

February 5, 2008
Senator Jeff Bingaman
703 Hart Senate Office Bldg.
United States Senate
Washington, D.C. 20510

Dear Senator Bingaman,

Citizen Action made a March 2007 request to EPA Region 6 for analysis of: 1) the Sandia National Laboratories' (SNL) Mixed Waste Landfill (MWL) monitoring well network and 2) the New Mexico Environment Department's (NMED) *Evaluation of the Representativeness and Reliability of Groundwater Monitoring Well Data, Mixed Waste Landfill, Sandia National Laboratories* by William Moats *et al.* (the Moats Evaluation).

A June 21, 2007 letter from EPA Administrator Richard E. Greene to Senator Jeff Bingaman stated in pertinent part:

"In our oversight capacity, the EPA is currently conducting an internal review of all well monitoring information, including well logs, site geology, and groundwater sampling results. The data for this site extends back more than two decades so there is a considerable amount of information to analyze. We intend to contact the EPA Risk Management Research Program Groundwater and Ecosystem Restoration Research Laboratory in Ada, OK, if necessary, to provide additional technical assistance."

Nevertheless, a three page letter response from the US EPA (12/3/07) 1) did not perform analysis for the Moat's Evaluation, 2) the EPA response letter of 12/13/07 simply did not review and address the factual issues that are raised by the record of inadequate well monitoring at the Mixed Waste Landfill, or 3) deliver the analysis promised in the June 21, 2007 letter.

Therefore, we drafted a letter to EPA on January 14, 2008 asking them to address 22 specific issues that were ignored in the EPA "internal review." A subsequent EPA letter response from Mr. Edlund at Region 6 on January 22, 2008 indicates that EPA has no intention to answer the questions. EPA is refusing to address the crucial issues about the failed groundwater monitoring program at the Sandia Mixed Waste Landfill. EPA is not meeting their responsibility to provide oversight for the state RCRA program.

Therefore, we make the following requests to Senator Bingaman. The justification for the requests is in the attached exhibits.

- 1. We ask that Senator Bingaman specifically request review of the Moats Evaluation by the EPA Kerr Research Laboratory.** The review is appropriate at this time because the EPA Kerr Lab is doing a second review of a similar report for Los Alamos National Laboratories (LANL). Moat's Evaluation was based upon an earlier version of the LANL report and that report was found not to be scientifically credible. Both requests for the LANL review were made by the Citizen's Advisory Board for public concerns at LANL. Unfortunately, there is no Citizens Advisory Board for Sandia. Nevertheless careful review is essential for the Moat's Evaluation.
- 2. We ask that Senator Bingaman request EPA Region 6 to answer the 22 questions sent to them in the Citizen Action letter of January 14, 2008.**

Sincerely,

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Exhibit 1. We ask that Senator Bingaman specifically request review of the Moats Evaluation by the EPA Kerr Research Laboratory. The EPA Kerr Laboratory is appropriate because it earlier reviewed a report that the Moat's Evaluation used as a model. The earlier report was the Los Alamos National Laboratory *Well Screen Analysis Report* (WSAR). Review of the Moat's Evaluation is as important for SNL as was review of the WSAR for LANL. Citizen Action is informed that the Northern New Mexico Citizens Advisory Board is requesting a new review by the EPA lab for the revised LANL WSAR. Disparate treatment of the two facilities is not appropriate in this instance. The City of Albuquerque's Groundwater Protection Advisory Board had also joined Citizen Action in the March 2007 request for review of the Moat's Evaluation by the EPA Kerr Laboratory and sent their request directly to the laboratory.

The NMED claimed the Moat's Evaluation was superior to the WSAR, but the subsequent revisions of the WSAR do not recognize or incorporate the Moat's Evaluation. Registered Geologist Robert Gilkeson disagrees and finds that neither the WSAR nor the Moat's Evaluation identify if any monitoring well produces reliable and representative water samples. This was also the finding of the EPA Kerr Laboratory for the LANL WSAR. The National Academy of Sciences (NAS) also found that the WSAR showed a lack of basic scientific knowledge and the evidence relied upon was not statistically valid (*Groundwater Protection at LANL—NAS 2007 Final Report*, p. 60.)

