HLW & FD

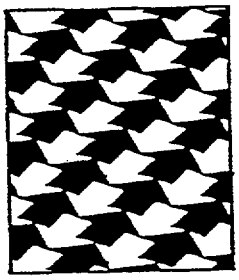
EIS PROJECT - AR/PF
Control # CC-14

INEEL CITIZENS ADVISORY BOARD RECOMMENDATIONS

RELEVANT TO HIGH LEVEL WASTE

INFORMATION ONLY

INEEL CAB Recommendations: High Level Waste



Citizens Advisory Board
Idaho National Engineering Laboratory

RECOMMENDATION

INEL HIGH-LEVEL WASTE PROGRAM

January 22, 1997

INTRODUCTION

The Citizens Advisory Board to the Idaho National Engineering Laboratory met with Department of Energy and Lockheed Martin Idaho Technologies Company personnel during its November 19-20, 1996, and January 21-22, 1997, meetings and received presentations on the *DOE-ID Regulatory Analysis and Proposed Path Forward for the Idaho National Engineering Laboratory High-level Waste Program* and management and disposition alternatives for INEL high-level waste. After consideration of the presentations and analysis of the document, the Board offers the following recommendations.

RECOMMENDATION

The Board appreciates the opportunity to comment on the plan for managing high-level waste (HLW) early in the process and recommends that such early public input continue to be elicited.

The *DOE-ID Regulatory Analysis and Proposed Path Forward for the Idaho National Engineering Laboratory High-level Waste Program* document states that the Environmental Impact Statement (EIS) is the proper vehicle to reach decisions on the management of HLW at the INEL and suggests completing the EIS early. The Board strongly agrees with this suggestion and recommends that work on the EIS be initiated immediately. The EIS must examine a broad range of alternatives and provide reasonable assurance that the preferred alternative will work as proposed. As part of the EIS, the Board recommends that a clear and concise description of all alternatives be provided. The Board also recommends including discussion of the criteria and relative weights that were used to arrive at the preferred alternative in order to help the stakeholders better understand the process and options.

During the presentations at the January meeting, a number of issues appear to be unresolved between DOE and the State of Idaho, including whether the separations approach will meet the commitments in the Settlement Agreement. The Board recommends that DOE initiate immediate interaction with LMITCO and the State of Idaho in order to resolve these issues and to identify alternatives for the EIS that are acceptable to all parties. In addition, the Board recommends that sufficient research and development funding be authorized for both separations and calcination to provide reasonable assurance that the recommended EIS technology will meet the milestones specified in the Settlement Agreement.

INFORMATION ONLY

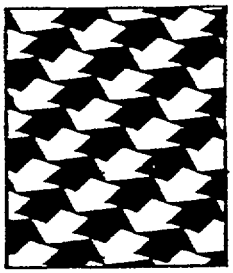
The assumptions that DOE-ID uses to reach the proposed alternative should be clear and explicit. Based on the presentations during the November Board meeting, the assumptions used to draft the *Regulatory Analysis* appear to include that a geologic repository will become available in the future for INEL's HLW, that there will be critical limits on volume in the repository, and that the HLW must be vitrified prior to disposal. Changes to any of these assumptions could force DOE to consider other alternatives. It is unclear to the Board why these assumptions are appropriate and the justification for them must be clarified in DOE-ID's EIS. Specifically, the EIS should include answers to the following key questions:

- Is Yucca Mountain the repository used for the planning basis?
- If not, what are the characteristics of the geologic repository assumed to be?
- What are the limiting factors: physical size, metric tons of heavy metal (MTHM), or both?
- How do volume and MTHM relate with and without separation, with and without vitrification, and with and without cementation?
- What are the legal and regulatory requirements of the waste form and is vitrification necessary/required?

The Board is also concerned about the proposal to dispose of the low-activity component in Idaho should that be recommended in the EIS. This material will contain radioactive isotopes and may contain hazardous components. Disposal of this material over the aquifer may be a concern to the citizens of Idaho. The Board recommends the EIS include careful examination of the associated risks of such disposal and that DOE keep the Board and the public informed as more information becomes available.

The Board is concerned that, as the liquid waste is treated and concentrated issues related to criticality be adequately addressed.

Finally, the Board also recommends that a public involvement program be initiated as part of the EIS scoping process and proposes that it assist DOE in the effort.



Citizens Advisory Board
Idaho National Engineering Laboratory

RECOMMENDATION

Waste Area Group 3
Remedial Investigation/Feasibility Study

March 19, 1997

INTRODUCTION

The Citizens Advisory Board to the Idaho National Engineering and Environmental Laboratory has met with Department of Energy personnel numerous times during the past eighteen months to discuss the ongoing remedial investigation at Waste Area Group (WAG) 3 at the INEEL. During the November 18-19, 1996, and January 21-22, 1997, meetings the Board received updates on the Feasibility Study efforts. After consideration of the presentations and analysis of the documentation submitted for Board review, the CAB offers the following recommendations.

The Board commends DOE's efforts to involve the Board early in the process and appreciates the consistent updates and new information it has routinely received. The portions of the draft DOE-ID *WAG 3 Feasibility Study* given to the Board for review were concise and reader-friendly and the Board is pleased with these sections.

RECOMMENDATION

The Board recommends that some remedial action be instigated and completed at WAG 3 to prevent health risks to workers and potential future occupants. The Board is concerned with the contamination of surface and subsurface soils, surface water, perched water and the aquifer as a result of activities at WAG 3.

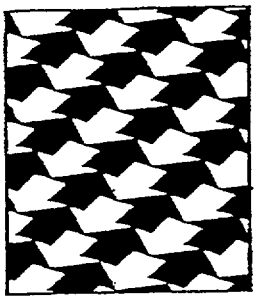
The Board recommends DOE-ID correct the following inadequacies as the final Feasibility Study is prepared:

- In future iterations, clarify what the "no action" alternatives include. The "no action" alternatives provided by DOE-ID are not true "no action" alternatives. They assume existing conditions at WAG 3 making them "status quo" alternatives.
- Ex-situ treatment of perched water is included in the groundwater waste unit table summarizing the "technologies retained following preliminary screening," but it is excluded in the table outlining the "technologies retained for consideration as component of remedial alternatives for groundwater." However, it appears that some ex-situ treatment is being considered as part of the interim remedies to be evaluated. The Board recommends DOE-ID

include an ex-situ treatment alternative for perched groundwater in further analysis of potential remedial alternatives.

- In-situ treatment technologies have been excluded in the document as "not applicable" due in part to "depth to water and inability to confirm effectiveness." The Board is aware of ongoing research being conducted to determine and demonstrate the benefit of in-situ treatments over other technologies. The Board recommends in-situ treatment technologies be included as potential options in further DOE-ID remediation alternative analyses.
- In Section 4, on page 7, the document states that "contaminant transport modeling suggests that plutonium in the Tank Farm soils will be leached and transported to the SRPA [Snake River Plain Aquifer] groundwater beneath the site at a future time. As such plutonium is a future SRPA COC [contaminant of concern]." The document does not provide much more information on this issue and the Board recommends additional discussion on the potential for plutonium to be a contaminant of concern in the aquifer.

Finally, the Board recommends that DOE-ID continue to involve the Board in the WAG 3 remedial investigation.



Citizens Advisory Board
Idaho National Engineering and Environmental Laboratory

RECOMMENDATION

WAG 3 FACT SHEET

September 17, 1997

INTRODUCTION

The INEEL CAB reviewed DOE's draft fact sheet entitled "Comprehensive investigation reveals extent of contamination within Waste Area Group (WAG) 3."

The Board acknowledges the difficulty of summarizing the volumes of highly technical information in a fact sheet. While the draft fact sheet is not a bad first draft, revisions could minimize confusion and result in improved communication of key concepts.

RECOMMENDATION

The Board recommends that the following changes be made to the fact sheet before it is finalized for distribution to the public:

- The fact sheet should review basic information about WAG 3, including its location. It should also review what the RI/FS included and what it did not (i.e., the buildings and tanks).
- The fact sheet should more clearly communicate the sources, magnitude, and types of risks (i.e., human health or ecological) posed by WAG 3.
- Please provide both vicinity and location maps for tritium, strontium, and Iodine-129 plumes in relation to the site boundary.
- Add a separate paragraph at the top of page 6 that describes present contamination and that which is projected for the future based on decay, dilution, and natural attenuation. If space allows, use maps to illustrate the expected (modeled) changes.
- Add a definition for radioactive decay in the sidebar on the page where the term is first used.
- The fact sheet should explain how DOE will ensure that contamination of the aquifer by plutonium, americium, and europium will not occur.
- The fact sheet should explain that the computer modeling is based on the no-action alternative.
- Review of the fact sheet led some of the Board members to conclude that existing Iodine-129 regulations are unreasonable and unjustified. The Board intends to review this regulation. At this time, however, the Board recommends that the fact sheet be worded in such a way as to communicate that DOE fully intends to comply with all existing regulations.

- On page 1, in the 2nd paragraph, the text suggests the possibility of consolidating soils at one facility. What other alternatives were considered and why were they ruled out?
- The 1st paragraph on page 2 implies that all liquid wastes have been calcined. This is not true even for non-sodium bearing liquid waste and certainly not true for the sodium bearing liquid waste. The fact sheet should acknowledge that the calcination process is ongoing.
- In the sidebar on page 2, the term "calcine" would be a better name for that process.
- In the sidebar on page 2, perched water is defined as water that is perched between layers. A definition must not rely on the word being defined; use terms familiar to the general public. The definition should be revised by using the word "isolated" instead.
- On pages 2 and 3 of the fact sheet, statements are made that indicate that disposal of radioactive and chemical waste through the injection well was "acceptable at the time." The fact sheet should explain past practices but not attempt to justify them.
- On page 3, the phrase "the extent of the lower perched water bodies is less well defined" is confusing. Please clarify whether this refers to the extent of the contamination or the size/location of the water body.
- On page 4, tritium, I-129 and strontium-90 are referred to in the last two paragraphs but the order is changed. This adds unnecessary confusion. The fact sheet should minimize confusion by using a consistent format.
- In the 1st paragraph of page 5, it is unclear if the 44 monitoring wells are on WAG 3, on-site, off-site, or a combination of these locations. Please clarify.
- Repeated statements as to what was dumped at WAG 3 are contradictory (i.e., page 5, 3rd paragraph and discussion of europium).
- The fact sheet implies that there are numerous hazards at WAG 3. The only hazards that are well described are I-129 and mercury contamination in soils. The fact sheet should clearly list all contaminants of concern and the risks posed by each. Risk discussions should address both on-site and off-site risks.
- In the middle of page 5, 2nd paragraph under Human Health Evaluation, and in the upper figure, the term "risk management" is used incorrectly. Risk management decisions are made at all risk levels above $1x10^{-6}$. Actions are sometimes taken at levels between $1x10^{-6}$ and $1x10^{-4}$ and almost always taken at levels above $1x10^{-4}$. Please correct.
- In the legend for Figure 4-15, the term H-3 distribution is used without explanation. Also it would be better to spell out Snake River Plain Aquifer rather than use the acronym in a figure legend.
- The remediation alternatives discussed on pages 6 and 7 are so poorly defined that they are not understandable. Please provide better definitions.

Citizens Advisory Board
Idaho National Engineering and Environmental Laboratory

RECOMMENDATION
on
ISSUES FOR CONSIDERATION IN THE DRAFT SURPLUS PLUTONIUM DISPOSITION ENVIRONMENTAL IMPACT STATEMENT

November 19, 1997

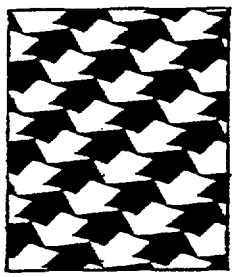
RECOMMENDATION

The INEEL CAB acknowledges that the scoping period for the Surplus Plutonium Disposition EIS has ended. Our interest in the issue is ongoing, and we respectfully submit this list of concerns in hopes that they may be addressed in the Draft EIS when it is released. Board members have concerns regarding:

- The need for and safety related to transportation of the plutonium across the Fort Hall Indian Reservation and elsewhere in the nation,
- Comparative analyses of environmental impacts and costs at each of the four alternative sites,
- Safe handling, storage, and transportation of all materials,
- Disposition plans for any and all wastes that will result,
- Security plans,
- Plans for where and how the mixed-oxide fuel will be used (including a demonstration of marketability),
- Environmental protection,
- Worker and public health and safety,
- Operation of all related facilities in full compliance with all relevant environmental regulations, including the Idaho Settlement Agreement,
- Whether the mission would bring funding to Idaho (to help support the existing infrastructure) without detracting from the site's ability to meet compliance schedules, and
- The costs associated with handling spent mixed-oxide nuclear fuel (e.g., storage and disposal).

The Board feels that DOE could do a better job at demonstrating the rationale for its decision to pursue mixed-oxide fuel fabrication instead of vitrification. In particular, the Board feels DOE must offer a complete and sound comparison between mixed oxide fuel fabrication and vitrification that substantiates DOE's proposed path forward in the Programmatic EIS ROD, including whether:

- mixed-oxide fuel fabrication is superior to vitrification at achieving nonproliferation,
- mixed-oxide fuel fabrication can be implemented cost-effectively,
- mixed-oxide fuel fabrication renders the plutonium into a form that cannot be utilized in the future for weapons production.



Citizens Advisory Board
Idaho National Engineering and Environmental Laboratory

RECOMMENDATION
on the
HIGH-LEVEL WASTE AND FACILITIES DISPOSITION ENVIRONMENTAL IMPACT STATEMENT

November 19, 1997

INTRODUCTION

The Board commends the Department of Energy (DOE) for beginning the High-Level Waste and Facilities Disposition Environmental Impact Statement (HLW EIS) nearly ten years ahead of schedule and for continuing to involve the Idaho National Engineering and Environmental Laboratory Citizens Advisory Board (INEEL CAB).

