels].

Address the following issues in the revised Work Plan:

- a. Clarify the rationale for collection of soil background data and calculation of inorganic BTVs at depths greater than the established human health and ecological exposure interval.
- b. Remove the statement indicating that contamination at depths greater than 12 ft bgs could potentially result in overly conservative calculations of site risk and/or hazard.
- c. Revise the Work Plan to indicate that the soil background data collected at depths greater than the established human health and ecological risk exposure interval (0 to 10 ft bgs) would only be used for defining vertical extent and/or the evaluation of the soil-to-groundwater migration pathway.

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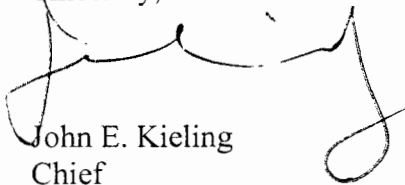
- d. Clarify how the augmented SBS will be reported (e.g., as separate report submittal or in an updated SBS).

Revise the Work Plan accordingly.

The Permittee must submit a revised Work Plan that addresses the comments contained in this letter. In addition, the Permittee must include a response letter that identifies where NMED's comments were addressed. The comment response letter must also be provided as an electronic copy. The Permittee must submit an electronic copy of the redline-strikeout showing where all changes were made to the Work Plan as well as an electronic copy of the revised Work Plan in addition to the hard copy. The revised Work Plan must be submitted no later than **June 28, 2019**.

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

Sincerely,



John E. Kieling
Chief
Hazardous Waste Bureau

cc: D. Cobrain, NMED HWB
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