The 12/3/07 EPA response letter claimed that review of the Moat's Evaluation was not conducted because NMED replaced a number of monitoring wells due to factors such as corroding well screens and dropping water tables. These were not, however, the issues addressed by the Moat's Evaluation, which looked at the reliability of wells that were drilled using organic drilling fluids and bentonite clay muds that are known to prevent detection of contamination known to be buried in the dump.

The EPA Kerr Lab is currently performing a new review of the latest version of the LANL report. This is an appropriate time for the EPA Kerr Lab to review the Moat's Evaluation.

Exhibit 2. 1) There is the failure of SNL to ever have installed the required well monitoring network for the detection of contaminants to the groundwater at the MWL described in the Resource Conservation and Recovery Act (RCRA, 40 CFR 264.90-.100), and; 2) the failure of SNL to comply with DOE Orders for monitoring of the vadose zone and the groundwater beneath the dump.

The EPA 12/3/07 letter failed to identify what RCRA requirements apply to the well monitoring network and factually identify whether the requirements were met. Contradicting the EPA assertion that the well monitoring network complies with RCRA were the orders by NMED for the replacement of four of the seven monitoring wells during the pendency of this review by EPA. The EPA letter did not address specific

issues for which substantial evidence was presented to them, much of it from the administrative record for the Mixed Waste dump:

- The lack of a background monitoring well and also for the lack of three downgradient monitoring wells (the minimum requirements of RCRA) for the entire period from 1989 to the present.
- Cross gradient wells at the MWL because of failure to determine the flow direction of groundwater.
- The existence of chromium and nickel contamination in monitoring wells exceeding federal and state drinking water standards.
- The plugging and abandonment of wells with chromium contamination without investigating the source of the contamination when chromium was known to have been disposed of as a large volume liquid waste in the MWL.
- NMED and DOE/SNL assigned the high chromium and nickel contamination to corrosion of the well screens. If so, such corrosion prevented the monitoring wells from producing reliable and representative water samples for a period of up to 15 years. EPA did not address this issue.
- For well MW5, failure to consider grout contamination, installation at an inappropriate depth and inappropriate strata for detecting contamination and its installation at too great a distance from the dump (RCRA Point of Compliance, 40 CFR 264.95).
- The need to plug and abandon wells MW4 and MW5 due to cross contamination of the sole source aquifer for drinking water to Albuquerque.
- The use of bentonite clay drilling muds known to prevent detection of contamination for construction of three of the seven wells at the MWL.
- Failure to understand the hydrological setting beneath the MWL with its two distinct groundwater flow systems.
- Failure to install wells at known locations beneath tritium and solvent hot spots in the MWL and failure to use proper analytical methods for early detection of tritium contamination in groundwater.
- The use of improper methods for collecting water samples that prevented detection of volatile, solvent type contaminants.
- Failure to address the historical "inadequacy" of the well monitoring network since its construction as identified by DOE Tiger Team, DOE Annual Groundwater Monitoring Reports, NMED Notices of Disapproval and internal reports and EPA Notices of Disapproval and internal studies. The historical reports by DOE, NMED and EPA identify that the well monitoring network was never reliable for obtaining knowledge of groundwater contamination at the MWL.
- The incorrect description of the MWL monitoring well network in the SNL Annual Groundwater Monitoring Reports up to the present time as reliable for detection of contamination. From the 2007 report: "The MWL monitoring well network consists of seven wells that serve as a detection monitoring system for potential contaminant releases to groundwater from the landfill." "The results show constituent concentrations within historical ranges for the site and indicate no evidence of groundwater contamination from the landfill." This is false for numerous reasons as stated above: cross-gradient location of wells, improper construction, improper sampling methods, improper analytical methods, and chromium and nickel contamination as measured at levels above drinking water standards.
- Other issues requiring investigation by the GAO are 1) poor characterization and monitoring from the MWL to the air pathway and 2) the storm water runoff pathway.