The following are submitted as recommendations for consideration during the scoping process for the EIS.

RECOMMENDATIONS

1. In its January 1997 recommendation to DOE, the Board expressed concerns regarding the sufficiency of funds for research and development for both separations and calcination to provide reasonable assurances that the technology selected by the Record of Decision (that will follow the HLW EIS) will meet the milestones in the Settlement Agreement. Our concerns continue, and we urge DOE to continue funding both research and development programs to ensure compliance with the Settlement Agreement regardless of which alternative is preferred and then selected pending analysis in the EIS.

2. The EIS must state all key assumptions clearly and explicitly. For example, if volume restrictions at Yucca Mountain are the driving force behind the decision to separate, then this should be stated and explained in clear and understandable language. In addition, the method for determining the equivalent metric tons of heavy metal for INEEL's HLW should be explained.

3. The EIS should clearly identify all waste streams, including radioactive and hazardous constituents that will result from each of the alternatives considered, state quantities, and describe the risks associated with each and plans for final disposition. In particular, DOE should distinguish between wastes that will leave Idaho and those that will remain at the

INEEL. If it is assumed that waste will be disposed of at the INEEL, the EIS should disclose what existing or new facilities will be used, associated costs, and what permits will be required.

4. The Board finds the "No-Action" alternative unacceptable and recommends it not be selected based on the following:

   - Risks associated with potential leakage of residual liquid waste from the tanks are unacceptable to the public due to the potential for aquifer contamination.
   - Leaving the calcine in the bin sets indefinitely is unacceptable to the public because that would result in de facto disposal of the waste.
   - Leaving facilities in "standby operations" results in significant mortgage costs.
   - The alternative is not in compliance with the Settlement Agreement.
   - The alternative would result in the loss of valuable infrastructure.

5. The Board recommends that all reasonable, other than "no action" alternatives—such as vitrification, ceramic, and cementation—be given full, careful and fair consideration in the EIS.

6. The EIS should address all liquid and calcined wastes at the tank farm and in the bin sets at the Idaho Chemical Processing Plant (ICPP). Materials distributed during the scoping process reiterate that sodium bearing waste has "historically been managed as high-level waste because some of its physical and chemical properties are similar to those of high-level waste." In addition, the Settlement agreement speaks of "sodium-bearing liquid high-level waste." However, the scoping materials go on to state that "Additional waste testing and characterization may result in its (sodium bearing liquid waste) reclassification as mixed transuranic waste or mixed low-level waste." This uncertainty about the classification of the sodium-bearing liquid waste must end. DOE must determine, as part of this NEPA process (including review by stakeholders and regulators), the classification of the sodium-bearing liquid wastes. The EIS should provide a clear rationale and basis for the selected classification.

7. DOE should consider an integrated, complex-wide approach for HLW treatment. If different approaches are taken at different sites, the rationale should be explained. For example, DOE should clearly and specifically justify why the separations process should be implemented at the INEEL if it is not going to be used at Hanford (a facility with a great deal more HLW than INEEL).

8. The EIS should clearly specify all of the pros and cons associated with each of the alternatives evaluated. Strategies for disposition and potential roadblocks, such as RCRA permitting and repository availability, should be identified and analyzed.

9. The description of the "Non-separation" alternative in the informational materials made available during the scoping period discusses "permanent disposal in-place at the INEEL or outside of the State of Idaho in a geologic repository" for HLW. The Board recommends that HLW should be disposed of in a geologic repository outside of Idaho. If disposal in Idaho is being considered, it must be included as a separate alternative.

10. Separation will result in a low activity waste component with radioactive and hazardous constituents. One plan for the disposal of this waste is to grout it back into the liquid waste tanks. Even if the low activity waste stream is not grouted into the tanks, the heels may remain in place. This means that significant quantities of radioactive and possibly hazardous materials could be disposed of over the aquifer. An option of closing the tanks as cleanly as possible (for example, by filling with clean grout) should be considered.

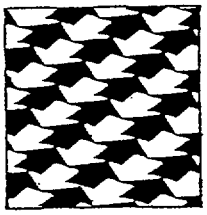
    The Board insists that DOE clearly define the risks to the environment, aquifer, and down gradient residents associated with this disposal option including the stability of this waste form and the possibility of leakage from these tanks. These risks should be compared to the risks to workers and the general public of other options, such as pumping or otherwise removing the heels, treating and disposing of the heels, filling the tanks with clean grout, or removing the tanks. In addition, the regulatory barriers associated with putting this RCRA regulated material at the INEEL under a CERCLA site should be addressed.

11. Offsite disposal of low activity waste should also be considered.

12. The Board believes that the hazardous constituents in the high level and sodium bearing waste may create serious problems in the disposal of the low activity and/or high activity waste streams. The EIS should clearly identify quantities and types of all hazardous constituents remaining in each waste stream and identify the disposal risks associated with each. DOE should consider alternative strategies for management of these hazardous constituents including separations and disposal at RCRA permitted facilities.

13. The EIS covers "high-level waste and facilities disposition." Preliminary scoping documents focus primarily on the HLW processing options, with very little information on facilities disposition alternatives. What facilities are being considered for disposition in this EIS and what is the tie-in with the WAG 3 ROD, scheduled to be completed a year before the final EIS is issued?

14. The Settlement Agreement states that the HLW will be calcined. Some of the alternatives, such as the "separations" alternative, would require negotiations with the State and rewording of the Settlement Agreement. The EIS should provide a full explanation of the potential need, strategy for, and ramifications of renegotiation of the Settlement Agreement under each alternative.



Citizens Advisory Board
Idaho National Engineering and Environmental Laboratory

PROPOSED STRATEGY FOR REMEDIAL ACTIONS AT WASTE AREA GROUP 3 IDAHO CHEMICAL PROCESSING PLANT

January 21, 1998

INTRODUCTION

The Idaho National Engineering and Environmental Laboratory Citizens Advisory Board (INEEL CAB) requests that the U.S. Environmental Protection Agency National Remedy Review Board consider this recommendation regarding DOE's proposed strategy for remedial actions to achieve cleanup of contamination at Waste Area Group 3, Idaho Chemical Processing Plant (ICPP), at the INEEL.

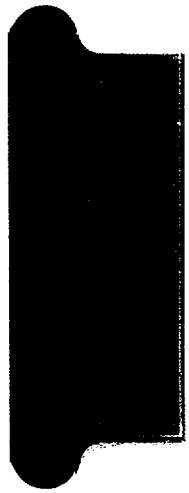
RECOMMENDATION

The INEEL CAB recommends that the National Remedy Review Board accept the DOE's proposed strategy for cleanup at the ICPP. We considered three issues in achieving consensus on this recommendation as summarized below.

The INEEL CAB feels that the range of alternatives evaluated in the ICPP Remedial Investigation and Feasibility Study covers the feasible actions for cost-effective cleanup. In general, the additional alternatives considered to support the Remedy Review Board's review appear to add significant cost with little reduction in risk to humans or the environment. Specifically, the INEEL CAB does not support using pump-and-treat technologies for the perched water and the Snake River Plain Aquifer alternatives. We believe they involve extremely high costs and a high degree of technical uncertainty with very little benefit.

The INEEL Comprehensive Facility and Land Use Plan (March 1996) defines future land uses at the INEEL. This plan designated the ICPP as an area where the federal government expects to retain control for at least the next 100 years, with the possibility of restricted industrial use during that time. The INEEL CAB's recommendation on this plan, dated November 15, 1995, expressed support for the 100-year scenario at the ICPP. We believe the 100-year scenario is acceptable and appropriate because federal government control of the area will limit the potential for human exposure to contamination.

In addition, the INEEL CAB finds the approach of using risk levels of 1×10^{-4} to determine the need for remedial action to be acceptable. We recognize this approach is less conservative than that used for some Superfund cleanups. We feel, however, that the significantly higher costs that would be imposed by using risk levels between 1×10^{-4} and 1×10^{-6} to trigger remedial action to be unjustified. While the CAB has never articulated acceptance of this approach in a recommendation, we have been aware of it for some time and have accepted it without comment.



RECOMMENDATION:

PROGRAMMATIC SPENT NUCLEAR FUEL MANAGEMENT AND IDAHO NATIONAL ENGINEERING LABORATORY ENVIRONMENTAL RESTORATION AND WASTE MANAGEMENT DRAFT ENVIRONMENTAL IMPACT STATEMENT

September 30, 1994

INTRODUCTION

The Environmental Management Site-Specific Advisory Board, Idaho National Engineering Laboratory (SSAB-INEL) met August 29-30, 1994 in Idaho Falls and conducted a day-and-a-half study of the Draft EIS. Advance materials had been supplied to all Board members. There were 13 of the 15 members present the first day and 14 members present the second day. The meeting was facilitated and a wide range of DOE, Navy, and contractor personnel were present throughout the Board member discussions.

OVERVIEW

Several over-arching themes emerged concerning Spent Nuclear Fuel Management.

Storage of SNF is a national problem and demands a national solution; INEL should participate in the solution, but should not bear the entire burden. INEL should not be placed in a NIMBY trap; fair and equitable treatment of all potential sites is essential.

Efforts to open a permanent storage site must be diligently pursued and demonstrated. A forty-year timeline too easily translates into "permanent" and provides a convenient excuse for permanent storage decisions to be delayed.

Public and worker health and safety and protection of the environment are prime considerations in all decisions relating to storage and transportation of SNF.

Cleanup at INEL must continue and must be completed as agreed to in the FFA/CO regardless of SNF siting decisions, and less costly and more effective cleanup technologies must be developed.

Technology development related to effective waste management is essential.

Participation by an informed public is crucial for acceptable solutions to be implemented. DOE has the responsibility of clearly and concisely presenting alternatives, including complete cost comparisons, for public consideration.

PROCESS

Board procedures define consensus as "substantive agreement among Board members on recommendations concerning, and advice regarding, INEL issues." Within this definition, over two-thirds (10) of the Board members present reached substantive agreement. The minority viewpoint follows the majority recommendation.

MAJORITY RECOMMENDATION

VOLUME I

RECOMMENDATION: REGIONALIZATION SUBALTERNATIVE A

A majority of SSAB-INEL Board members reached agreement on selection of Regionalization, Subalternative A (based primarily on fuel type). This was a consensus agreement among those who preferred an alternative greater than No Action. Regionalization, Subalternative A, could best be characterized as the alternative which all could "live with" and with which there was no major disagreement. It should be noted, however, that disposition of Navy SNF was omitted from this decision.

RATIONALE:

One of the primary reasons this alternative was selected was based on the fact that it supplies one of the few objective rationales for distribution of SNF, that of fuel type. It also eliminates a great deal of what was felt was unnecessary transportation of existing waste, an unproductive use of taxpayer dollars. Maximum utilization of existing facilities, site equity, and management efficiency were additional considerations.

While the Navy's presentation on waste streams was superior to that included in the overall EIS, it was felt that the Navy's information on water purity considerations could be improved. Transportation costs vs. risks and the costs of on-site storage was felt to be another area of deficiency. Primarily, however, there was reluctance to make a recommendation concerning Navy SNF because a convincing case was not made for continued examination at INEL or elsewhere. Due to the variance of opinion regarding this issue, no consensus was possible; however, it is possible that consensus could have been reached if time had been available.

VOLUME II

RECOMMENDATION: A HYBRID OF ALTERNATIVE B AND ALTERNATIVE D

The SSAB-INEL majority recommends a hybrid of Alternative B and Alternative D for SNF management, environmental restoration, and waste management at the Idaho National Engineering Laboratory. Specifically, the Board majority recommends the elements included in Alternative B except those for High-Level Waste and Hazardous Waste, preferring those two elements from Alternative D. This preference is dependent upon the selected alternative in Volume I and the INEL Draft Site Treatment Plan's resolution. It is assumed that the Volume II alternatives will be re-named and/or reorganized.

RATIONALE:

This hybrid alternative builds upon the site knowledge base and takes local and state economic impacts into consideration. It has the further advantage of better utilizing the nation's investment in facilities and technological expertise. Total potential waste management costs could also be reduced under this allocation of resources; however, additional specific cost information is necessary to confirm this assumption. High level and hazardous waste management lie within INEL's historic mission.

The Board was concerned that the time frame contained in Volume II did not address the long-term storage implications implicit in Volume I. This could create a situation where INEL would become a de facto long-term (permanent) waste repository. While it is the Board's position that the INEL must participate in waste management solutions, the Board is opposed to the INEL becoming the only solution.

The Board believes that the EIS could be improved by addressing the following concerns in greater detail: total and comparative cost analyses, tribal and treaty issues, site hydrology and strategic land use planning.

MINORITY VIEWPOINT

VOLUME I

RECOMMENDATION: NO ACTION ALTERNATIVE

A minority of the SSAB-INEL prefers the No Action alternative. This position is based on the premise that choosing any of the existing DOE sites for temporary centralized or regionalized storage of SNF is likely to become a de facto choice of that site for permanent storage. What little movement presently exists toward permanent solution of the SNF/waste management dilemma is the product of public worries about the safety of the present dispersed handling of these materials.

RATIONALE:

The minority fears that if these materials are moved out of peoples' backyards, to temporary locations which are out of sight and have no political power, then the political will to pursue a permanent solution will evaporate. Since there are such strong reasons to believe that selection of a site for temporary SNF management and storage will in fact become a selection of that site for permanent storage, the minority believes that the EIS is seriously flawed.

