



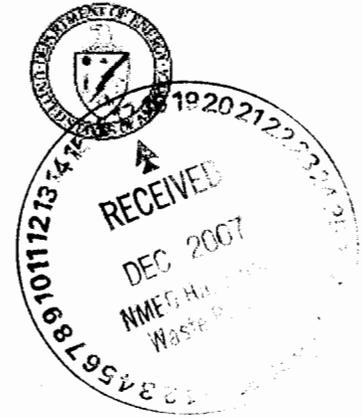
**National Nuclear Security Administration**

Sandia Site Office  
P.O. Box 5400  
Albuquerque, New Mexico 87185-5400

DEC 05 2007

**CERTIFIED MAIL – RETURN RECEIPT REQUESTED**

Mr. James Bearzi  
Chief  
Hazardous Waste Bureau  
New Mexico Environment Department  
2905 Rodeo Park Road East Building E  
Santa Fe, New Mexico 87505



Dear Mr. Bearzi:

On behalf of the Department of Energy (DOE) and Sandia Corporation (Sandia), DOE is responding to the October 30, 2007 Notice of Approval: Monitoring Well Plug and Abandonment Plan and Replacement Well Construction Plan; Decommissioning of Groundwater Wells MWL-MW1 and MWL-MW3; MWL-MW7 and MWL-MW8, July 2007, Sandia National Laboratories, EPA ID No. NM5890110518, HWB-SNL-07-016. As detailed below, we have a number of concerns regarding the conditions of approval that define the locations of groundwater monitoring wells at the Mixed Waste Landfill (MWL).

The New Mexico Environment Department (NMED) identified the following conditions:

- *The proposed location of monitor well MWL-MW7 must be moved 80 feet at a bearing of 30° northeast from where it is shown on Figure 1 in the work plan.*
- *The proposed location of monitor well MWL-MW8 must be moved 100 feet at a bearing of 40° northeast.*
- *Both new wells shall be positioned as close as possible to the former west fence that originally surrounded the Mixed Waste Landfill.*

In addition, the NMED states that they are “. . . aware that, once installed, the new wells will fall within the footprint of the new cover.”

As DOE and Sandia believe the cited conditions will have the potential to affect the integrity of the MWL engineered cover over the long term and conflict with the groundwater monitoring well locations proposed in Long-Term Monitoring Maintenance Plan (LTMMP), DOE and Sandia respectfully request that NMED reconsider these conditions. DOE and Sandia detail the following reasons:

- **Structural Integrity and Performance of the Engineered Cover**--The NMED locations pose a threat to the integrity of the engineered cover. Placement of wells through the cover could result in preferential pathways for liquids over the long term. As noted on

Figure 1 from the work plan (see enclosure for revised Figure 1) the engineered topography of the cover slopes to the west. In order to protect the wellhead, the slope of the cover would need to be redesigned which would involve a significant effort and significant delays in implementing the remedy. While design changes could alleviate some concerns, such as protecting the wellhead, the potential for creating conduits over the long term remains a critical issue.

- **Structural Integrity and Performance of the Monitoring Wells**--If the wells are installed prior to the installation of the cover (as currently planned), the well casing would have to be extended to the new surface of the cover. In addition, the protective casing would have to be extended approximately 8 to 10 feet and the concrete pad and other surface completion features would have to be installed. Any disturbance to the well could compromise the integrity of the well. The revised completion on the cover would require re-survey of the critical monitoring well elevations. In addition, during the cover installation there will be significant traffic of heavy equipment in a very close proximity to the wellheads, again, affording an opportunity for damage.
- **Access and Security Issues**--DOE and Sandia proposed the locations of the wells to be just outside of the security fence that will be installed following cover completion. With this location outside the fence, there is no need for the sampling equipment truck to drive onto the cover to access the wells for sampling. The security plan specifies that only one gate will access the cover and that is on the north side. Driving across the cover would have the potential to cause damage to the crucial vegetation on the cover and to the integrity of the soil compaction that may lead to erosion.
- **Conflicts with the Monitoring Network Proposed in the LTMMP**--In the LTMMP (currently in NMED and public review) the DOE and Sandia proposed three wells on the western side of the landfill (outside of the security fence) to replace current monitoring wells, MWL-MW-1, -2, and -3. These three wells (MWL-MW-7, -8, and -9) are shown on Figure 3.5.1-1 in the LTMMP. The wells proposed in the LTMMP are evenly spaced along the western side of the landfill and represent downgradient points of compliance. The proposed NMED locations would significantly change this configuration. In addition, the NMED locations interfere with the neutron access tubes (already in place) and the locations for the soil-vapor sampling wells as proposed in the LTMMP. The two proposed soil-vapor wells located on the west side of the landfill are evenly spaced along the edge of the cover (Figure 3.4.1-1 in the LTMMP). Please refer to Figure 1 (enclosed), which includes all monitoring and soil-vapor well locations proposed in the LTMMP and the proposed NMED locations. DOE- and Sandia are currently preparing a plugging and abandonment plan for MWL-MW2 that includes the installation of MWL-MW9 at the location shown on Figure 1.

