



**Citizens Advisory Board
Idaho National Engineering and Environmental Laboratory**

**Engineering Evaluation/Cost Analysis for
Phase 1 of the Decommissioning for the
Power Burst Facility Reactor Building**

The Idaho National Engineering and Environmental Laboratory (INEEL) Citizens Advisory Board (CAB) has received and reviewed the Engineering Evaluation/Cost Analysis for Phase 1 of the Decommissioning for the Power Burst Facility Reactor Building (PBF EE/CA). The following comments are submitted to the U.S. Department of Energy (DOE).

The INEEL CAB supports the general goals of removing about half of the radioactivity; removing about two-thirds of the lead; and leaving the facility in a cold, dark, and dry condition. We also support selection of Alternative 2 as presented in the PBF EE/CA. We believe that approach would save money in the long term and will leave the facility in the safest and most stable condition.

Waste Disposition

In addition, the INEEL CAB notes that two possible dispositions are described for each of three main waste streams that will result from decommissioning activities:

- The radioactive water (currently in the reactor vessel, coolant loop, and evaporator tank) could be disposed in the evaporation tank or the Idaho National Engineering and Environmental Laboratory Comprehensive Environmental Response, Compensation, and Liability Act Disposal Facility (ICDF). The CAB's preference would be to dispose the radioactive water in the evaporation tank.
- The contaminated lead and cadmium shielding could be disposed in the ICDF or an appropriate off-INEEL disposal facility. The CAB's preference would be to dispose the lead and cadmium at an appropriate off-INEEL disposal facility.
- The highly radioactive inpile tube could be disposed at the ICDF or an appropriate off-INEEL disposal facility. The CAB's preference would be to dispose the inpile tube at an appropriate off-INEEL disposal facility.

We are concerned about potential changes in the waste acceptance criteria for the ICDF. **The INEEL CAB recommends against disposal of highly radioactive wastes over a sole-source aquifer.**

In addition, the INEEL CAB recommends that DOE carefully evaluate the appropriate disposition for each waste stream before initiating decommissioning activities. The Action Memorandum that will describe implementation of the decommissioning activities for Phase 1 should explicitly state which disposition is preferred for each waste stream that will result.

Filling of the Reactor Vessel

The PBF EE/CA mentions the possibility of filling the reactor vessel with an “inert, solid, shielding material.” We understand the rationale for filling the vessel would be for stabilization and shielding after the water has been removed. **If DOE determines that filling the vessel is necessary, the INEEL CAB recommends that DOE use material that could be easily removed.** We adamantly oppose the use of any fill that would preclude selection from a full range of end states. In addition, we are opposed to use of a fill material that would be difficult or costly to remove during Phase II of the decommissioning effort.