While DOE has devoted considerable effort to looking at the transport of SNF to and between the various sites, the analysis stops with the material located at sites which are supposed (in most cases) to be temporary. While a permanent geological repository has not been identified, this does not excuse DOE from the need to include the transportation of SNF and any wastes generated by SNF handling to a permanent site.

Given federal budget constraints and the magnitude of the SNF and cleanup tasks being addressed in this EIS, cost estimates are vital to making an informed choice among the alternatives. DOE has indicated that public opinion and cost will play a major role in its decisions regarding SNF. Delaying the public release of cost estimates until or near the date of the Record of Decision deprives the public of important information required for making decisions.

RECOMMENDATION: NO SPECIFIC ALTERNATIVE

RATIONALE:

Because the minority has significant problems with the SNF portion of the DEIS, those concerns carry over to the INEL ER/WM DEIS. This process whereby the INEL might be chosen as a de facto permanent SNF storage site is unacceptable. There are factors including groundwater, hydrology, location relative to SNF sources and likely permanent repositories, and present site facility problems which make INEL inappropriate as a site for treatment and either temporary or permanent storage of additional SNF.

In summary, INEL should not accept a major role in processing waste materials from other sites–at least until a permanent storage site is available. The minority feels the draft EIS does not address the right questions nor provide sufficient and accurate enough information for the public to make informed decisions.

DISSENT TO THE SSAB MAJORITY POSITION ON THE SNF & INEL ENVIRONMENTAL IMPACT STATEMENTS

At its August 29-30 meeting the INEL Site-Specific Advisory Board developed a set of responses and recommendations regarding the SNF & INEL environmental impact statement. We wish to dissent from that majority position for the following reasons:

SPENT NUCLEAR FUEL:

- Temporary actions may become permanent

Our disagreement about what to do with spent fuel is the core of our dissent. We are convinced that choosing any of the existing DOE sites for temporary centralized or regionalized storage of SNF is likely to become a de facto choice of that site for permanent storage. DOE representatives at our meeting gave us no assurance that any permanent geological repository could be developed during the 40-year time horizon of the EIS. The DOE's draft land use scenarios document echoes the pessimism that agreement can be reached regarding a permanent site: "Uncertainty in the opening of the WIPP increases the importance of the RWMC serving as at least a short-term waste management facility, if not a long-term facility." Department of Energy, Long-term Land Use Future Scenarios for or the Idaho National Engineering Laboratory, August 1994, page 43.

What little movement presently exists toward permanent solution of the SNF/waste management dilemma is the product of public worries about the safety of the present dispersed handling of these materials, and DOD concerns about the effects on its defense mission. We fear that if these materials are moved out of peoples' backyards, to temporary locations which are out of sight and have no political power, then the political will to pursue a permanent solution will evaporate. Certainly, with the public's attitude toward transportation of nuclear materials, if they are once moved to a site that is out of sight and out of mind, then the public will be very reluctant to see the material moved again.

Any site chosen for a centralized or regionalized role in SNF management and temporary storage will develop (or perhaps already has) related infrastructure both on-site and in the surrounding community, as well as a population dependent on the jobs at the site. This local economic dependence, and the political pressures it fosters, make it likely that temporary actions will stretch into permanent ones. In the same way, the major investment in site facilities, once made, would be an investment that DOE would be reluctant to abandon in a further move to an eventual permanent solution.

Since there are such strong reasons to believe that selection of a site for temporary SNF management and storage will in fact become a selection of that site for permanent storage, we believe that the EIS is seriously flawed. We are concerned that this assumption is implicitly embedded in the EIS, but not discussed explicitly. We are concerned that the issues important to the NEPA process for selection of a site for permanent storage have simply not been discussed in this EIS.

- Link to decisions on nuclear material from other sources

While it is outside the stated scope of this EIS, the decision about what to do with SNF may be expected to relate to decisions about the handling of other nuclear materials. If any site develops the skills and facilities for handling SNF, this may make it more likely that the same site will be chosen to also handle the additional nuclear materials. While the most plausible link would be to materials resulting from the dismantling of domestic and/or foreign nuclear weapons, our concern

extends even to commercial SNF, which have so far not found a permanent home. The massive cost estimates for additions/modifications to building 666 and for dry SNF storage (from Volume 2, part B) lead us to wonder whether the scale of these projects might be a "Trojan horse" for even more shipments of SNF to INEL.

Treatment/reprocessing issues

We agree that some forms of treatment may be necessary to prepare SNF and waste materials for permanent storage. However, we are concerned that proposals to develop SNF stabilization technologies involving the separation of fissile materials might in fact be a back-door attempt to resume fuel reprocessing. If resumption of fuel reprocessing is being considered (with all of its international politics and non-proliferation implications), then it should be discussed openly, and not buried in the details of the EIS. Separation of fissile materials, even if it is done just for storage technology and safety reasons, still raises these political and non-proliferation concerns.

We are concerned that the EIS alternative of "regionalization by fuel type," which was favored by the SSAB majority, is a way to assemble similar fuels at selected sites for ease in reprocessing. Otherwise – why not just regionalize by geography, and minimize the transportation problem?

• SNF transport section of EIS is incomplete

While DOE has devoted considerable effort to looking at the transport of SNF to and between the various sites, the analysis stops with the material located at sites which are supposed (in most cases) to be temporary. While a permanent geological repository has not been identified, this does not excuse DOE from the need to include the transport of SNF and any wastes generated by SNF handling to a permanent site. Both the economic and the political costs of this second move may be very important. DOE should address this in their transportation analysis by contingency analysis. (What if the Nevada site is chosen as permanent, what if INEL is chosen . . .)

• Incomplete treatment of health effects

We are concerned with DOE's focus on "latent cancer fatalities" as if that were the only consequence from the alternatives studied in the EIS. As DOE recognizes, other health effects can result from possible acute and/or low level exposure to the radiation and hazardous materials inherent in SNF transportation and site operation. Having recognized that other health effects are possible, it falls to DOE to make known the full nature and extent to which people's health is at risk.

In addition, should accidents happen in the course of transportation, the physical environment is also placed at risk. The EIS fails to fully address the impacts from transportation accidents to air, earth, water, and wildlife.

• Failure to consider all options

The EIS fails to fully consider all the available options for some SNF streams. For example, the SNF from the Fort St. Vrain reactor might be held for the time being in facilities presently available or that could be built at that site, rather than shipped to supposedly temporary storage at another regional or central site. There maybe options for storage of SNF from university reactors on-site (and there is the further question whether DOE's support of all these university reactors is in the national interest). There may be other non-US sites which could handle the foreign SNF as an alternative to shipping it here. Having failed to address the environmental impacts of what may be other viable alternatives, the EIS is incomplete.

• Lack of cost data

Given federal budget constraints and the magnitude of the SNF and cleanup tasks being addressed in this EIS, cost estimates are vital to making an informed choice among the alternatives. In fact, DOE has indicated that public opinion and cost will play a major role in its decisions regarding SNF. If the public is being asked to make EIS decisions without cost information being available, and then actual implementation is dictated by budget realities, then the EIS process has been a charade. Delaying the public release of cost estimates until at or near the date of the record of decision deprives the public of information important for making decisions, and this is unsatisfactory.

NAVY FUEL:

Permanence - Impetus to find permanent site

Since Navy fuel makes up a large part of the additional SNF requiring management and storage, our comments above about the likely permanence of this supposedly temporary action apply especially to the Navy fuel. The existence of the Navy's Expended Core Facility at the INEL makes this a particularly difficult decision.

Regarding permanent storage, we would much rather that the Navy feel a serious commitment to finding a good permanent site for a geologic repository, rather than give the Navy access to a "temporary" solution which would sap its incentive to seek a permanent site. We would prefer to have the Navy on our side in seeking the best possible permanent solution to SNF storage.

Double shipment, 100 percent examination of Navy SNF

The Navy would prefer to ship all spent fuel assemblies to INEL, examine them to provide input to its ongoing reactor research program, and then have them stored "temporarily" at the Idaho site. If the temporary storage part doesn't work out, then the Navy proposed to still ship all fuel assemblies to an Expended Core Facility (at INEL or some other site) and then ship the materials back to their point of origin for temporary storage. We wonder whether this double shipment scenario, with the high associated financial and political transportation costs, might have been crafted to make the status quo of examination and storage at INEL look better by comparison.

We question whether the Navy's objective of examining all spent fuel elements is really vital to its mission (especially a mission appropriately configured to the realities and budgets of a post-cold war world). If the Navy's past fuel examinations have been adequate, surely they must have resulted in some knowledge about the effects of materials used, core position, use history, etc., on the fuel itself. If this is so, then concentrating the examination on a small sample of spent fuel elements that include alternative designs, materials or use histories should produce almost as much information to support the Navy's mission as would complete examination. Moving to sample examination would make it much easier to smaller scale accommodate examination facilities at alternative sites such as refueling sites or a selected permanent SNF repository.

In fact we understand that, following the end of fuel reprocessing operations, most of the SNF examination conducted in Idaho consisted of visual and nondestructive observation. Apparently some 20% of fuel elements are examined in any detail. Only a small fraction of these elements were examined invasively, and that was apparently done not in Idaho, but at the Bettis facilities at Pittsburgh. We are led to wonder whether the examination issue isn't really a Navy strategy to get the SNF to Idaho for "temporary" storage.

INEL ER/WM EIS:

• SNF management and storage

Because we have major problems with the SNF environmental impact statement, it follows that these concerns carry over to the INEL ER/WM environmental impact statement. We object to a process where INEL might be chosen as a de facto permanent SNF storage site without a comprehensive decision-making process to assess whether INEL is appropriate for such use. It is self-evident that DOE has targeted INEL as the location for storage of SNF--only INEL has been analyzed in detail. We contend that no decisions on SNF can be made until each potential site has completed a site specific NEPA review.

The draft EIS fails to focus on the most basic question--namely whether the INEL site is suitable (and indeed the best alternative) for the receipt and storage of additional SNF. We believe there are reasons, including seismic risk, groundwater hydrology, location relative to SNF sources and likely permanent repositories, and present site facility problems which make INEL inappropriate as a site for treatment and either temporary or permanent storage of additional SNF.

• Minimize receipt of waste from other sites.

A similar logic has to apply to programs which would involve shipping waste from other sites to INEL. It is true that INEL has facilities and skills that could be used to address waste problems at other sites. Certainly, many in the community would welcome the jobs and income which such programs would imply.

On the other hand, many waste treatment activities would result in some materials that are probably not appropriate for permanent storage in Idaho. For that reason, we are very reluctant to see INEL accept a major role in processing waste materials from other sites--at least until a permanent storage site is available.

• Support aggressive site cleanup

We had hoped that the draft EIS would provide the breadth and depth of analysis needed to make the right decisions for restoring the environment that has been damaged by past activities at INEL, and properly managing the wastes that are stored at the site. The document fails to meet that expectation. The EIS focuses instead on the receipt and storage of many additional shipments of highly radioactive SNF at INEL, at the expense of any comprehensive treatment of alternatives for environmental restoration and waste management at the site itself. The environmental restoration and waste management alternatives specific to INEL, for the most part, contain components that are unreasonable or unrealistic. None of them matches what DOE really plans to do or should do. No rationale is provided for why particular projects were considered in some alternatives and not in others. The likely result of such a process could only be a mix and match of parts of the various proposals--frustrating the opportunity for meaningful comment on the environmental acceptability of future management alternatives at INEL.

We strongly support an aggressive cleanup of the INEL site and continued development of technology to accomplish this cleanup. Budgetary constraints make it imperative that the most hazardous sites be addressed first, but economics should not be used as an excuse to avoid cleanup of wastes that pose a hazard to reasonably likely uses in the long-term future. Site practices may need further improvement to avoid aggravating existing waste problems or creating new ones. Much of this cleanup may occur on-site to minimize transport, and it may be necessary to temporarily store the resulting materials on-site, even though some of them may be inappropriate for either temporary or permanent storage over the Snake Plan aquifer.

- Failure to consider Shoshone-Bannock tribal interests

The draft EIS was prepared without significant consultation with the Shoshone-Bannock Tribe. DOE policy recognizes the sovereign status of Indian tribes and requires the Department to consult with tribes before taking actions that may impact tribal interests and rights. The tribe has a number of serious concerns that are not adequately addressed in the EIS, several of which are listed below.

The Hazardous Materials Transportation Act authorizes Indian tribes as sovereigns to regulate the transportation of such materials across their lands. Under this authority, the Shoshone-Bannock Tribes have enacted ordinances regulating the transportation of SNF across the Fort Hall Reservation. This issue of regulatory authority, completely ignored in the EIS, is of special concern to the Shoshone-Bannock Tribes because most shipments of SNF converge at and cross the Fort Hall Reservation, regardless of direction and mode of transportation.

The EIS also fails to adequately address the impacts of alternatives on the many cultural sites with possible significance to the Shoshone-Bannock Tribe. Apart from the admission that as many as 57,000 cultural sites exist on the reservation, there has been no comprehensive inventory, and no systematic assessment of the effects which the various alternatives might have on these sites. It is not acceptable to defer such studies until after decisions have already been made.

CONCLUSION

We agree with the assertion made by Governor Andrus in his testimony on August 25, 1994, that the SNF and INEL EIS both fall short and go beyond what is needed:

> "First of all, the INEL Environmental Restoration Waste Management Impact Statement is not comprehensive. It does not provide an adequate description of ongoing activities and operations at INEL. Nor does it provide enough detail for us to evaluate the impacts of past, present, and future DOE activities."
>
> "Second the Programmatic EIS on spent nuclear fuel goes far beyond what Judge Ryan required for the INEL environmental impact statement. That is, the Programmatic EIS looks at the nationwide issue of where to store the total inventory of DOE spent nuclear fuel over the next 40 years. It does not focus on the concern that Idaho raised in the lawsuit, namely whether INEL is a suitable site for the continued receipt of Navy spent nuclear fuel and fuel from Fort St. Vrain, Colorado."
>
> "...Now why did they do this? Is DOE trying to tell us that we should think of INEL and the storage of all DOE spent nuclear fuel in the same breath? That is certainly the message I get."

