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RYAN FLYNN
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BUTCH TONGATE
Deputy Secretary

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

August 11, 2015

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

Attention of: RE-15-046

RE: DISAPPROVAL
SOIL BACKGROUND STUDY INVESTIGATION REPORT
NATIONAL AERONAUTICS SPACE ADMINISTRATION (NASA)
JOHNSON SPACE CENTER (JSC) WHITE SANDS TEST FACILITY (WSTF)
DOÑA ANA COUNTY, NEW MEXICO
EPA ID #NM08800019434
HWB-NASA-14-002

Dear Mr. Davis:

The New Mexico Environment Department (NMED) issued an Approval with Modification (AWM) for the document referenced above on February 15, 2015 and received the NASA WSTF (Permittee's) response titled *NASA WSTF Soil Background Study Investigation Report (IR),* dated May 13, 2015. Due to discrepancies found within the response the Permittee must revise the IR to include the following information:

Comment(s):

1. The Key to Table 5 of Appendix F in the revised report includes the following statements regarding the Nonparametric KM Estimation Method:

- km.W: ProUCL's 95-95 UTL based on the WH [Wilson-Hilferty] method discussed in the ProUCL manuals based on imputing using the GROS method. Only calculated if there are NDs [non-detects].
- km.H: The 95-95 UTL based on the HW [Hawkins-Wixley] method discussed in the ProUCL manuals based on imputing using the GROS method. Only calculated if there are NDs.

In reviewing the ProUCL Version 5.0 Technical Guide (e.g., Sections 3.4.3, Section 4.4 and equations 4-1, 4-2, and 4-3; and Section 5.3.3.3), information that definitively supports the assertion that km.W and km.H values are based on imputed values from the gamma-regression on order statistics (GROS) method could not be found. The equations for UTL presented in Section 5.3.3.3 are based on the KM mean and standard deviation of the transformed (i.e., transformed using the WH or HW approximation) data; however, equations 4.1, 4.2, and 4.3 for the KM population mean, sample mean, and variance, respectively, do not appear to use imputed values for non-detects. Revise the IR to provide additional support for the approach proposed by the Permittee for estimating background values at the site, revise the Key to Table 5 and/or the reference list for Appendix F to identify the information source(s) that provides the basis for the assertion that the km.W and km.H values listed in Table 5 reflect the use of imputed values derived from the GROS method.

2. Section 3.3, bullet point 4 states that if an UTL could not be determined due to low frequency of detection, the Permittee will defer to the most current NMED residential SSL (or EPA RSL) value for a background concentration. In the event an UTL cannot be determined, then the constituent must be retained as a constituent of potential concern (COPC) and carried forward in the risk screening. NMED does not allow screening of COPCs at an individual level as this can lead to an underestimation of cumulative or total risk/hazard. Revise the IR to remove this bullet.

The Permittee must submit a revised IR to address these comments. In addition, the Permittee must include a response letter that details where each comment was addressed, cross-referencing NMED's numbered comments. The Permittee must also submit an electronic redline-strikeout version of the revised IR. The revised IR must be submitted on or before **September 30, 2015**.

If you have any questions regarding this letter, please contact Vicky Baca at (505) 476-6059.

Sincerely,

John E. Kieling
Chief
Hazardous Waste Bureau

cc: N. Dhawan, NMED HWB
D. Cobrain, NMED HWB
K. VanHorn, NMED HWB
R. Isaac, NMED GWQB
L. King, EPA 6PD-N
M. Zigmond, NASA WSTF

File: Reading & NASA WSTF, 2015
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