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JAMES C. KENNEY
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Certified Mail - Return Receipt Requested

April 18, 2024

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-23-075

RE: APPROVAL WITH MODIFICATIONS
200 AND 600 AREA VAPOR INTRUSION ASSESSMENT REPORT
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
JOHNSON SPACE CENTER WHITE SANDS TEST FACILITY
DOÑA ANA COUNTY, NEW MEXICO
EPA ID #NM08800019434
HWB-NASA-18-010

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) *200 and 600 Area Vapor Intrusion Assessment Report* (Report), dated April 27, 2023. NMED has completed a review of the Report and hereby issues this Approval with the following modifications.

MODIFICATIONS

1. **Section 1.0, Introduction, Page 1**

   Permittee Statement: "In a November 25, 2015 letter to NMED (NASA, 2015d), NASA included a summary of the environmental investigations performed at the 600 Area HWMU [Hazardous Waste Management Unit], the findings of those investigations, and the NMED responses to NASA's conclusions."

NMED Comment: The document citation (NASA, 2015d) does not appear to be accurate. Section 9.0, References, indicates that document NASA, 2015d is the *Soil Background Study Investigation Report,* not the summary of environmental investigations for the 600 Area HWMU. Revise the Permittee statement for accuracy and provide a replacement page(s).

2. **Section 2.1, Soil Vapor Contamination, Page 8**

Permittee Statement: "Soil vapor concentrations at the 200 Area former Clean Room UST HWMU were of the greatest potential concern because they were the highest measured within the 200 and 600 Areas. VOC concentrations at this location are the most proximal to and potentially below the northwest side of Building 200. The NMED VISLs [Vapor Intrusion Screening Levels] for Freon 113 and PCE (Figure 2.3) were also exceeded by the concentrations in the soil vapor at this location."

NMED Comment: For clarity, revise the Permittee statement to also reference Figure 2.1, Freon 113 Soil Vapor and Groundwater Concentrations (Oct-14), as reference for the Freon 113 VISL exceedance discussed, and provide a revised replacement page.

3. **Section 8.0, Recommendations, Pages 47 and 48**

Permittee Statement: "Based on the background data presented in this report, the comparison of analytical results to applicable regulatory screening level criteria, and the performance of a cumulative screening level risk assessment, NASA concludes that there is a complete vapor intrusion pathway within the 200 and 600 areas, but there is no unacceptable impact to human health within Building 200 and 637, respectively."

NMED Comment: The following comments must be addressed:

a. Given the persistent exceedance of the applicable NMED VISLs and site-specific risk-based concentrations for trichloroethylene at the 200 and 600 Areas in addition to tetrachloroethylene and 1,1-dichloroethene VISL exceedances at the 200 Area attributable to vadose zone and groundwater contamination, continued sampling at 200 and 600 Area soil vapor monitoring wells appears warranted. The collection of additional soil vapor data in the vadose zone on a regular schedule could potentially serve the purpose of further characterization, temporal tracking of soil vapor contamination in the subsurface, and the collection of more current representative data for use during any necessary future risk screen evaluations or other investigations. An initial work plan for the follow-on vadose zone soil vapor sampling at the 200 and 600 Areas must be submitted no later than **November 27, 2024.**

b. The potential for variability in 200 and 600 Area site environmental and building conditions and data collected during vadose zone soil vapor sampling required by

NMED Comment 3a above may indicate the need for additional indoor air sampling and risk evaluation in the future. If deemed necessary, the additional sampling could provide a greater level of confidence in indoor air quality conditions at 200 and 600 Area structures and bolster results of the risk screen evaluations presented in the Report. Any indoor air sampling deemed necessary may be proposed in reporting and work plans for the required follow-on soil vapor sampling at the 200 and 600 Areas. No additional action is required for this comment at this time.

4. **Figure 5.2, Building 637 Soil Vapor and Air Sampling Locations and Analytical Results, Page 65**

   NMED Comment: The following comments must be addressed:

   a. Section 5.2.1, 600 Area Soil Vapor Analytical Results, discussion indicates that the trichloroethylene concentration for the sample collected at 600-SGW-2-12.5 for February 2018 exceeded the NMED VISL. Revise the figure to appropriately note this exceedance and provide a revised replacement figure.

   b. Revise Figure 5.2 to clearly note on the figure key the color codes for the various screening level exceedance scenarios depicted on the figure and provide a revised replacement figure.

The Permittee must provide replacement pages that address NMED's required modifications. In addition, a response letter that cross-references where the modifications were addressed must be provided. The response letter must also be provided as an electronic copy. Electronic copies of the revised Report and a redline-strikeout version of the Report showing where all changes were made must be submitted to NMED no later than **July 31, 2024**.

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 505-690-5760.

Sincerely,

Ricardo Maestas Digitally signed by Ricardo Maestas
Date: 2024.04.18 14:11:34 -06'00'

Ricardo Maestas
Acting Chief
Hazardous Waste Bureau

cc: N. Dhawan, NMED HWB
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File: NASA 2024 and Reading

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