We too feel that the draft EIS does not address the right questions, nor does it provide sufficient and accurate enough information for the public to make reasoned decisions. For these reasons, we dissent from the position adopted by the majority of the INEL Specific Advisory Board on these issues.

Joel Hamilton, Brett Hayball, Chuck Broscious, Beatrice Brailsford
Dated September 14, 1994

RECOMMENDATION:

DEPARTMENT OF ENERGY-OWNED SPENT NUCLEAR FUEL STRATEGIC PLAN

June 20, 1995

The Environmental Management Site Specific Advisory Board for the Idaho National Engineering Laboratory (EM SSAB-INEL) provides the following recommendation in response to the three questions posed in the draft DOE-Owned Spent Nuclear Fuel Strategic Plan. The Board's response to the three questions are cross-referenced to the attached document "EM SSAB-INEL Spent Nuclear Fuel Strawman Questionnaire Results," which summarizes SSAB member attitudes and positions on the more overarching concerns of SNF policy.

1. Should DOE-owned SNF be placed in the first geologic repository?

Generally our answer is yes. However, we feel that the plan is deficient in several areas:

- The Strategic Plan needs to articulate more clearly the technical and political realities of opening the first geologic repository, and the anticipated limits at this site on space available for DOE-owned SNF. The report should also address considerations related to a second geologic repository, such as timing, politics, and cost.
- The document should include contingency plans which address what happens if repository sites are not approved or are delayed. These plans should include discussion of the full range of possible contingency alternatives, presumably including treatment and aboveground retrievable storage.
- The plan needs to address in greater detail the process of determining waste acceptance criteria and identifying the actions necessary to bring DOE-owned SNF into compliance with those criteria. We recognize that NRC has not yet defined such criteria.
- The plan needs to address what will happen with any DOE-owned SNF that is not scheduled to go to a geologic repository in its present form.
- We encourage DOE to continue the process of updating the SNF inventory.

Related SNF strawman questionnaire results:

#3	R&D for better, safer, faster and more cost-effective handling, processing and storage of SNF.
#4	We shouldn't tell another state what to do.
#5	On contingencies in event no permanent solution is in sight.
#10	Want assurance that SNF will be moved to a geologic repository.
#11	Effect of actions on search for a permanent repository.
#12	Doubt permanent solution is achievable.
#15	SNF should be retrievably stored for future domestic or defense use.
#21	Get on with decision on second repository.
#22	Don't spend money to store SNF - use it beneficially.
#23	Quickly decide on permanent repository.
#24	National problem requiring national solution.
#25	Need for contingency plans.

2. Should new interim storage facilities be licensed by the NRC?

The SSAB concludes that such facility licensing by NRC should occur. There are several bases for this recommendation as follows:

- There is experience and expertise in NRC and its contractors in the areas of storage and design and handling of SNF.
- Since the NRC will license permanent disposal of DOE SNF, it is probable that the necessary characterization and validation technologies used by the licensed commercial facilities will be required for DOE SNF. Therefore, it makes sense to handle SNF in interim storage the same way as will be required for final disposal.

- The commercially accepted NRC licensing procedure, including public involvement and technical review of the adequacy of DOE interim storage facilities by NRC would be useful. The Board is concerned with the necessary integration of all applicable regulations and orders into a streamlined process, and the effect of such independent technical reviews on the public accessibility of the licensing process.
- The proposed DOE licensability review using a SNF dry storage demonstration project to define the cost, schedule and technical implications of potential NRC licensing makes sense.

These recommendations are supported by Board responses in the strawman questionnaire:

#3 R&D for better, safer, faster and more cost-effective handling, processing and storage of SNF.
#5 On contingencies in event no permanent solution is in sight.
#8 On SNF storage vulnerabilities.
#13 On properly funded interim storage.
#19 Assure short and long-term safety and well-being of workers, the public and the environment in processing and managing SNF and hazardous waste.

3. Should some DOE-Owned SNF be regulated under RCRA?

The SSAB feels that the information contained in the DOE-Owned Spent Nuclear Fuel Strategic Plan is inadequate for the Board to form a qualified opinion on this question.

- The document states: "Preliminary valuations indicate that only a small fraction of the many types of DOE-owned SNF may potentially exhibit the characteristics of a RCRA hazardous waste" and further states "process knowledge or more specific ongoing evaluations will be required to completely resolve the issue."

- The SSAB-INEL recommends that DOE proceed with such evaluations as the question is premature until the evaluations are completed.

The Board exercise questions which may provide guidance are:

#1 Use INEL resources/knowledge base.
#3 R&D for better, safer, faster and more cost-effective handling, processing and storage of SNF.
#6 Continue clean-up of existing SNF where current knowledge indicates that problems exist.
#18 Continue clean-up and upgrade SNF storage at INEL to address existing problems.
#19 Assure short and long-term safety and well-being of workers, the public and the environment in processing and managing SNF and hazardous waste.

Reference is also made to the SSAB-INEL recommendation on the STP relative to RCRA.

RECOMMENDATION:

PROPOSED NUCLEAR WEAPONS NONPROLIFERATION POLICY CONCERNING FOREIGN RESEARCH REACTOR SPENT NUCLEAR FUEL

June 20, 1995

The Environmental Management Site Specific Advisory Board for the Idaho National Engineering Laboratory (EM SSAB-INEL) recommends Management Alternative 1 as the preferred alternative for the Draft Environmental Impact Statement on a Proposed Nuclear Weapons Nonproliferation Policy Concerning Foreign Research Reactor Spent Nuclear Fuel.

One minority perspective to the recommendation of Alternative 1 is articulated below, and one minority perspective is articulated within the alternative. Both are written in italics.

Alternative 1 proposed that the United States should accept and manage foreign research reactor (FRR) spent nuclear fuel (SNF) containing uranium of U.S. origin. The Board recommends this alternative with the following caveats:

- Any appropriate spent fuel containing highly enriched uranium (HEU) and low enriched uranium (LEU) would be accepted only for a period of ten years.
- Developing nations would be subsidized, but the United States would charge a competitive rate to other nations for FRR SNF management activities.
- The aluminum-based and TRIGA (Training, Research, Isotope, General Atomics) FRR SNF would be managed at the Savannah River Site and the Idaho National Engineering Laboratory.

  Minority perspective provided by one Board member: In taking aluminum-based and TRIGA SNF from other countries the Board should encourage involved/appropriate federal agencies to negotiate with countries regarding acceptable storage of FRR SNF, or absorbing SNF into their existing reprocessing streams.
- The United States would take title to the SNF at specified ports of entry.
- Regularly scheduled commercial ships should be used to provide marine transport of the FRR SNF.
- Once in the United States' possession, ground transport should take place by rail or highway, not by barge.
- Dry storage technologies should be used as often as possible, especially in any new construction.
- Near term chemical separation, blending HEU down to LEU, should take place in the United States, but only at facilities currently performing activities of this nature. No new reprocessing activities should be initiated, and only the FRR SNF should undergo blending down to LEU. No domestic fuel should be reprocessed.

The EM SSAB-INEL also urges continued focus on a permanent geologic repository. The Board has also submitted to DOE a recommendation on the SNF and INEL Draft EIS. The comments in that recommendation regarding the management and transportation of SNF remain applicable. We urge the DOE to refer to that recommendation as well.

Minority perspective provided by one Board member:

"I support a modified Foreign Research Reactor Spent Nuclear Fuel Environmental Impact Statement No Action Alternative which includes onsite storage of SNF at the facility of origin, and absolutely no reprocessing. The proliferation threat discussion is like listening to a couple of old farmers arguing over whether to shut the barn door after the horses have run out. Solutions to radioactive waste management will never be developed unless the generators bear full responsibility for health, safety, and costs of permanent disposal in the country of origin. Moreover, without this responsibility, there will be no incentive to stop generating more radioactive waste.

DOE failed to present a credible Programmatic Spent Nuclear Fuel Management Environmental Impact Statement for current SNF inventories. The fundamental flaws in the EIS are recognized by US District Court, which quickly issued an injunction against additional shipments to INEL upon request by the State of Idaho. These two management plans are inextricably related and both contain the same fundamental flaws, not the least of which is DOE's denial that significant quantities of SNF is dumped in shallow land burial at the Radioactive Waste Management Complex."

Environmental Management Site Specific Advisory Board - Idaho National Engineering Laboratory

RECOMMENDATION:

INEL SPENT NUCLEAR FUEL MANAGEMENT PLAN DOCUMENT

July 16, 1996

INTRODUCTION

The Environmental Management Site Specific Advisory Board to the Idaho National Engineering Laboratory (EM SSAB-INEL) met with Department of Energy (DOE) and Lockheemd Martin Idaho Technologies (LMITCO) personnel during tis July 16, 1996, meeting of the Board in Idaho Falls. Following detailed presentation and discussion, the EM SSAB-INEL developed the following recommendation to the DOE and LMITCO. The recommendation was consensus-based and it was reached unaminmously.

OVERVIEW

The EM SSAB-INEL has made recommendations and/or studied numerous documents and issues regarding the management and disposition of spent nuclear fuel over the past 21 months. During that time individual Board members and the Board as a whole have questioned how all these planning documents and related agreements (such as the SNF and INEL ER/WM EIS/ROD, WM Programmatic EIS/ROD, Foreign Research Reactor EIS/ROD, Electrometallurgical Treatment EA, Settlement Agreement, etc.) are integrated to provide a description of a program to manage spent nuclear fuel throughout the United States and specifically in Idaho.

The *INEL Spent Nuclear Fuel Management Plan* document should be viewed as a positive attempt to provide for Idahoans and others one document that captures the programmatic path forward and outstanding issues for managing spent nuclear fuel at the INEL based on decisions made in other documents, including those already subject to or currently undergoing National Environmental Policy Act (NEPA) public processes.

Recognizing the difficulty in developing an integrated document, the Board appreciates DOE's and LMITCO's efforts to produce this document and communicate its objectives to this Board and to the public at large. The following recommendations are in response to questions asked of the Board at its May meeting. These questions are:

- Is the INEL Spent Nuclear Fuel Management Plan providing the level of detail necessary to facilitate informed reviews by stakeholders?
- Are there any recommended improvements the INEL Spent Nuclear Fuel Program can make to further define or convey the programmatic path forward?
- What level of public input is appropriate for the INEL Spent Nuclear Fuel Management Plan?
- What avenues would be most effective in working with the public?

RECOMMENDATION

(Related Board comments from the May meeting follow each statement in italics.)

1. While the Board members found this to be a difficult document to read, follow, and understand, the presentation made by Al Hoskins, LMITCO, at the May Board meeting clarified many items of the Plan and should be incorporated in future drafts. In addition to following the specific suggestions made in 2-5 below, other simplifications to the document will enable citizens to better comprehend its scope and function. One suggestion is to develop a simplified version based on the suggestions made above for public distribution, leaving the full document as one that is available upon request. Another is to revise the document in order to simplify and clarify information. For example, the Board found the May meeting presentation to be much more effective in creating understanding regarding document scope and objectives than any review of the document itself. DOE might consider capitalizing on that information and approach in sharing plan-related information with the public.

   Board member comments:

   - *Watch color mix in illustrations for those who are color-blind.*
   - *Reduce acronyms.*

2. Provide a clear, simple statement of purpose at the start of the document, pointing out that the path forward is guided by decisions made in other documents (Records of Decision, Settlement Agreement, etc.). Specify those areas where questions remain and future decisions are subject to public input, involvement, and agency decision-making (multipurpose containers, final disposition, etc.).

   The scope of the issue and the document has been best described and put into context by the flow charts and graphs presented by Al Hoskins, LMITCO, to the Board at its May meeting. Similar visual materials should be incorporated to put the document and its issues into a national and local context.

   Board member comments:

   - *Need "whole" picture*
   - *User friendly*
   - *Nationwide vs. site specific.*

3. The introduction should include a graph/chart showing quantities and types of spent nuclear fuel, coupled with a similar graphic indicating associated vulnerabilities to provide a visual orientation to the scope of the program at the INEL. Quantities listed in a user friendly format, as depicted in the May presentation to the Board, are more useful to the general reader.

   Board member comments:

   - *Need commonplace comparisons*
   - *SNF comparisons*
   - *Entire INEL*
   - *Pictures of typical types of fuel with "man" for size perspective*

- *Dry/wet storage pictures*
- *Simplification of charts*
- *Volume of each SNF stream.*

4. The SNF quantities, types and vulnerabilities and how they are managed need to be addressed. Flow charts depicted in the May presentation to the Board can help readers visualize the path forward for these materials. DOE should consider using a key to link activities to decision-making documents (Settlement Agreement, for example), regulations, and/or regulating agencies.

Board member comments:

- *Clear lines of accountable implementation*
- *Licensing concerns NRC/DOE*
- *Time line - especially with flow charts*
- *Show INEL total system analysis*
- *Relationship between NRC & DOE & DNFSB*
- *Milestone dates emphasized*
- *Relationship between different agencies/programs/governments*
- *Promote working relationship between different agencies/programs/governments*
- *Complexity of various SNF stream treatments.*

5. Clearly identify impediments to achieving the ultimate objective for spent nuclear fuel. Identification of these impediments, both on a flowchart and simply listed in the text, provides the reader instant identification of potential pitfalls and guides the reader to areas where DOE requires additional public involvement.

