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March 1, 2007

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SUBJECT: COMMENTS AND RECOMMENDATIONS REGARDING THE SOIL-VAPOR SAMPLING AND ANALYSIS PLAN FOR MIXED WASTE LANDFILL, SANDIA NATIONAL LABORATORIES PURSUANT TO PUBLIC NOTICE 07-01

Dear Sirs:

This letter provides initial comments regarding the Soil-Vapor Sampling and Analysis Plan (SAP) for the Mixed Waste Landfill (MWL) at Sandia National Laboratories (SNL) pursuant to NMED Public Notice 07-01 dated February 5, 2007. Southwest Research recommends that NMED extend the comment period for the SAP and convene a public technical discussion meeting during that extended period to provide an opportunity for a dialogue on technical aspects of the SAP prior to the close of the expanded comment period, similar to NMED process as provided in May 2006.

As stated in that Public Notice, the SAP was filed by SNL in response to a Notice of Disapproval (NOD) for the Corrective Measures Implementation Plan (CMIP) for submitted by SNL and DOE, the Permittees, pursuant to a Permit Modification issued by NMED for the MWL in May 2005. The November 20, 2006 NOD issued by the NMED required the Permittees to submit for approval a sampling and analysis plan (SAP) to obtain at the MWL more current soil-vapor data for volatile organic compounds, tritium, and radon. A Soil-Vapor SAP was submitted by the Permittees to the NMED on December 21, 2006.

Public Notice No. 07-01 states, “because of the rupturing of containers and the leaking of their contents could have occurred [at the MWL] since the mid-1990s’s, the NMED requires more current soil-gas data to resolve this issue. The Permittees shall therefore collect and analyze active soil gas samples taken at depths of 10 and 30 feet at a minimum of three locations within the landfill where previous sampling has detected the highest volatile organic compound concentrations in the past.”

COMMENTS

I. SCOPE OF THE SAP: The SAP prepared in response to this requirement does not provide for a sufficient scope of work to identify the current soil-gas profile for all areas where volatile organic compounds (VOCs) have been detected at the MWL. As VOCs are not naturally occurring, it is reasonable for any detection of VOCs at or below the MWL in the 1990s-era sampling programs to be considered high for purpose of defining the appropriate extent of the currently required SAP.

The proposed SAP is too narrowly focused on the peak levels detected more than a decade ago and fails to provide a sampling pattern that can identify VOC occurrences around the perimeter and within the MWL where they were detected in 1994.

RECOMMENDATION: Southwest Research recommends that NMED require a modification of the proposed plan to provide for a SAP that would fully characterize soil-vapor pattern at and around the 2.6 acre MWL including interior and perimeter sampling locations and sampling activities for depths ranging from surface to the depth at which no volatile organic compounds are detected.

The recommended scope of sampling would provide sufficient data to determine soil-vapor conditions across an area similar to the 1994 survey VOCs emanating from the whole MWL including perimeter sites. This expanded sampling program would provide for detection of any volatile organic compounds that may have been release during or following the construction of the subgrade cover at the MWL identified in the SAP that approved by NMED in September 2006.

II. PURPOSE OF THE SAP: In comments provided to NMED on the MWL Fate and Transport Model (FTM) on behalf of Citizen Action, Southwest Research recommended that a soil vapor sampling and analysis program be conducted to determine whether the Fate and Transport Model accurately reflects real- world conditions at the site.

No field data has been provided by the Permittees or NMED to determine the accuracy of the FTM. This lack of field data for verification is particularly significant regarding VOCs as the FTM predicted that VOCs releases from the MWL would reach the regional groundwater table. A full MWL wide SAP would provide a stronger basis for evaluation and modification of the FTM than the proposed, narrowly focused, SAP.

RECOMMENDATION: Southwest Research recommends that NMED require a MWL-wide soil-vapor SAP to provide current field data for the MWL to compare to data used in and generated by the FTM.

III. IMPACTS OF SUBGRADE CONSTRUCTION ON VOC RELEASES: NMED approved construction a subgrade cover up to 40 inches deep over the MWL on September 18, 2006 even though the subgrade cover specifications were part of the MWL soil cover detailed engineering design in the Corrective Measure Implementation Plan for which NMED issued a Notice of Disapproval only two month later on November 20, 2006!!

NMED asserted in its approval letter in September 2006 that there was no public interest in the subgrade cover therefore it could be approved prior to the approval of the CMIP, of which it was an essential part.

The subgrade is addressed as already in place in the SAP but no information is provided as to specifications that were followed during subgrade construction and whether the subgrade construction resulted in rupture of any containers remaining within the MWL.

RECOMMENDATION: Southwest Research recommends that NMED require an MWL-wide soil-vapor SAP to determine the distribution of soil vapors at the surface and at depth to determine the extent to which soil vapors may have been released by subgrade construction and compaction conducted at the MWL in 2006.

IV. TECHNICAL DISCUSSION MEETING AND EXTENDED COMMENT PERIOD:

Due to:

1) the technical nature of the public comments on the SAP;
2) the lack of public information regarding the subgrade construction addressed in the SAP and
3) the commitment to effective public involvement in the NMED Permit Modification for the MWL Cover from May 2005;

Southwest Research recommends that NMED extend the public comment period and convene a public meeting, similar to the technical discussion public meeting convened by NMED May 25, 2006, to provide an opportunity for additional public comments on the SAP. The May 2006 Technical Discussion Meeting provided a well-mannered forum for members of the public, the Department and the Permittee to address technical aspects of the plan available for public comment at the time.

I'd look forward to opportunity to address these comments with you and your staff and would certainly be available to assist the Department in the development of an appropriate agenda and set of ground rules for the technical discussion meeting if NMED determines that it is appropriate and reasonable to convene such a meeting.

Sincerely,

Paul Robinson
Research Director