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**CERTIFIED MAIL - RETURN RECEIPT REQUESTED**



**James C. Kenney**  
Cabinet Secretary

**Jennifer J. Pruett**  
Deputy Secretary

December 12, 2019

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-19-064

**RE: APPROVAL WITH MODIFICATIONS  
GROUNDWATER MONITORING PLAN  
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION  
JOHNSON SPACE CENTER WHITE SANDS TEST FACILITY  
DOÑA ANA COUNTY, NEW MEXICO  
EPA ID #NM08800019434  
HWB-NASA-19-005**

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) *Groundwater Monitoring Plan* (Monitoring Plan), dated April 30, 2019. NMED has completed review of the Monitoring Plan and hereby issues this Approval with the following modifications.

## **MODIFICATIONS**

### **1. Figure 3, Distribution of NDMA [N-nitrosodimethylamine] in WSTF [White Sands Test Facility] Groundwater, Page 92**

**NMED Comment:** An NDMA contamination distribution map was not provided in the Monitoring Plan. The figure "Site-Wide Groundwater Elevations for Fourth Quarter 2018" followed the Figure 3 cover page. Revise the Monitoring Plan to include the NDMA contamination distribution map and provide a replacement figure.

### **2. Requirement for Initial Groundwater Screening for Aqueous Film-Forming Foam (AFFF) Chemicals of Concern at WSTF**

**NMED Comment:** Use of AFFF at WSTF was documented in NASA's July 2014 *SWMUs [Solid Waste Management Units] 1,3, and 15 Historical Information Summary (HIS)*. The HIS indicated that AFFF was intermittently used during fire training exercises conducted at WSTF 100 and 200 Areas from the late 1960s to at least 1995. AFFFs are known to contain poly and per-fluoroalkyl compounds (PFAS) such as perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS) and are emerging contaminants of concern due to their toxicity, high mobility, and persistence in the environment. Given the reported history of use and release of AFFF to the environment at WSTF 100 and 200 Areas, and potentially other areas, an initial groundwater screening sampling event for PFAS chemicals must be proposed in the 2020 WSTF Groundwater Monitoring Plan. Groundwater samples must be collected at select existing WSTF monitoring wells proximal to any former and currently existing WSTF fire training areas and other potential PFAS release source areas, such as fire or fuel spill incident locations where AFFF was used, wastewater treatment system locations that potentially received AFFF laden waste water, or landfills where waste containing PFAS may have been disposed. The proposed groundwater sample analysis suite must address all PFAS chemicals listed in NMED's June 2019 *Risk Assessment Guidance for Site Investigations and Remediation (RA Guidance)*, Section 5.3, PFAS (See Table 5-2, PFAS Analyte List). A preliminary Tap Water screening level (0.07 micrograms per liter) for PFOA, PFOS, and perfluorohexanesulfonic acid (PFHxS) is provided on RA Guidance Table 5-3, Preliminary Screening Levels for Select PFAS (PFOA, PFOS, and PFHxS). The results of the groundwater sampling event must be reported in the comprehensive fourth quarter 2020 periodic groundwater monitoring report. No changes to the 2019 Monitoring Plan are necessary in response to this comment.

The Permittee must provide a replacement page that addresses NMED's modification to the PMR. 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 Monitoring Plan must also be submitted to NMED no later than **February 28, 2020**.

Mr. Davis  
December 12, 2019  
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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,



Dave Cobrain  
Acting Chief  
Hazardous Waste Bureau

cc: B. Wear, NMED HWB  
G. Acevedo, NMED HWB  
L. King, EPA Region 6 (6LCRRC)  
M. Zigmond, NASA WSTF

File: NASA 2019 and Reading