Board member comments:

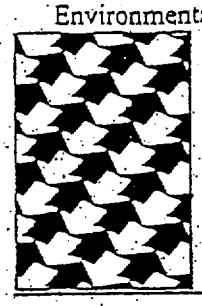
- *Cost trade-offs and major cost drivers by stream*
- *Shipping route considerations up from port to Lewiston*
- *Reassessment of how (and why) pay for return of FRR from countries known to have (officially or unofficially) nuclear weapons capability*
- *Don't need any more details in order to make a decision*

Other Board members comments not tied to 1-5 above include:

- *State-wide and regional public meetings*
- *Encourage open-house meetings*
- *Consider Board involvement in briefings to explain basis for recommendations (community forum)*
- *Use more graphs, pie charts, pictures*
- *Don't need any more details in order to make a decision.*

EM BUDGETS

Environmental Management Site Specific Advisory Board - Idaho National Engineering Laboratory



RECOMMENDATION:

ENVIRONMENTAL MANAGEMENT FISCAL YEAR 1998 INTEGRATED BUDGET PRIORITIZATION

November 15, 1995

INTRODUCTION

The Environmental Management Site Specific Advisory Board - Idaho National Engineering Laboratory (EM SSAB-INEL) met on November 14-15, 1995 in Idaho Falls, Idaho. Following presentations and discussions with Department of Energy-Idaho Operations Office (DOE-ID) and Lockheed Martin Idaho Technologies (LMIT) personnel regarding the strategy for prioritizing activities for the Environmental Management (EM) Fiscal Year 1998 (FY98) budget and as described in the draft INEL EM Prioritization IPT Report of November 8, 1995, the Board participated in a facilitated, consensus-building process through which the following recommendation was developed and unanimously adopted.

The Board suggests that DOE-ID and LMIT incorporate the principles articulated below into the INEL's development of criteria for prioritizing activities. The Board's principles have been prioritized in descending order, with the most important principle listed first.

RECOMMENDATION

The Environmental Management Site Specific Advisory Board to the Idaho National Engineering Laboratory has made eleven recommendations to the Department of Energy Idaho Operations Office (DOE-ID) describing its perspectives on DOE activities. Within those recommendations exist overarching principles on which the Board feels policy, programmatic, and budget decisions should be made. A recommendation on the EM FY98 Prioritization List should articulate and integrate those Board principles which are essential to making prioritized decisions. In order to give DOE a more substantive opinion on the prioritization of specific projects, the most effective way would be to go through the prioritized list project by project.

1. Risk-Based Prioritization. The EM SSAB-INEL advocates the use of risk as a basis for setting priorities at the INEL. The Board also recommends that the DOE focus dollars and effort to ensure that environmental remediation and waste management activities underway are addressing the most pressing risk issues first. Ensure that environmental, cultural, public, and worker safety measures are in place as the work is pursued. Relatively inconsequential waste and waste streams ought to receive attention only after significant and high risk wastes are treated.

2. Integration. The Board encourages the DOE to make decisions factoring in risk, cost, budget realities, regulatory requirements, viability of innovative technologies, and ultimately, the ability to complete the highest priority tasks as expeditiously as possible.

3. Environmental Protection. The EM SSAB-INEL considers protection of the Snake River Plain Aquifer a paramount concern. Continued federal management of the site is anticipated, with no residential development. Agricultural development should be limited to

grazing. Cultural resources on site must be preserved. These standards should be factored into l decisions related to environmental remediation and waste management.

4. *(tie)* Core Competencies. The EM SSAB-INEL is concerned about the long term viability of the INEL in meeting its waste management and environmental remediation mission, including research and development to meet the needs of the EM program. Specifically, as described in the following: maintain INEL technical core competencies required to conduct the research and development in science/engineering and applications to develop new technologies and facilities; and assure there is an appropriate mix of personnel with expertise and knowledge of the existing facility operating characteristics and to preserve the institutional memory of the aging INEL facilities. DOE should also support new research and development initiatives to develop a future industrial base when cleanup is completed.

4. *(tie)* Fiscal Management. The EM SSAB-INEL recognizes that the INEL is among the cleanest DOE sites in the complex. The Board does not want the INEL and the State of Idaho to be penalized for its better management and technical practices by receiving fewer dollars to implement the activities required at the INEL. The EM SSAB-INEL encourages the DOE to invest in INEL capabilities, whether through technology development, continued integration efforts or privatization, for the benefit of the rest of the complex and the country in solving environmental restoration, waste management, and technology development issues. The Board believes that a DOE goal should be to keep costs at a level comparable to that incurred by the private sector for similar activities.

5. National Waste Disposal Solution. The DOE must aggressively pursue a solution to locating and activating a national repository, both for current and future needs. A solution to this national problem must be spearheaded by DOE Headquarters as the appropriate federal agency in this matter.

6. Public Involvement. The EM SSAB-INEL encourages continued public involvement early and throughout the decision-making activities at the INEL. The Board encourages the DOE to remain responsive to public concerns and implement genuine public involvement activities, as well as advise the public as cleanup and remediation are accomplished.

Environmental Management Site Specific Advisory Board - Idaho National Engineering Laboratory

RECOMMENDATION:

ENVIRONMENTAL MANAGEMENT FISCAL YEAR 1998 INTEGRATED BUDGET PRIORITIZATION

March 20, 1996

INTRODUCTION

The Environmental Management Site Specific Advisory Board to the Idaho National Engineering Laboratory (EM SSAB-INEL) met with Department of Energy (DOE) and Lockheed Martin Idaho Technologies (LMIT) personnel during its March 20, 1996 meeting of the Board in Idaho Falls. Following detailed presentation and discussion, the EM SSAB-INEL developed the following recommendation to the DOE and LMIT. The recommendation was consensus-based and it was reached unanimously.

RECOMMENDATION

On November 17, 1995, and January 17, 1996, the EM SSAB-INEL provided recommendations to DOE and LMIT on the progress in budget prioritization. A presentation was made on March 20, 1996, which further updated this progress and responded to earlier Board concerns. The Board would like to extend congratulations to Enoch Miles and Lori Fritz, DOE-ID, and Jo Ferguson, LMIT, for an excellent presentation. The Board has increased confidence in the budget prioritization due to the improvements and clarification made to the process. The use of personnel from multiple programs and support organizations (for example, the Murder Boards) has, we believe, led to a more defensible budget.

For future presentations, the Board suggests the Prioritization Criteria graph should be amended. Just as the Mission and the Environment, Safety and Health columns are detailed, we suggest the Regulatory Compliance column be divided into a) liability for non-compliance and b) risk factors.

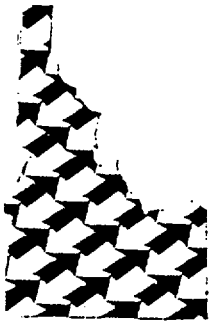
The Board endorses the accelerated cost concept, especially pursuing the Accelerated High Level Waste Immobilization Plant. The Board feels that accelerating this project will ensure compliance with the Settlement Agreement sooner and at an estimated $1B life-cycle cost reduction. We also support early reduction in mortgage costs whenever possible. The Board is interested in assuring that the necessary Research and Development (R&D) is adequately funded for developing new technologies. R&D efforts should be focused and integrated in order to avoid duplication of technologies being developed elsewhere.

We have several concerns including:

1. The potential for the DOE-ID budget to bear the cost of transporting Foreign Research Reactor fuels. Developed nations should bear all costs related to return of U.S. originated spent fuel from their countries.
2. We encourage further examination of construction projects with the goal of elimination or reduction in scope in order to achieve cost savings.
3. We continue to support the development of and funding for an INEL visitors center at Experimental Breeder Reactor-I, and that DOE-ID pursue the possibility of interagency and intergovernmental support for this endeavor.

4. We encourage DOE attention to the budget implications of liabilities due to regulatory non-compliance in light of recent State of Idaho legislation embodied in the Environmental Audit Act.

Again, we would like to emphasize our appreciation for the thoroughness and quality of today's EM budget prioritization presentation.



Citizens Advisory Board
Idaho National Engineering and Environmental Laboratory

FISCAL YEARS 1999 AND 2000 BUDGET REQUESTS

INTRODUCTION

The following recommendation is submitted to the Department of Energy's Idaho Operations Office (DOE-ID) as the Idaho National Engineering and Environmental Laboratory (INEEL) Citizens Advisory Board's (CAB) comments on the Fiscal Year 1999 and 2000 Budget Requests.

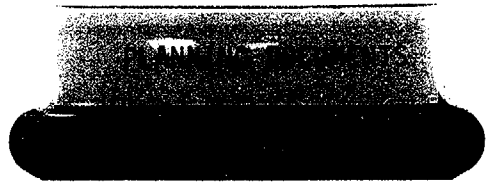
DOE-ID recently asked the INEEL CAB to provide input that the agency could use to support its efforts to develop budget requests for the INEEL for Fiscal Years 1999 and 2000. The agency presently expects (based on budget targets provided by the Office of Management and Budget) that funding levels for the two fiscal years will be insufficient to stay in compliance with laws, regulations, and agreements, including (but not limited to):

- The Idaho Settlement Agreement;
- The Federal Facility Agreement/Consent Order;
- The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).
- The Resource Conservation and Recovery Act (RCRA)
- Signed Records of Decision that result from compliance with CERCLA and RCRA;
- The Hazardous Waste Management Act;
- The Clean Air Act;
- The Federal Facility Compliance Act;
- The Clean Water Act; and
- The Safe Drinking Water Act;

The INEEL CAB has been involved in numerous compliance decisions that have resulted in significant cost-savings and increases in efficiencies. It appears unlikely that many more significant cuts can be made without affecting the site's ability to staying in compliance.

Executive Order 10288 requires federal agencies to submit budget requests that will allow full compliance with all applicable enforceable laws, regulations, commitments, and agreements and with voluntary actions (like the Voluntary Consent Order). It does not allow agencies to "pick and choose" among compliance commitments.

The budget targets provided to DOE-ID by DOE-HQ would not provide adequate funding to meet DOE's compliance commitments to the State of Idaho and the Environmental Protection Agency. The INEEL CAB rejects the concept of choosing between compliance commitments with regard to the INEEL and urges DOE to submit budget requests in compliance with Executive Order 10288.



RECOMMENDATION:

IDAHO NATIONAL ENGINEERING LABORATORY DRAFT SITE TREATMENT PLAN

December 7, 1994

INTRODUCTION

The Environmental Management Site Specific Advisory Board – Idaho National Engineering Laboratory (EM SSAB-INEL) met December 6-7, 1994 in Idaho Falls and developed their recommendation on the INEL Draft Site Treatment Plan (DSTP) after having studied the plan with the assistance of Department of Energy Idaho Operations Office (DOE-ID) and Lockheed Idaho Technologies Company (LITCO) personnel. The meeting was facilitated and the recommendation was obtained via consensus and it was unanimous.

OVERVIEW

With the assistance of DOE-ID and LITCO staff, the board confirmed the following assumptions regarding the DSTP. These assumptions were utilized in the development of the recommendation.

1. That the plan is mandated by FFCA to ensure compliance with RCRA.

2. That all hazardous and mixed wastes are uniformly regulated by RCRA regardless of risk and volume. DSTP addresses only mixed waste (mixed waste is waste that is both hazardous and radioactive).

3. That the DSTP was prepared based upon RCRA compliance and not on cost/benefit or risk analysis. That selection of treatment technologies and implementation time will be dependent upon the DOE's negotiations with the State of Idaho.

4. That the DSTP has identified treatment technologies for each waste stream and additional improved technologies may be developed.

5. That the schedule for mixed waste treatment is driven by the FFCA, negotiations with all parties, and the DOE budget.

6. That this plan requires some integration with other DOE Sites, states and tribal governments, and that such national coordination will be difficult.

7. That the State has the overall lead and will decide how much public involvement it wants during negotiations. (Further clarification will be forthcoming from the State of Idaho via Steve Hill, INEL Oversight ex officio).

8. That waste, treated or otherwise, will require storage for an unknown amount of time and that disposal decisions have not been made.

RECOMMENDATION

COST

In the present national budget climate it is apparent that funding for treatment of mixed waste at the INEL is presently, and will continue to be, limited to some extent. Consequently, it is urged that the DOE prioritize the INEL Site Treatment activities on the following basis:

- Initial expenditures should be applied to treatment of those wastes that pose the highest risk to site workers, off-site citizens, the aquifer, and air quality.

- More of the present and near term expenditures should be applied to actual treatment as opposed to a continuation of waste and waste stream characterization of very low risk and very small volume wastes.

- Waste treatment should be conducted in the most cost effective manner possible to meet regulatory standards; consideration should be given to privatization of as much of the effort as possible; and relatively inconsequential wastes and waste streams should receive attention only after the significant and high risk wastes have been treated.

RISK

The Board is aware that the Site Treatment Plan must meet the legal requirements of RCRA. Within RCRA constraints, the Board believes that the actual site treatment should be risk-driven and closely related to the potential impact of the specific waste. A clear delineation of risk ensures the implementation of necessary treatment.

Therefore, it is recommended that DOE consider the following tenets in regard to the INEL Site Treatment Plan.

- Each waste or waste stream should be evaluated on the basis of its quantity, physical state, hazardous and radiation components, and ultimately, the risk to site workers, the general public, the aquifer, and air quality to determine the schedule for mixed waste treatment requirements. This evaluation should form the basis for DOE's recommendations to the State of Idaho for scheduling expenditures.

- Risk-based evaluations should be continually applied at various steps in the treatment process to assure that limited funds are applied first to the treatment of waste having the highest risk.

- Existing treatment technologies should be utilized wherever reasonable to put the waste into a stable and retrievable form. The form for the waste should not be driven by the anticipated acceptance criteria or timing of a national repository.

