



Idaho Nuclear Technology and Engineering Center (INTEC) Tank Farm Closure and Sodium-Bearing Waste Treatment Facility

The Idaho National Laboratory (INL) Site Environmental Management Citizens Advisory Board (CAB) has closely followed decisions made and actions taken pursuant to issuance of the *Idaho High-Level Waste and Facilities Disposition Final Environmental Impact Statement* (EIS) (DOE/EIS-287) in October 2002. That EIS planned for a phased decision-making process, the most recent component of which is the Record of Decision (ROD) (DOE/EIS-287).

The CAB has reviewed this ROD and supporting documents including draft DOE/NE-ID-11226, commentary from Idaho Department of Environmental Quality dated January 17, 2006, Nuclear Regulatory Commission (NRC) draft interim concentration averaging guidance for waste determinations issued December 2005, and the NRC request for additional information on draft DOE/NE-ID-11226, distributed September 7, 2005.

We offer the following comments related to tank farm closure and recommended treatment of sodium-bearing waste. Additional commentary on issues such as facilities disposition, calcine, etc., will be developed as full information becomes available.

In general, the CAB is pleased with the progress made toward tank closure. The Department of Energy (DOE) staff is to be commended for their responsive, well documented actions toward this end. However, significant issues remain to be addressed. These include more detailed information and analyses related to thoroughness of tank cleaning, characterization of tank residuals, sandpad inventories, grout characteristics, flooding risk, vadose zone characteristics, and broadened intruder analyses. Several of these concerns were addressed in the CAB letter to DOE-ID dated November 16, 2005 (attached). Furthermore, the CAB concurs with the additional issues raised by NRC and ID-DEQ, including the latter's focus on DOE's lack of a "road map" outlining the process to be utilized for remediation of radiologic processing facilities and facilitation of future waste determinations. These are all related to the CAB's primary concern throughout the tank closure process, which is long-term protection of the aquifer.

The CAB recommends that DOE commit whatever resources are necessary toward the satisfactory resolution of remaining tank closure issues. This process should be complete, transparent, and understandable to the general public.

As part of the tank closure process, the CAB has participated in discussion of methods for processing sodium bearing waste. While the discussions initially provided some controversy, the CAB is now satisfied with DOE's selection of steam reforming as the preferred technology, with the understanding that the initial product will be repository neutral (i.e., suitable—perhaps with additional processing—for deposition in either the Waste Isolation Pilot Plant, Yucca Mountain, or another deep geologic repository).

The CAB recommends that DOE proceed with construction of a SBW treatment facility, equipped with steam reforming methodology, and that DOE continue to pursue determinations regarding classification and eventual disposal paths for this waste.

The CAB looks forward to continued participation in the high-level waste and facilities disposition process.



Citizens Advisory Board

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05-CAB-197

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November 16, 2005

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Richard B. Provencher
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Subject: Draft Section 3116 Determination for the Idaho Nuclear Technology
and Engineering Center Tank Farm

Ex-officios
Nick Ceto
Rick Provencher
Kathleen Trever

Dear Mr. Provencher:

The Idaho National Laboratory Site Environmental Management Citizens Advisory Board (Idaho CAB) has received and reviewed the Draft Section 3116 Determination for the Idaho Nuclear Technology and Engineering Center Tank Farm. Time constraints prevented full review and comment within the announced public comment period for this document, which ended on October 28, 2005.

We have some questions on this document and the path forward for closure of the Tank Farm, and respectfully submit the following questions at this time.

Idaho Site Liaison
William J. Johnson

CAB Support Staff
Peggy Hinman
Wendy Green Lowe
Lori McNamara

1. DOE assumes that the tanks yet to be cleaned have the same radionuclide inventory as those already cleaned, which appears to be a reasonable assumption. This should be validated after the tanks have been cleaned. If the residual is higher than estimated, what actions will be taken?
2. The sand pads, which contain about 30% of all the radioactivity in the tank farm (estimated) have not been directly measured. We suggest that DOE revisit this issue. Have all possibilities really been fully examined? Validated knowledge on this issue is important.
3. Will the heterogeneous (inhomogeneous) mix of grout and waste in the tanks pose a problem (by exceeding Class C levels, for example) and thereby compromise the long-term integrity of the grout?

In addition, the CAB has one suggestion: Expected residual radioactivity levels should be separated into long and short half life components, and expressed as activity that will remain at 100, 500, and perhaps 1,000 years. Both Tables 5 and 6 partially accomplish this.

The CAB intends to follow the development of this document, including the review being conducted by the Nuclear Regulatory Commission, and may have additional comments to offer at a later date.

Sincerely,

A handwritten signature in black ink that reads "David Kipping". The letters are cursive and slightly slanted to the right.

David Kipping
Chair

cc: Anna Bradford, Nuclear Regulatory Commission
Shannon Brennan, DOE-ID
Scott Van Camp, DOE-ID
Keith Lockie, DOE-ID
CAB Members