Mr. Bearzi

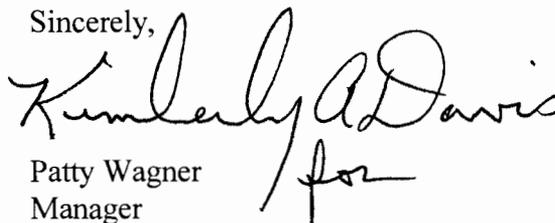
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DOE and Sandia would like to meet with you and your staff to discuss this issue. We believe that a quick resolution is of the utmost importance for complying with the March 31, 2008 deadline imposed by the NMED. DOE and Sandia are currently in the process of obtaining approvals from the Office of the State Engineer and scheduling a drilling contractor for this work.

If you have any questions regarding this submittal, please contact me at (505) 845-6036, or Dan Pellegrino of my staff at (505) 845-5398.

Sincerely,

  
Patty Wagner  
Manager

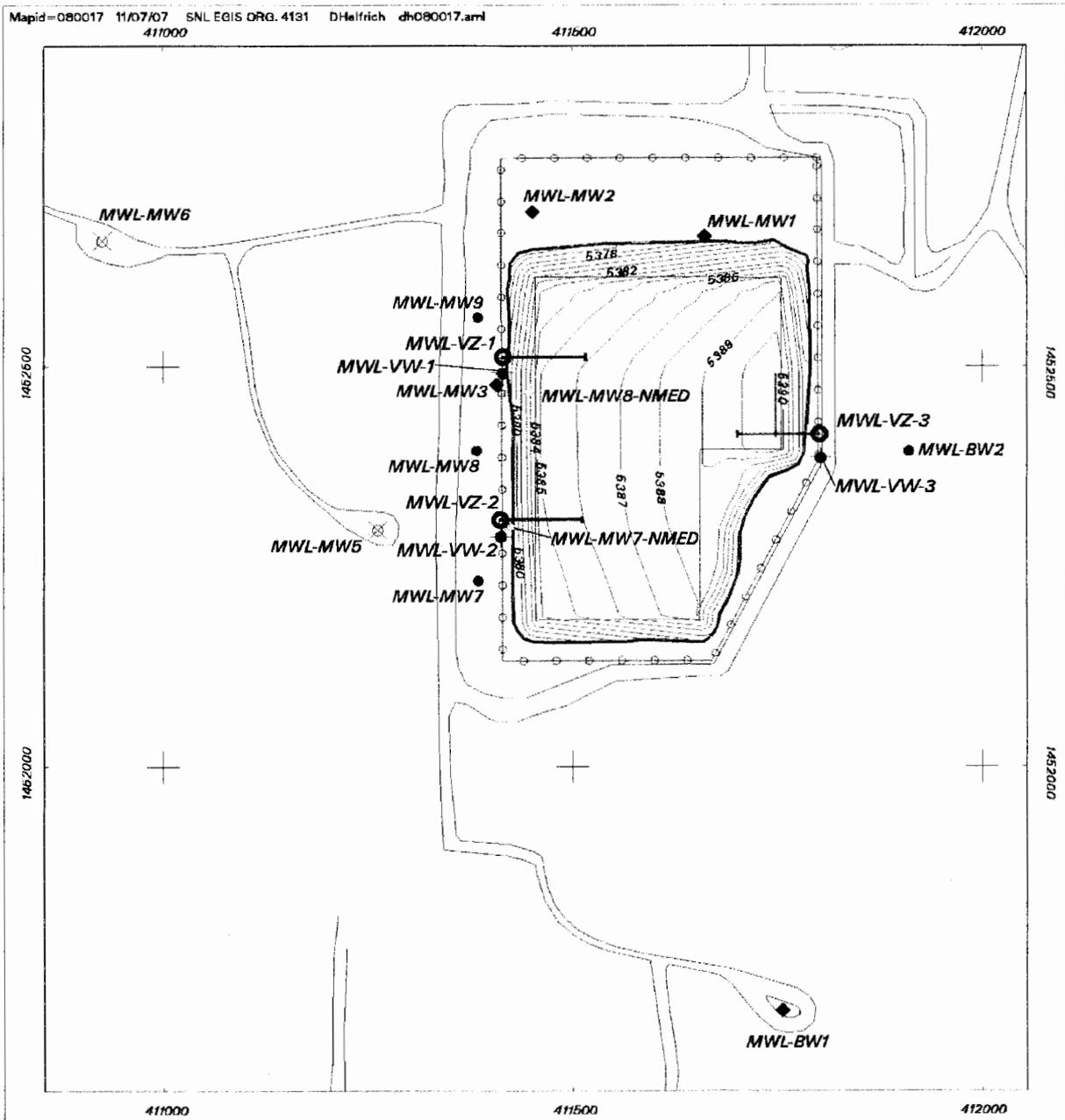
Enclosure

cc w/enclosure:

W. Moats, NMED-HWB (Via Certified Mail)  
L. King, EPA, Region 6 (Via Certified Mail)  
T. Skibitski, NMED-OB  
B. Birch. NMED-OB

cc w/o enclosure:

A. Blumberg, SNL/NM, Org. 11100, MS 0141  
D. Miller, SNL/NM, Org 6765, MS 0718  
P. Freshour, SNL/NM, Org. 6765, MS 1089  
S. Griffith, SNL/NM, Org.6765, MS 1089  
M. Davis, SNL/NM, Org. 6765, MS 1089  
Records Center, SNL/NM, Org.6765, MS 1089  
T. Longo, HQ/GTN, NA-56  
J. Estrada, SSO, MS 0184



- Legend**
- NMED Proposed Monitoring Well Location
  - ◆ Existing Monitoring Well Proposed for Plug and Abandonment
  - DOE / Sandia Proposed Monitoring Well Location
  - ⊥ Soil-Moisture Monitoring Access Tube (showing horizontal extent of tube)
  - FLUTE™ Well
  - ⊗ Existing Monitoring Well