PUBLIC INVOLVEMENT

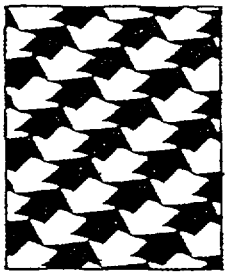
From a broader perspective than the DSTP, but engendered by its review of this document, the INEL SSAB has some comments on the public involvement process utilized by the DOE. It is crucial that the site workers, local residents, tribes, and other stakeholders know what is being done, including the State's involvement. Your attention is therefore directed to the following concerns.

- All practical avenues, including an Executive Summary and the use of public involvement professionals and technical experts, should be used to inform the public of the key aspects of the Site Treatment Plan and other related plans.

- As cleanup and treatment proceed and remediation of waste problems is actually accomplished, advise the public on an ongoing basis.

- Provide a brief but clear road map of document integration to make it clear how various plans are interconnected and how they interrelate with national plans.

- Avenues should be provided to allow the public to be involved in subsequent actions, including the Consent Order negotiations.



Citizens Advisory Board
Idaho National Engineering and Environmental Laboratory

RECOMMENDATION

**DOE "Focus on 2006" Discussion Drafts,
"Contractor Report to the Department of Energy on the
Environmental Management Baseline Programs and Integration Opportunities (Discussion Draft)"
and the DOE-ID EM FY 1999 Budget Priorities Document**

July 16, 1997

INTRODUCTION

The INEEL Citizens Advisory Board has studied, evaluated, and investigated the proposed actions of the Department of Energy relating to the budget planning for waste management and cleanup of the INEEL site and the entire DOE complex and provides the following recommendations. For ease in review, the recommendations are made on specific program planning documents. However, more than one document may be germane to the recommendation.

RECOMMENDATION

The Board is concerned that budget distributions to the various sites are apparently not compliance and risk driven, but are scaled to some arbitrary historic allocation, which refutes any argument that there is any "unifying vision (that) will drive budget decisions, sequencing projects and actual actions taken to meet program objectives," as stated in the Focus on 2006 Plan vision. An example of this arbitrary allocation is the INEEL allocation of 6.8% of the $6.0 billion budget and 6.9% of each of the $5.5 billion and $5.0 billion budgets. This appears to the INEEL CAB as an abrogation of the responsibility EM has to determine allocations based on compliance and risk. The CAB also notes that neither the $5.5 billion or $5.0 billion cases provide sufficient funds for INEEL to maintain compliance with the Settlement Agreement or other enforceable agreements in FY 1999. DOE should recognize and emphasize the relationship between the "Focus on 2006" plans and budgetary decisions.

The INEEL Board does not believe that the environmental damage done to the various sites or existing potential hazards are the same at each site. DOE Headquarters has the opportunity and responsibility to integrate a regulatory compliant, risk driven program of environmental management. It does not appear to have taken that opportunity or responsibility, but has backed away from managing the program by providing arbitrary goals for reducing support costs, obtaining project improvements in expenditures, and achieving annual productivity improvements.

The INEEL Board believes such goals may be worthy, but does not believe they should be a universal standard for high and low risk sites and programs, for varying degrees of compliance requirements, or for unequally efficient Management and Operating (M&O) operators.

Therefore, our recommendations are as follows:

1. In its next version, the 2006 Discussion Draft should
    a. Be more cleanly structured for ease of review, and should be clear, concise, and consistent, integrating information from the individual site and other DOE planning documents.
    b. Delineate the regulatory and compliance drivers for budget distribution project-by-project and site-to-site along with the consequences of non-compliance.
    c. Describe accurately the highest risk to lowest risk programs at each of the DOE sites and show how the budget allocations are reducing these risks by 2006. Risks to be included are environmental degradation, worker and public health and safety, and risks to future generations.
    d. Provide a clear and consistent basis for the anticipated cost savings site-by-site based on existing program (or project) costs (both direct and indirect); demonstrated support or overhead cost saving achieved to date since FY95; and the basis for support cost reduction. The Board currently believes that DOE has arbitrarily established the performance enhancement targets, which include the support cost reduction to 30%, and achieving annual productivity improvements of 3.5 percent for definable projects and 6.0 percent for operations. DOE should be more realistic in defining its goals.
    e. When privatization is purported to be 30 to 50 percent cheaper than M&O cost type contracts, explain the consequences for failure to fund privatization to the $1 billion level requested in FY 1998. For INEEL, this would be the initial increment of $671 million total for the AMWTP and SNF dry transfer in FYs 1998, 1999, and 2000. In the absence of these funds, the Settlement Agreement Milestones cannot be met.
    f. Explain precisely how the funding is anticipated to be provided to assure the TRU pits and trenches cleanup will be accomplished.
    g. The Board supports the schedule in the "Focus on 2006" Discussion Draft to issue the EIS for the ROD for the INEEL HLW activities in 1999. However, the Idaho Settlement Agreement has overall goals that may be achievable by using other technologies for treating HLW (e.g., calcining). The State and DOE are urged to explore the most cost-effective and efficient ways to meet these goals when completing the EIS.
    h. Include a concise definition of what is included in the referenced "equity considerations" and explain the potential options for achieving equity among sites.

2. The Contractor Complex-Wide Integration effort and report is applauded as the first effort the INEEL Board has seen in the vital area of attempting to convert the national EM Program from an accumulation of numerous narrowly focused site specific problems to an integrated program to resolve key issues. The INEEL Board stands ready to support such an effort in the nation's best interest, so long as it can be done while protecting the citizens and environment of Idaho, which we believe is not only a must, but doable. In the interest of

furthering the complex wide integration effort, the Board offers the following comments and advice.

a. We believe the approach and strategy are excellent. The document offers an excellent comparison of alternatives based solely on technical capability. We urge DOE to use and support the purpose and findings of the document and expand the scope to other DOE programs.
b. We believe the various TRU initiatives, including transportation initiatives and consolidation of TRU waste from sites with small inventories to sites with greater inventories is logical, although it will require careful planning and execution, public and states involvement, and regulatory negotiations.
c. We believe equity (transfers of waste for treatment, storage, or disposal) should have greater significance than relatively minor dollar savings.
d. The overall savings of $1.3 billion in enhanced TRU management should be pursued.
e. The $300 million savings in MLLW appear to be based on logical premises and should be implemented to the extent possible. Since DOE is moving toward NRC regulation, the "De Minimis" level might be adopted from the BRC (Below Regulatory Concern) level developed by NRC in the late 1980's.
f. The $400 million in LLW savings appear reasonable.
g. In the area of Environmental Restoration the suggested actions to save $600 million are logical, cost effective and have minimal, if any, environmental, public, or worker impact and should be implemented to the extent possible.
h. The HLW program changes and savings of $18 billion are the most impressive and are worthwhile investigating. The issue of disposing cesium and strontium in Idaho if INEEL HLW is shipped to Hanford will require state to state negotiations between Idaho and Washington.
i. The $3 billion cost avoidance at INEEL to close the HLW tanks may be of less concern to stakeholders than to the State of Idaho regulators, but will be considered by the Board in its HLW considerations.

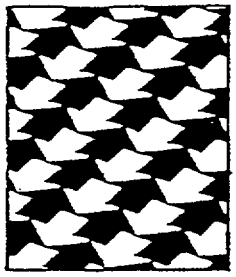
3. Although the following partially duplicates comments provided by the CAB on the "Focus on 2006 Discussion Drafts," they specifically apply to the INEEL Budget Priorities Summary for Fiscal Year 1999. The Board recommends:

a. The INEEL EM program should be funded such that achieving compliance with all legal, regulatory, and Settlement Agreement requirements and minimizing risk are the primary drivers. The funding should also be adequate to avoid anticipatory breach of compliance in future fiscal years. The Board is convinced that neither the INEEL allocation proposed in the $5.5 billion nor in the $5.0 billion DOE EM budget are adequate to meet this requirement.
b. It is vital that privatization funds, or their equivalent, be added to the Base Budget to support the Advanced Mixed Waste Treatment Project on the previously agreed schedule or a major portion of the Settlement Agreement will be compromised. The Board finds this to be unacceptable. DOE is responsible to allocate sufficient funds to support all Settlement Agreement commitments, including high-level waste

treatment, spent nuclear fuel storage, and the Advanced Mixed Waste Treatment Project, even if the privatization funds are not authorized by Congress.

As in previous recommendations, the CAB recommends DOE ensure consistency among the "Focus on 2006" Discussion Drafts and other DOE planning efforts and pursue options to increase efficiency and effectiveness. In addition, the CAB suggests implementation of good recommendations made by independent groups. In the past, some highly-prestigious, national commissions (e.g., Galvin) reviewed DOE sites and programs and suggested how DOE could operate more efficiently. These are mentioned in the DOE Strategic Plan as "Past Achievements," although the recommendations were not largely implemented. Where appropriate, DOE should implement the recommendations that would help EM achieve accelerated site cleanup and long-term cost reduction.

The CAB also urges DOE to open both the Waste Isolation Pilot Plant and the Yucca Mountain repository. While the WIPP opening has again been delayed, and Yucca Mountain has yet to be approved to open, the "Focus on 2006" documents and other site plans are providing for disposal of waste according to criteria based on these locations. Much time, effort and money has been spent on treatment and planning transportation routes, when the repositories are not guaranteed to open and waste acceptance criteria are still being debated. In addition, there are no contingency plans in place for disposal of TRU and HLW in the event that the locations do not open. The CAB believes a more rational approach would include full identification of optimal solutions for each waste stream before finalizing the planning details.



Environmental Management Site Specific Advisory Board
Idaho National Engineering Laboratory

RECOMMENDATION

INEL TEN-YEAR PLAN

September 18, 1996

INTRODUCTION

The Environmental Management Site Specific Advisory Board to the Idaho National Engineering Laboratory (EM SSAB-INEL) met with Department of Energy (DOE) personnel regarding the INEL Ten-Year Plan during the July 16-17, 1996 meeting. Board members attended a June video conference and an August stakeholder forum featuring Al Alm, DOE Assistant Secretary for Environmental Management, both of which focused on the EM Ten-Year Plan. The Board developed the following recommendations to DOE-ID on the INEL Ten-Year Plan at the September 17-18, 1996, meeting.

RECOMMENDATIONS

While recognizing that all cleanup will not be accomplished in 10 years, the Board endorses the concept of an accelerated 10-year cleanup schedule and recommends that the proposed activities outlined in the INEL Ten-Year Plan receive full funding to bring waste management and cleanup activities to a rapid conclusion. Specific recommendations regarding various facets of the INEL Ten-Year Plan are given below.

Settlement Agreement

The Board agrees that the Settlement Agreement provides strong funding justification for accelerated waste management and cleanup at the INEL. The Board continues to be concerned that a threat to the aquifer comes from the storage of 1.8 million gallons of liquid radioactive waste, containing several million curies of radioactivity. The Settlement Agreement supports an accelerated schedule for conversion of this liquid waste to a more stable form. The Board strongly supports this 50 percent schedule acceleration for liquid waste stabilization, with the completion date moved from 2075 to 2035. The Board also supports the acceleration (from 2018 to 2015) of removal of large quantities of plutonium (i.e., transuranic, or TRU) wastes from over the aquifer and out of the state.

Spent nuclear fuel (SNF), has been stored, handled, processed, managed, and controlled safely and efficiently at the INEL for more than 40 years. Due to concerns of the state's residents and officials, the Agreement states that in 1999, spent nuclear fuel will begin to be converted from wet storage to safer and more dependable dry storage. By 2023, all fuel will be in dry storage and by 2035 -- 25 years earlier than previously scheduled -- all existing SNF will be gone from Idaho to a permanent repository. The Board strongly endorses this improvement.

The Board also endorses the guarantee that none of the 92,000 shipments of commercial nuclear fuel the government must begin accepting next year will ever come to Idaho.

The Board recognizes that there are some concerns:

- The financial penalties are not excessive, and DOE could determine it is easier and more cost-effective to pay the fines rather than adhere to the Agreement.
- The Agreement specifies enforceability by the federal court, which can sentence federal officials to jail and can award financial damages to Idaho if DOE fails to meet the Agreement. However, history shows that the federal courts side with the federal government and there is concern that if milestones are missed, the terms of the Agreement may not be enforced. Also, the Agreement does not collectively address the interests and concerns of other states, such as Nevada and New Mexico, that are candidates for permanent waste disposal. Idaho could become a de facto repository if no permanent disposal site is established.

The Board endorses the Agreement, but cautions that it will only be successful if DOE complies fully with the terms stated. The Board expects and recommends in no uncertain terms that DOE meet each established milestone.

Integration and Timing

The Board recommends that the Ten-Year Plan realistically define a path forward for cleanup at EM sites and become better integrated at all levels, both site and complex wide, to avoid duplication of activities and facilities. The Board is concerned that the site plans are not adequately incorporated into the national plan based on the current timetable, particularly since the site plans are due to DOE Headquarters the same day the national plan is scheduled to be released to stakeholders. Where specific milestones in the INEL Plan are dependent upon the schedules of other facilities such as the Waste Isolation Pilot Plant and the Yucca Mountain repository, contingency plans should be provided. Where the Oak Ridge plan states that wastes or SNF will be sent to the INEL for "long term storage," for instance, the Board expects itself and the citizenry of Idaho to be kept fully informed by DOE as to how, or whether, this fits into the SNF EIS and the INEL Ten-Year Plan. Where it is stated that "6,700 kilograms of enriched uranium would be ... shipped offsite", or "treat and ship transuranic and low-level (including mixed wastes) offsite" from Rocky Flats, the Board requires clarification of what "offsite" means to INEL.

