



SUSANA MARTINEZ  
Governor

JOHN A. SANCHEZ  
Lieutenant Governor

NEW MEXICO  
ENVIRONMENT DEPARTMENT

*Hazardous Waste Bureau*

2905 Rodeo Park Drive East, Building 1  
Santa Fe, New Mexico 87505-6303  
Phone (505) 476-6000 Fax (505) 476-6030  
[www.nmenv.state.nm.us](http://www.nmenv.state.nm.us)



DAVE MARTIN  
Cabinet Secretary

BUTCH TONGATE  
Deputy Secretary

JAMES H. DAVIS, Ph.D.  
Director  
Resource Protection Division

**CERTIFIED MAIL - RETURN RECEIPT REQUESTED**

August 17, 2012

Radel Bunker-Farrah  
Environmental Program Manager  
National Aeronautics and Space Administration  
White Sands Test Facility  
P.O. Box 20  
Las Cruces, NM 88004-0020

Attention of: RE-E12-079

**RE: DISAPPROVAL  
NASA WHITE SANDS TEST FACILITY SOIL BACKGROUND STUDY  
INVESTIGATION WORK PLAN  
NATIONAL AERONAUTICS SPACE ADMINISTRATION (NASA)  
JOHNSON SPACE CENTER (JSC) WHITE SANDS TEST FACILITY (WSTF)  
DOÑA ANA COUNTY, NEW MEXICO  
EPA ID #NM08800019434  
HWB-NASA-12-010**

Dear Ms. Bunker-Farrah:

The New Mexico Environment Department (NMED) has received NASA's *White Sands Test Facility Soil Background Study Investigation Work Plan* (Plan), dated May 2012 and received June 20, 2012. NMED has completed its review of the Plan, issues this disapproval, and provides the following comments.

**Comments:**

**1. Section 1.2, Objective and Scope, first paragraph, second sentence, page 1:**

**NMED Comment:** There is an apparent typographical error in this portion of the Plan. The purpose of the investigation is to develop 95 percent (%) Upper Tolerance Limits (UTLs) for various inorganic (not organic) constituents for the facility. Correct the error in the revised Plan.

**2. Investigation Work Plan; General Comments:**

**a:** Overall, the planned sampling activities would likely yield sufficient but minimal data (10 samples per interval) in order to calculate statistically appropriate background tolerance values. Typically eight samples are needed to statistically evaluate a data set; there is some concern that if there are any data quality issues with the analytical results, rejected data could result in an insufficient number of samples for statistical analyses. However, with inorganics/metals, it is unlikely that quality issues would be encountered. In the event there are rejected data, it may be possible to statistically evaluate the intervals and determine that there is no significant difference between background at two feet, six feet and/or 10 feet below ground surface. If this is the case, the data could be combined, increasing the robustness of the statistical analyses. Unless the Permittee decides to increase the number of proposed samples, there is no need to provide a response to this comment.

**b:** Table 2.1 provides results from previous soil investigations. The Resource Conservation and Recovery Act (RCRA) Action Levels listed in this table are reflective of the United States Environmental Protection Agency's (EPA) Corrective Action Rule. These data are outdated, not risk-based, and are not currently applied in assessing potential risk. The Permittee must clarify that current NMED Soil Screening Guidance/Levels will be applied in assessing risk. In addition, it must be clarified that these action levels were only provided from a historical perspective and that these levels will not be used to assess adequacy of laboratory detection limits, which are not provided in the Plan. The Permittee must review the selected laboratory's minimum detection limits (MDLs) or levels of detection (LODs) to ensure that the data will meet the risk-based levels needed for site assessment. Revise the Plan accordingly.

**c.** It is also not clear whether the Permittee plans to combine data obtained from the proposed sampling activities with historical background data (as presented in Table 2.1) in calculating 95% UTLs. If so, the Permittee must determine whether the historical data are of sufficient quality/integrity and the data must be grouped appropriately according to soil type and depth. Revise the Plan accordingly, as appropriate to the comment.

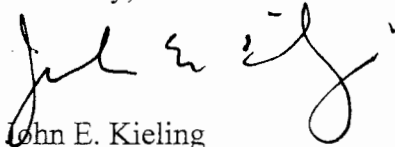
**d.** As noted in Table 4.1, there are sites associated with burn activities or other thermal treatment [e.g., Solid Waste Management Units (SWMUs) 1, 9, 11, 12, 15, 18, and 20]. It is unclear whether dioxins and furans could be considered potential contaminants of concern for these SWMUs. If dioxins and furans are anticipated at these locations, it would be

beneficial for the Permittee to consider collection of anthropogenic/ambient background dioxin/furan congener data to aid in future investigations of these SWMUs. Alternatively, collection of dioxin and furan data could be delayed until the affected SWMUs are investigated according to the schedule outlined in Attachment 16 of Permit NM8880019434. If the Permittee chooses to collect dioxin and furan data as part of the background study proposed in this Plan, revise the Plan accordingly.

e. Once data are obtained, the Permittee plans to calculate 95% UTLs, as required by their Permit. It is not stated how the Permittee plans to process censored data (i.e., non-detects), and if they will employ regression on order statistical methods, as currently recommended by EPA. The Permittee is advised to include censored data in the background data set, and to perform regression on order statistical methods as recommended in current EPA guidance. Revise the Plan as necessary.

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

Sincerely,



John E. Kieling  
Chief  
Hazardous Waste Bureau

cc: N. Dhawan, NMED HWB  
D. Cobrain, NMED HWB  
D. Comeau, NMED HWB  
L. King, EPA 6PD-N  
T. Davis NASA WSTF  
M. Zigmond, NASA WSTF

File: Site Soil Background Investigation Work Plan; NOD - 2012