  - Road
  - Proposed Fence
  - - - 1-ft. Contour Intervals for Proposed Soil Cover
  - Toe of Landfill Cover
  - MWL Extent

**Figure 1**  
**Location of Existing and Proposed Groundwater Monitoring Wells at the Mixed Waste Landfill**



# CERTIFICATION STATEMENT FOR APPROVAL AND FINAL RELEASE OF DOCUMENTS

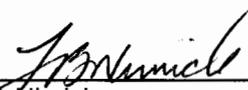
**Document title: Response to Notice of Approval: Monitoring Well Plug and Abandonment Plan and Replacement Well Construction Plan; Decommissioning of Groundwater Monitoring Wells MWL-MW1 and MWL-MW3; Installation of Replacement Groundwater Monitoring Wells MWL-MW7 and MWL-MW8, July 2007 (HWB-SNL07-016) November 2007**

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**Document author: Stacy Griffith, Dept. 6765**

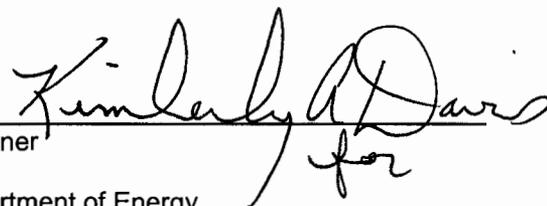
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I certify under penalty of law that this document and all attachments were prepared under my direction or supervision according to a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment for knowing violations.

Signature:   
Francis B. Nimick  
Deputy to the  
Nuclear Energy and Global Security Technologies  
Center 6700  
Sandia National Laboratories/New Mexico  
Albuquerque, New Mexico 87185  
Operator

11/13/07  
Date

and

Signature:   
Patty Wagner  
Manager  
U.S. Department of Energy  
National Nuclear Security Administration  
Sandia Site Office  
Owner and Co-Operator

12/5/07  
Date