Privatization

The Board recognizes that privatization may be problematic given the complexity of activities and contractual requirements at EM sites. The Board does support privatization where it will reduce costs and eliminate duplication of effort/activities in the governmental system. The Board urges DOE-ID to maintain the appropriate technical knowledge base at INEL as essential support to the privatized activities. The Board recommends DOE-ID examine the potential life-cycle costs and activities associated with privatization and demonstrate the basis for economic benefits prior to moving forward with specific initiatives.

Waste Minimization and Pollution Prevention

The Board recommends that DOE-ID capitalize on waste minimization at INEL. Waste minimization efforts can and should span the breadth of programs from treatment and disposal of currently existing waste, minimization of current waste streams, and planning for future waste streams that will come from decontamination, decommissioning, and environmental restoration activities. An integrated program of waste minimization and pollution prevention should be developed and explicitly incorporated into the Plan.

Technology Development and Treatment

The Board has consistently encouraged DOE-ID to continue to develop and improve technologies to complete waste management and environmental remediation tasks more efficiently and cost effectively. The Ten Year Plan must offer a clear rationale for the technologies currently being planned for development. The listing of "INEL Identified Needs Prioritization" contained in Appendix A does not articulate the needs of the Plan to support its accomplishment. For example, "Removal of Undissolved Solids from Tank Waste and Dissolved Calcine" is a mechanical separations issue which has traditionally been resolved by the use of centrifuges. This does not appear to warrant development of a new technology. The Board recommends that the "needs" listing be clearly defined, justified, and prioritized, and realistic budgets and schedules developed promptly.

The Board also recommends that DOE-ID accelerate the treatment of various waste streams to:

1. Stabilize and remove the highest risk liquid waste at an even faster rate than that in the Ten-Year Plan

2. Ensure that waste and spent fuel are in the most stable form possible for future storage, transportation, and/or disposal

3. Optimize the options, schedules, and life-cycle for disposal of all waste streams. DOE should also accelerate evaluation of newer technologies for the possibility of waste minimization and early achievement of final waste forms. An example might be the remaining sodium bearing liquid waste that is legally a mixed transuranic waste and may be eligible for disposal at the Waste Isolation Pilot Plant after stabilization rather than at a high-level waste repository.

The Board applauds DOE for the far-sighted Ten-Year Plan with the accelerated timetable.

Citizens Advisory Board

Idaho National Engineering and Environmental Laboratory

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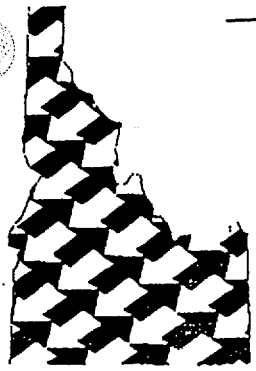

May 1, 1998

John Wilcynski
U.S. Department of Energy
Idaho Operations Office
850 Energy Drive, MS 1203
Idaho Falls, ID 83401-1203

Dear Mr. Wilcynski:

The attached is submitted by the Idaho National Engineering and Environmental Laboratory INEEL Citizens Advisory Board (CAB) as our recommendations and comments on the U.S. Department of Energy's (DOE) *Draft Accelerating Cleanup: Paths to Closure* document. We reviewed both the national volume and the INEEL site-specific volumes of the *Paths to Closure* document in preparing this submittal.

A total of 59 specific recommendations comprise it, organized into 9 broad categories. Several of the specific comments and recommendations are directed at DOE's Idaho Operations Office, while others are more appropriately directed at the department as a whole. We trust you will convey them all appropriately.

The submittal was approved by consensus on May 1, 1998, following significant effort on our part. Board members participated in a total of 15 committee conference calls and a special meeting in April to develop this recommendation. Those efforts were supported extensively by DOE-ID staff and their efforts are greatly appreciated.

The Board looks forward to DOE's response to this recommendation.

Sincerely,

Charles M. Rice, Chair

cc: James Owendoff, DOE-HQ
Martha Crosland, DOE-HQ (EM-22)
Larry Craig, U.S. Senate
Dirk Kempthorne, U.S. Senate
Mike Crapo, U.S. House of Representatives
Laird Noh, Chair, Idaho Senate Resources and Environment Committee
Golden C. Linford, Chair, Idaho House of Representatives Resources and Conservation Committee
Dolores Crow, Chair, Idaho House of Representatives Environmental Affairs Committee
Linda Milam, Chair, INEEL CAB Focus on 2006 Committee
Gerald Bowman, DOE-ID
Kathleen Trever, State of Idaho INEEL Oversight
Wayne Pierre, U.S. Environmental Protection Agency, Region X

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Citizens Advisory Board
Idaho National Engineering and Environmental Laboratory

Final Recommendation
***Draft Accelerating Cleanup: Paths to Closure* Document**

INTRODUCTION

The Idaho National Engineering and Environmental Laboratory (INEEL) Citizens Advisory Board (CAB) commends the U.S. Department of Energy (DOE) for producing the *Draft Accelerating Cleanup: Paths to Closure* document (hereafter called *Paths to Closure*). An integrated approach to management of the environmental management (EM) program across the entire DOE complex has been needed. This document represents a good first step.

The INEEL CAB appreciates DOE's efforts to respond to public comments on previous versions of the document. Attachment B to the INEEL-specific volume of the document provides a useful tool for communicating with the public about the comments DOE received on the previous version of the document and how those comments were addressed in this revised version. We understand that site-specific volumes for other sites did not include a similar attachment.

The INEEL CAB commends DOE on its obvious efforts to communicate the nature and extent of the problems addressed by the EM program. Appendix A in the site specific volume for the INEEL offers a concise presentation of appropriate and necessary information to help stakeholders understand the complexity of the program. The "football field" diagram (Figure 1 of the INEEL site-specific volume) helps stakeholders visualize the volumes of waste products managed at the site. We also appreciated presentations provided by DOE personnel on the document as they allowed an enhanced understanding of how the INEEL's EM program fits into the overall picture.

We do have concerns about and recommendations on both the national and the INEEL site-specific volumes of the document which are presented below. They were formulated based on our understanding of the programs as described in the document and other information provided to the Board to support our review. While most of the points raised in this recommendation have application for the entire DOE complex, we have included site-specific examples to illustrate our points where appropriate. Each specific recommendation appears in a bolded typeface and has been assigned a number to assist in tracking.

GLOBAL RECOMMENDATIONS

(G-1) In order to achieve a fully-integrated approach, the INEEL CAB recommends that DOE incorporate waste streams under the auspices of other DOE programs (outside the EM program) into the *Paths to Closure* document. Such waste streams should be portrayed on the baseline disposition maps, as well. For example, the wastes managed by Argonne National Laboratory - West (ANL-W) should be included in the *Paths to Closure* document.

(G-2) The INEEL CAB recommends that DOE add a diagram (similar to the football field diagram) to each site specific volume of the *Paths to Closure* document depicting wastes by their level of radioactivity. Such a diagram will enhance the stakeholders' understanding of the nature and extent of DOE's stewardship responsibilities at each DOE site.

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(G-3) The INEEL CAB recommends that DOE integrate the management of the environmental restoration (ER) program with the management of the waste management (WM) program to the extent possible. In addition, the wastes depicted on ER program baseline disposition maps should be incorporated into the other, relevant maps for each site. For example, low-level wastes (LLW) that result from implementation of the ER program at the INEEL should be managed in the same manner as LLW under the auspices of the EM program at the INEEL, and they should appear on the INEEL LLW Baseline Disposition Map.

(G-4) The INEEL CAB recommends that DOE add improved descriptions to the document for all projects—such as Navy projects —not under the auspices of the DOE EM program. This is especially important for all projects that DOE is or will be reliant upon in complying with enforceable laws, regulations, agreements, and commitments.

(G-5) The INEEL CAB recommends that DOE prepare annual progress reports on activities and accomplishments under the Accelerating Cleanup program in addition to periodic revisions to the document. Such progress reporting should occur in coordination with other annual progress reporting, such as efforts at the INEEL to support the Site Treatment Plan. The Annual Accelerating Cleanup progress reports should document progress toward meeting commitments made in the 1998 *Paths to Closure* document. The annual progress reports will ensure that stakeholders are able to more fully understand program continuity.

(G-6) The INEEL CAB recommends that DOE pursue waste minimization efforts to the extent practical. The manner in which waste minimization efforts will be applied at each site should be included in the descriptions of the sites in the *Paths to Closure* document. The descriptions will allow stakeholders to develop an understanding of how such efforts contribute to the responsible management of the EM program. The Annual Accelerating Cleanup progress reports (see Recommendation G-5 above) should include information on the effectiveness of waste minimization efforts.

(G-7) The INEEL CAB recommends that DOE provide a better explanation of and more fully integrate the concept of programmatic risk throughout the *Paths to Closure* document. The document should allow stakeholders to develop a better understanding of how programmatic risk affects management of the program.

(G-8) The INEEL CAB recommends that DOE develop strategies for minimizing programmatic risk plans for those projects with the highest programmatic risks. We further recommend that DOE develop contingency plans for the same projects in case the preferred path forward cannot be implemented. The *Draft Paths to Closure* document assumes that Yucca Mountain will be available as a waste repository, but it lacks a contingency plan should the facility fail to open. The Annual Accelerating Cleanup progress reports (see Recommendation G-5 above) should identify new contingency plans developed as a result of problems experienced in implementing the commitments in the 1998 *Paths to Closure* document.

(G-9) The INEEL CAB recommends that DOE present funding needs in a way that will allow stakeholders to understand when funding shortfalls would exacerbate the programmatic risks. That information will enhance the public's understanding of how important adequate funding is to the DOE's ability to fulfill its commitments and mission.

(G-10) The INEEL CAB recommends that DOE delineate all enforceable compliance requirements and the budgets necessary to comply with those requirements for all DOE site in the national volume of the *Paths to Closure* document. While comparable information may be available in each of the site-specific volumes, that presentation does not allow for comparisons among sites.

(G-11) The INEEL CAB recommends that DOE consolidate the summary information for each DOE site in Appendix E of the national volume and eliminate Chapter 3. The splitting of site summaries between Chapter 3 and Appendix E does not serve any useful purpose. It could also be misconstrued to mean that the sites in Chapter 3 are preferred to those in Appendix E, even though there is a disclaimer in the text.

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(G-12) The INEEL CAB recommends that DOE apply the concept of mortgage reduction to further identify potential for achieving economies within the program. The concept should be explained better and integrated more fully into the document.

(G-13) The INEEL CAB recommends that DOE clarify its definition of "closure" as it is not well communicated in the *Draft Paths to Closure* document. It is not clear if closure means completion of the EM program at a site or closure of the site altogether. The term "critical closure path" similarly needs clarification.

(G-14) The INEEL CAB insists that DOE take measures to ensure that cleanup will continue at the INEEL. The schedule in the national volume of the *Draft Paths to Closure* document indicates that INEEL will be the last DOE site to be cleaned up. The INEEL CAB is concerned that means that cleanup of the INEEL is of the lowest priority to the Department. As departmental funding will surely decline over time, we fear that the INEEL will never be cleaned up. Such an outcome would be completely unacceptable to stakeholders in Idaho.

(G-15) The INEEL CAB recommends that DOE develop and present its plans for coordinated intersite handoffs of waste and discuss these plans in the *Paths to Closure* document. For example, the baseline disposition map for Spent Nuclear Fuel at the INEEL shows an ultimate disposition for INEEL-SNF-10 being a "handoff to the Navy," yet provides little information about that handoff.

(G-16) The INEEL CAB recommends that DOE add descriptions of the decision-making process that will be used to select the ultimate disposition for each of the waste streams that are designated with "To-Be-Determined" (TBD) dispositions on the baseline disposition maps. The description should include a list of candidate alternatives being considered in the decision-making process and identify the schedule for completion of the process.

(G-17) The INEEL CAB recommends that DOE identify and aggressively pursue technology development and deployment efforts needed to support cleanup and closure activities. Annual Accelerating Cleanup progress reports (see Recommendation G-5 above) should report performance milestones for technology development and deployment.

BUDGET RECOMMENDATIONS

The INEEL CAB recognizes that the *Draft Paths to Closure* document is neither a decision document nor a budget document. We do recognize how important the document will be in establishing policy with regard to the programs portrayed, however. As a result, we have several recommendations with regard to the budget implications of the document that are discussed in this section.

(B-1) The INEEL CAB insists that all budgets presented in the *Paths to Closure* document must reflect adequate budget and work scope to allow full compliance with all enforceable laws, regulations, agreements, and commitments as required by Executive Order 12088. The INEEL CAB has been told that budget targets provided by DOE-HQ will not allow for full compliance with all laws, regulations, agreements, and commitments at the INEEL. This is unacceptable. The DOE must request sufficient funds for full compliance.

(B-2) The INEEL CAB recommends that life cycle cost estimates presented in the *Paths to Closure* document should be calculated using one consistent approach for DOE-Headquarters and all field offices.

(B-3) The INEEL CAB recommends that the *Paths to Closure* document provide more detailed cost estimates. For example, we would appreciate an explanation of the variation over time (e.g., the peaks and valleys) for all life cycle cost estimates provided in Appendix A of the INEEL site-specific volume. In addition, stakeholders and

representatives of the State of Idaho's INEEL Oversight Program should be kept informed about the INEEL cost estimating process, as appropriate.

(B-4) The INEEL CAB recommends that DOE establish and implement a charge-back system across the complex as soon as possible for charging all generators for treatment and disposal services. For example, Argonne National Laboratory–West (ANL-W), the Naval Reactors Facility (NRF), and others should reimburse the INEEL for costs associated with treatment and disposal of wastes generated at their facilities.

