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**CERTIFIED MAIL - RETURN RECEIPT REQUESTED**

**FEB 03 2020**

Timothy J. 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-19-113

**RE: APPROVAL WITH MODIFICATIONS  
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 June 24, 2019. NMED has completed review of the Work Plan and hereby issues this Approval with the following modifications.

## **MODIFICATIONS**

### **1. Background, Pages 3 and 4**

**Permittee Statement:** “Investigations at WSTF [White Sands Test Facility] commonly generate soil analytical data from subsurface soils greater than 12 ft bgs [feet below ground surface], and the soil-to-groundwater exposure scenario must be evaluated using investigation data from all depths. 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 BTV [background threshold values]. Therefore, inorganic constituents identified in deeper soils that may represent background conditions cannot be eliminated as COPCs [constituents of potential concern], and point-to-point comparison of contaminant concentrations to soil-to-groundwater screening levels may identify exceedances of the Migration to Groundwater Pathway SL-SSLs (Soil leachate-based soil screening levels) that originate from natural sources. NASA [National Aeronautics and Space Administration] proposes to augment the previous SBS to characterize background conditions of subsurface soils from depths of 12 to 48 ft bgs.”

**NMED Comment:** NMED’s comments to the Work Plan Background section must be addressed as follows:

- a. Given the potential to collect soil samples at depths greater than 48 ft bgs during corrective actions investigations at WSTF, an inherent limitation to the proposed augmented soil background study (ASBS) data set is apparent. Revise the Work Plan to also include the rationale for proposing a maximum sample depth of 48 ft bgs. Contaminant concentration SL-SSL exceedances beyond the proposed ASBS maximum sample depth must be evaluated in accordance with NMED’s June 2019 Risk Assessment Guidance for Site Investigations and Remediation (RA Guidance), Section 4.9, Summary of the Migration to Groundwater Pathway SL-SSLs (i.e., a point-to-point screening level evaluation of contaminant concentrations to SL-SSLs must be performed and lines of evidence must be provided to support an incomplete migration pathway conclusion). Revise the Work Plan accordingly and provide replacement pages.
- b. Evaluation of the soil-to-groundwater pathway with ASBS BTVs must be limited to sites where SL-SSL exceedances are not attributable to a source of site contamination. Any SL-SSL exceedances that are attributable to a source of site contamination must be completely delineated (vertically and horizontally), and any conclusions derived from the soil background evaluation must be supported by lines of evidence. Revise the Work Plan to address this comment and provide respective replacement pages.

## 2. Schedule, Page 7

**Permittee Statement:** “Based on an evaluation of NMED RA Guidance and NMED correspondence related to this AIWP [Abbreviated Investigation Work Plan], NASA determined that there is no longer an immediate need to perform the work described in this AIWP, NASA plans to postpone execution of this AIWP at this time. NASA may recommend performing certain elements of this plan in site-specific work plans submitted to NMED.”

**NMED Comment:** NMED’s comments to the Work Plan Schedule section must be addressed as follows:

- a. NMED must be formally notified of the Permittee’s intent to initiate the approved Work Plan. The notification must include the rationale for initiation of the Work Plan and any amendments to the approved scope of work. The Permittee may initiate the Work Plan following receipt of NMED’s response.
- b. All supporting rationale, project details, and work scope specifications for a site-specific SBS must be included in an investigation work plan. Reference to the approved Work Plan or a component of the scope of work in another work plan will not suffice as a proposal for a site-specific SBS and may result in disapproval of the work plan.

Revise the Work Plan to address the comments and provide respective replacement pages.

## 3. ASBS Reporting

**NMED Comment:** As stated in the Permittee’s response to NMED’s March 2019 *Disapproval Augmented Soil Background Study Abbreviated Investigation Work Plan*, Comment 1.d, a separate report documenting the ASBS results will be submitted for NMED approval. Revise the Work Plan to include a “Reporting” section clarifying that the ASBS will be submitted as an additional SBS report and provide respective replacement pages.

The Permittee must provide replacement pages that addresses NMED’s modifications to the Work Plan. In addition, a response letter that addresses the modifications must be provided. The response letter must also be provided as an electronic copy. An electronic copy of the revised Work Plan and redline-strikeout version showing where all changes have been made to the Work Plan must also be submitted to NMED no later than **April 10, 2020**.

Mr. Davis  
ASBS Investigation Work Plan  
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This approval is based on the information presented in the document as it relates to the objectives of the work identified by NMED at the time of review. Approval of this document does not constitute agreement with all information or every statement presented in the document.

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

Sincerely,



Kevin Pierard  
Chief  
Hazardous Waste Bureau

cc: D. Cobrain, NMED HWB  
B. Wear, NMED HWB  
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