



Citizens Advisory Board
Idaho National Engineering and Environmental Laboratory

**The Future of the Waste Experimental Reduction Facility at the
Idaho National Engineering and Environmental Laboratory**

The Idaho National Engineering and Environmental Laboratory (INEEL) Citizens Advisory Board (CAB) received a presentation from the Department of Energy's Idaho Operations Office (DOE-ID) at its January 2000 meeting regarding operational alternatives for the Waste Experimental Reduction Facility (WERF). WERF is an incinerator used to treat low-level waste (LLW) and mixed low-level waste (MLLW) before disposal in compliance with the Resource Conservation and Recovery Act. WERF has operated for a number of years, but must now comply with Maximum Achievable Control Technology (MACT) standards in order to continue to be permitted under the Clean Air Act as amended in 1990. The MACT standards are more restrictive than past standards with regard to the hazardous air emissions that can be released by various classes of sources of air pollutants, including cement kilns, lightweight aggregate kilns, and incinerators used to treat hazardous wastes. The standards also mandate the installation of equipment to restrict air emissions. Finally, the revised standards require that the operator of any currently permitted facility to determine what actions would be required to comply with the revised standards and announce no later than June 30, 2000 whether those actions will be undertaken (or alternatively, that the facility will be shut down). If DOE decides to shut down the facility, operations must cease at WERF no later than September 30, 2001.

As we understand it, DOE has two options for WERF, including 1) initiating a significant and expensive upgrade to the facility to comply with the MACT standards or 2) announcing its intention to shut down the facility.

The CAB has always supported selection of treatment and disposal alternatives for management of INEEL wastes that are expedient, cost effective, protective of human health and the environment, and compliant with all legally binding regulations and the Idaho Settlement Agreement. On numerous prior occasions, the INEEL CAB has recommended DOE continue operations at WERF until the Advanced Mixed Waste Treatment Project (AMWTP) is operational. A summary presentation was provided at our January meeting regarding the timetable on which the required determination must be made, the anticipated costs that would be associated with upgrading the facility to meet the MACT standards, the unit costs of operating the upgraded facility, and the pending availability of other soon-to-be-operational permitted commercial facilities that could provide necessary treatment.

The INEEL CAB is concerned that a decision to cease operating WERF could have adverse impacts on DOE's ability to meet relevant commitments to the State of Idaho if any of the assumptions supporting this possible conclusion are not met. We note past experience throughout the complex when DOE has shut down treatment capacity because of near-term operating costs, only to find that long-term waste management costs were much higher. Other U.S. government agencies have also experienced project failures because of an apparent acceptance of increased risk in order to decrease the costs.

The INEEL CAB recommends that DOE-ID make every effort to insure that treatment capacity is available for existing and future inventories of INEEL LLW and MLLW. We further recommend that DOE decide whether to shut down the WERF incinerator or to initiate the MACT upgrade

based upon factual and substantiated data and analysis. The analysis should consider the following.

1. The volume of LLW and MLLW currently in inventory at INEEL, regardless of program source.
2. The volume of LLW and MLLW that is projected to be produced between June 30, 2000 (date of Notice of Intent if DOE's decision is to close down WERF) and September 30, 2001 (the date WERF would close if that were the decision).
3. The capability of WERF—based on an objective assessment of the facility's ability to accept INEEL waste and the adequacy of its processing capacity—to treat the volumes of wastes identified in #1 and #2 above prior to shutdown.
4. The capability of AMWTP—based on an objective assessment of that facility's ability to accept INEEL waste, the adequacy of its processing capacity, and realistic dates for beginning operations—to treat the same volumes of the wastes identified in #1 and #2 above on a schedule that would meet the milestones in the Idaho Settlement Agreement.
5. The capability of the anticipated two commercial incinerators—including an objective assessment of the two facilities' ability to accept INEEL waste, the adequacy of their processing capacity, and realistic dates for beginning operations—to treat the same volumes of the wastes identified in #1 and #2 above on a schedule that would meet the milestones in the Idaho Settlement Agreement.
6. A unit cost comparison of a) treating at WERF once it is MACT compliant versus b) treating at AMWTP and how both those cost estimates compare with c) treating at either of the two commercial facilities. All estimates should include all costs, including packaging, transportation, waste acceptance, and waste disposal.
7. Comparisons of operating longevity and the total volumes of waste that could be treated over a comparable period. For example, we note that WERF is an aging facility with limited capacity. Certainly the AMWTP and, presumably, the two commercial facilities, would have a larger throughput capacity and would be state of the art circa 2000.

The INEEL CAB recommends DOE involve all affected parties in its decision making process, including the State of Idaho, and use all readily available information from DOE and the contractor. Input and reviews by knowledgeable contractor and/or outside experts should be included.

The INEEL CAB recommends DOE confirm that AMWTP will include an incineration plant before making any decision that would involve reliance on that facility for treatment of LLW and MLLW currently slated for WERF, regardless of the program source. In addition, DOE should evaluate whether the incinerator will be designed to accept the WERF wastes and will process the wastes on a schedule that would allow DOE to meet its commitments to the State of Idaho. We note that Secretary Richardson has recently announced that he will decide in the near future whether AMWTP will include an incinerator.

While the estimate for upgrading WERF to meet MACT—\$6 million—is large, that cost should not be considered in isolation. **The INEEL CAB recommends DOE base its decision regarding the future of WERF on sound estimates of the full costs associated with both options.** For the option of ceasing operations at WERF, the cost estimate should include all costs associated with handling, packaging, and shipment to an offsite treatment facility (if needed), treatment, and shipment back to the INEEL (if needed) for the best alternative treatment option. For the option of continuing to rely on WERF, the cost

estimate should include both the MACT upgrade and ongoing operational costs. Special add-on costs, such as any surcharges charged by commercial facilities should be included. The cost estimates should be based as much as possible on costs for the specific waste composition, not on an "average mixed waste cost" for operating WERF or the alternative facility. As much as possible, the cost estimate should be based on verifiable treatment costs instead of costs based on design estimates.

The INEEL CAB recommends DOE evaluate the probability of achieving treatment objectives under all options and base that evaluation on an assessment of the risks of being able to ensure all assumptions can be realized within the agreed schedule and at the estimated cost. The evaluation should also consider:

- The technological risk of being able to treat the waste within the regulatory limits,
- The time and effort involved in qualifying the waste for shipment,
- The possibility of acceptance of the waste under the waste acceptance criteria for the new facility,
- The treatment capacity and permit status of the new facility,
- Possible outcomes of necessary negotiations with the regulators,
- Other factors, including State and Tribal input on transportation, and
- Levels of interest and concern among the various publics.