

COMMENTS OF  
NUCLEAR WATCH OF NEW MEXICO

on the

PROPOSED CLASS 2 HAZARDOUS WASTE PERMIT MODIFICATION

FOR USE OF TOMOGRAPHY TO CHARACTERIZE WASTE

AT THE WASTE ISOLATION PILOT PLANT

submitted by

Jay Coghlan

April 2, 2001

Thank you for the opportunity to comment on DOE's proposed class 2 modification for use of tomography to characterize waste for disposal at WIPP. Nuclear Watch of New Mexico (NWNM) offers the following comments:

1. If tomography is like Magnetic Resonance Imaging and Real Time Radiography (RTR) is like an x-ray, then it is clear that tomography is a far superior technology for determining the waste composition of the contents of the 55-gallon barrels proposed for burial at WIPP. However, the existing permit would allow DOE to substitute tomography for (RTR) without a modification. Therefore, this proposed modification is not a request to use tomography, but rather a request to discontinue the currently required safety net of periodic visual examinations of the contents of waste barrels to check the accuracy of RTR. NWNM strongly opposes the discontinuance of visual examination even if DOE adopts tomography as an improved technology replacing RTR for the following reasons:

A. DOE has submitted insufficient evidence that tomography, as it is proposed in the class 2 modification, has been tested and evaluated sufficiently to justify elimination of visual examination. On page A-10, the modification request states that DOE's sole evidence in support of the accuracy of tomography is a single test



that involved five WIPP waste drums and three surrogate drums. Only one operator was used in this evaluation procedure. NWNM believes that this one test is not sufficient to verify the accuracy of a machine proposed to be used to characterize over 850,000 drums, especially when DOE's acceptable knowledge paperwork has such an abysmal track record. The studies and evaluations currently being done at Argonne may be a start toward evaluating the accuracy of tomography for waste characterization, but without the results of these studies, DOE has submitted insufficient scientific evidence to justify its permit modification request. Moreover, NWNM has yet to see the Argonne Laboratory studies and cannot yet comment on their protocol or objectivity. Therefore, NWNM believes that, until further information becomes available, tomography must be checked by periodic visual examination in order to assure that it is performing as well as DOE promises. Since the information is incomplete, NMED should deny the modification request.

- B. Before eliminating visual examination, DOE should improve the Quality Assurance for tomography to include checks on the performance of technical equipment and performance by operators. The present system has different people doing RTR and visual examination. The proposed system would have the same people who are doing the tomographic characterization be the ones who review the tomographic tapes. This system allows tomography operators to check themselves, in contradiction to standard Quality Assurance principles. Any flaw in the procedures would not be noticed because everyone has been trained in the same way and everyone is doing the same thing. This proposed system is not designed to catch errors, and therefore NWNM believes that it is less safe than the present system.
- 2. The cost of \$1,250,000 for one tomography machine is at least twice the cost of a current RTR. Moreover, the weight of the machine in excess of 100,000 pounds violates current highway weight limitations. The cost of the machine increases the cost of waste characterization. The weight of the machine may limit DOE's ability to use one machine as a mobile unit for several sites. NWNM is concerned that approval of this modification will predetermine or at least prejudice NMED's future decision on DOE's proposed modification for waste characterization to be performed at WIPP. For example, once

- tomography has been approved and visual examination has been eliminated, DOE may then assert that the transportation and cost exigencies of tomography dictate that on-site waste characterization is too costly and that tomography dictates that waste characterization responsibilities be centralized at WIPP. Because of this link between the two proposed modifications, NWNM believes that NMED should deny approval of the tomography modification. If the class 2 modification is denied, DOE can resubmit it as a part of the class 3 modification regarding waste characterization at WIPP. Hearings on waste characterization at WIPP will provide an opportunity for the public to fully investigate all safety aspects of the plan to characterize waste at WIPP.
3. Tomography may provide valuable data which can evaluate DOE's acceptable knowledge paperwork (and DOE's acceptable knowledge process is in sore need of buttressing). NWNM suggests that DOE collect and record an accurate database for use in evaluating whether tomography confirms the accuracy of acceptable knowledge paperwork for each waste stream.
  4. As a general comment, NWNM requests that any future "meetings" for class 2 modifications be on the record. We recognize that this is not required by existing regulations. However, given the ongoing controversy about whether or not proposed modifications, like the tomography modification, are major modifications, NMED might at least record the "meeting" comments so that public oral comments on class 2 modifications can be formally reviewed by NMED.

Thank you for the opportunity to comment.

  
Jay Coghlan,  
Director

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Mr. Zappe,  
 Attached are our Permit Modification Comments. Thank you for the chance to comment.

Sincerely,  
 Jay Coghlan

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