(B-5) The INEEL CAB recommends that DOE identify the compliance milestones that would be achieved and those that would be jeopardized under baseline and target budget scenarios for the entire complex in the *Paths to Closure* document. The annual Accelerating Cleanup progress reports (see Recommendation G-5 above) should clearly identify how changes in target budgets will affect the Department's ability to comply with regulatory obligations at each site.

(B-6) The INEEL CAB recommends that DOE provide plans for funding in the event that adequate privatization funds are not provided. This will be especially important for future projects that must be implemented to meet compliance milestones which are reliant on privatization funding. INEEL examples that concern us include the Advanced Mixed Waste Treatment Project and the interim dry storage for Spent Nuclear Fuel.

(B-7) The INEEL CAB recommends that DOE identify budgets for all unfunded mandates as soon as possible. We are concerned that unfunded mandates jeopardize the budgets for all projects. One example is the Foreign Research Reactor (FRR) project at the INEEL. Annual Accelerating Cleanup progress reports (see Recommendation G-5 above) should include information on program performance that allow a comparison between what each site is expected to do over the year and what it was unable to complete as a result of unfunded mandates.

(B-8) The INEEL CAB recommends that DOE provide a better explanation of the differences in costs and schedules presented in Exhibit 2-10 of the *Paths to Closure* national volume. (The exhibit illustrates how the *Draft Paths to Closure* document differs from the previously released *Focus on 2006* discussion *Draft*.) We noted, for example, that DOE now predicts that Savannah River Site will be cleaned up much more quickly than it was thought a year ago, with little added cost. By contrast, Oak Ridge will be cleaned up a little more slowly, but the cleanup will be significantly more costly than previously thought. Hanford and Rocky Flats will be cleaned up more quickly and for less money. The pattern is not apparent and the oversimplified explanation is not very helpful.

LOW-LEVEL WASTE PROGRAM RECOMMENDATIONS (Jeff Shanley)

The INEEL CAB submits the following recommendations with regard to the low-level waste (LLW) program as it is portrayed in the *Draft Paths to Closure* document.

(LLW-1) The INEEL CAB recommends that DOE clarify the strategic direction for the LLW program by promptly issuing the LLW Record of Decision (ROD) for the Programmatic Environmental Impact Statement (PEIS) for the WM program. Timely completion of the ROD will not only allow for resolution of the TBD dispositions for specific wastes in the LLW program, but will also allow for more efficient and responsible management of the overall program.

(LLW-2) The INEEL CAB recommends that DOE-ID continue disposal of LLW at the Subsurface Disposal Area (SDA) only if it is consistent with the final remedial action selected for the SDA under the ER program. If the final remedial action selected for remediation of the SDA will involve removal of LLW from the SDA, disposal of LLW should not continue at the SDA and DOE should make provisions for interim storage.

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(LLW-3) The INEEL CAB recommends that DOE-ID continue its plans to close down disposal of contact-handled LLW at the SDA by 2006 and remote-handled LLW disposal at the SDA by 2008.

(LLW-4) The INEEL CAB recommends that DOE-ID develop contingency strategies for contact-handled LLW disposal at INEEL after 2006 and remote-handled LLW disposal at INEEL after 2008 in case appropriate off-site disposal sites are not available.

(LLW-5) The INEEL CAB recommends that DOE consider the possibility of managing LLW under a strategy based on the duration of the radioactive waste half-lives.

(LLW-6) The INEEL CAB recommends that DOE develop a contingency strategy for LLW treatment in case the agency is not able to favorably resolve the current litigation with Waste Control Specialists. This litigation could threaten the agency's ability to contract for LLW treatment at a commercial LLW treatment facility if the litigation has not been resolved by the time the Waste Experimental Reduction Facility (WERF) shuts down as planned in 2003.

MIXED LOW-LEVEL WASTE PROGRAM RECOMMENDATIONS (Mary)

The INEEL CAB submits the following recommendations with regard to the mixed low-level waste (MLLW) program as it is portrayed in the *Draft Paths to Closure* document.

(MLLW-1) The INEEL CAB recommends that DOE clarify the strategic direction for the MLLW program by promptly issuing the MLLW ROD for the PEIS for the WM program.

(MLLW-2) The INEEL CAB recommends that DOE develop a contingency strategy, including funding requirements, for treatment of MLLW in case the Advanced Mixed Waste Treatment Project (AMWTP) does not proceed as presently scheduled.

(MLLW-3) The INEEL CAB recommends that DOE develop a contingency strategy for MLLW disposal in case the agency is not able to favorably resolve the current litigation with Waste Control Specialists. This litigation threatens the agency's ability to contract for disposal of MLLW slated for disposal at a commercial Subtitle C disposal facility.

(MLLW-4) The INEEL CAB recommends that DOE-ID upgrade and maintain the WERF in an operational state as long as the facility is cost-effective, it can be permitted, and it can be operated safely within regulatory guidelines. Due to the difficulties involved in permitting new incineration facilities, DOE is urged not to shut down WERF until a viable complex-wide alternative is operational.

HIGH-LEVEL WASTE PROGRAM RECOMMENDATIONS (Tom)

The INEEL CAB submits the following recommendations with regard to the high-level waste (HLW) program as it is portrayed in the *Draft Paths to Closure* document.

The INEEL CAB prefaces their recommendations on the HLW program by noting that the INEEL HLW Baseline Disposition Map presently portrays the program baseline. An EIS for the HLW program is ongoing and will evaluate alternatives that may be preferred to those in the baseline and may be selected in the ROD. For example, grouting the low-activity waste back into the tanks may not be supported by the ROD for the EIS. We request a continuing opportunity to review the status of the HLW EIS along with pertinent supporting documentation.

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(HLW-1) The INEEL CAB recommends that DOE-ID continue Resource Conservation and Recovery Act (RCRA) permitting activities for HLW processing (including the calciner) so that the specific EIS alternative ultimately selected for inclusion in the ROD can be implemented with no delay in the program. Any delays would reduce DOE's ability to comply with the Idaho Settlement Agreement.

(HLW-2) The INEEL CAB recommends that DOE resolve the question concerning sodium-bearing waste categorization and ensure that the resolution is consistent with the language in the Idaho Settlement Agreement.

(HLW-3) The INEEL CAB recommends that DOE clearly distinguish HLW from sodium-bearing waste and MLLW throughout the *Paths to Closure* document and on the INEEL HLW Baseline Disposition Map. The map states that the INEEL has 10,000 m^3 of HLW. Our understanding is that 4,000 m^3 of calcine meets the legal definition of HLW, whereas the balance (about 6,000 m^3) does not meet that definition.

(HLW-4) The INEEL CAB recommends that DOE-ID consider alternatives to its decision to calcine. While calcining reduces short-term risks, it doesn't appear to make sense to calcine the remaining 1.4 million gallons of sodium-bearing liquid waste and then dissolve the calcine prior to treatment.

(HLW-5) The INEEL CAB recommends that the budget presented in the *Paths to Closure* document for the INEEL HLW program be reconsidered. There is an apparent disconnect between the budget presented in the draft document and what is currently budgeted for the HLW program at the INEEL. The budget should be consistently presented.

TRANSURANIC WASTE PROGRAM RECOMMENDATIONS (Gary 10)

The INEEL CAB submits the following recommendations with regard to the transuranic waste (TRU) program as it is portrayed in the *Draft Paths to Closure* document.

(TRU-1) The INEEL CAB recommends that DOE develop contingency plans in case any one or combination of the following conditions cannot be met—all of which are necessary to ensure that the TRU program will meet the terms of the Idaho Settlement Agreement:

The Waste Isolation Pilot Project (WIPP) must open as planned and DOE must resolve any legal actions filed against the facility promptly,

WIPP must get a RCRA Part B Permit to allow acceptance of those TRU wastes at the INEEL that have hazardous components,

Funding for the AMWTP must be adequate (regardless of the future of privatization funding),

The WIPP enabling documentation and the WIPP waste acceptance criteria (WAC) must be changed to allow for the disposal of all TRU waste to which DOE holds title (without regard to point of origin) and all wastes that are managed as TRU waste by DOE (because of comparable health and safety risks), and

DOE must give INEEL priority for receipt of the available TRUPACTs (shipping containers certified for the shipment of TRU wastes) if the number of those containers will limit the ability to support shipment of TRU to WIPP in accordance with the schedule outlined in the Idaho Settlement Agreement.

(TRU-2) The INEEL CAB recommends that DOE-ID develop a contingency plan for treatment of TRU waste in the SDA in case the contract option for the AMWTP is not exercised.

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(TRU-3) The INEEL CAB recommends against building duplicate processing facilities for TRU waste at other DOE sites as we feel such construction would constitute an unnecessary expense. In order to limit the number of shipments to the INEEL to the extent possible, TRU waste that can be treated at the site of generation should be.

ENVIRONMENTAL RESTORATION PROGRAM RECOMMENDATIONS (Katie)

The INEEL CAB submits the following recommendations and one comment with regard to the wastes resulting from cleanup efforts conducted under the ER program as portrayed in the *Draft Paths to Closure* document.

(ER-1) The INEEL CAB recommends that DOE-ID conduct ER projects across the INEEL and within each waste area group (WAG) at the INEEL in accordance with a prioritization based on the risks that are posed to human health and the environment.

(ER-2) The INEEL CAB recommends that DOE-ID develop its ER budget at the INEEL on a conservative basis to provide assurance that the total volumes can be managed responsibly. We are not confident that the volumes listed for the various waste streams resulting from the ER program are accurate nor that the budget estimates for the program are accurate for out-years.

(ER-3) The INEEL CAB recommends that the *Paths to Closure* document include cost estimates for the Remedial Investigation/Feasibility Study and Remedial Action of the Tank Farm Soils.

(ER-4) The INEEL CAB recommends that DOE based cost estimate for cleanup of Pit 9 in the *Paths to Closure* document on DOE-ID's estimate of costs for remediation under the contingency plan. The cost estimate presently reflects the fixed-price privatization contract that is under dispute. We are concerned that the $132 million that was set aside for the privatization contract for remediation of Pit 9 will not result in effective cleanup.

(ER-5) The INEEL CAB recommends that DOE use a planning scenario of 100 years before residential land use will occur in the vicinity of existing facilities at the INEEL. We support the planning basis that would prevent residential use for 100 years. That planning basis should be uniformly applied throughout the INEEL.

In addition, we offer one comment on the ER program as it is portrayed in the document. The INEEL CAB is uncomfortable with the plan to continue pump-and-treat operations at Operable Unit 1-07B at Test Area North as a long-term solution. We look forward to the results of the treatability studies currently being conducted to identify remedial alternatives. We are hopeful that a remedial alternative will be identified that will be less costly and more effective than the pump-and-treat operation.

SPENT NUCLEAR FUEL PROGRAM RECOMMENDATIONS (Bob Sturup Barb Beller)

The INEEL CAB submits the following recommendations with regard to the spent nuclear fuel (SNF) program as it is portrayed in the *Draft Paths to Closure* document.

(SNF-1) The INEEL CAB recommends that DOE develop a contingency plan in case it is not possible to implement the present plan for procurement, construction, and licensing of SNF dry storage facilities in time to meet the commitments in the Idaho Settlement Agreement.

(SNF-2) The INEEL CAB recommends that the section on the INEEL's Integrated SNF program be rewritten. It presently lacks sufficient detail to provide the reader with an understanding of the Dry Storage Project (privatized or otherwise). The technology development required for the "dry interim storage and preparation for

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offsite repository disposal" is not described. It is also unclear what the "new privatized dry transfer system and modular storage facility" is and how it fits into the Dry Storage Project.

(SNF-3) The INEEL CAB recommends that DOE provide adequate funding for privatization projects supporting the SNF program. We are concerned about the future availability of funding for privatized projects.

(SNF-4) The INEEL CAB recommends that DOE develop contingency plans in case lawsuits threaten its ability to meet compliance milestones. In particular, we are concerned about the impact from lawsuits related to the FRR project.

(SNF-5) The INEEL CAB recommends that DOE develop a contingency plan in case there is no repository available to receive all of the SNF from of Idaho by 2035 in accordance with the Idaho Settlement Agreement.

(SNF-6) The INEEL CAB recommends that DOE-ID develop a contingency plan for sodium-bonded fuel at ANL-West in case the current research and development efforts fail to identify an effective treatment technology that is acceptable to stakeholders.

BASELINE DISPOSITION MAP RECOMMENDATIONS

The INEEL CAB makes the following recommendations with regard to the baseline disposition maps:

(BDM-1) The INEEL CAB requests that DOE (1) modify the baseline disposition maps to reflect it's own review and incorporation of non-technical considerations (including regulatory, political, equity, and stakeholder considerations) or (2) DOE issue an explanation to the SSAB chairs as to why those considerations did not impact on the waste dispositions portrayed on the baseline disposition maps previously released in the *Contractor Report to the DOE on Environmental Management Baseline Programs and Integration Opportunities* (*Contractor Report*). DOE-Headquarters personnel made a commitment to the Site-Specific Advisory Board chairs at the October 29-30, 1997 meeting that DOE would review the baseline disposition maps prepared by the contractors and incorporate non-technical considerations into the baseline disposition maps included in this revision of this document. It is not apparent that this commitment was carried out.

(BDM-2) The INEEL CAB recommends that DOE continue to make every effort to ensure the baseline disposition maps can be easily understood by the public. We suggest, for example, that the maps do not need to present all of the information needed by system engineers. The maps should be tied to more detailed information for those who want it, however.

(BDM-3) The INEEL CAB recommends that DOE provide what is known about waste forms and the expected range of volumes for "To-Be-Determined" quantities of wastes on the baseline disposition maps.

(BDM-4) The INEEL CAB recommends that all of the baseline disposition maps should be consistently designed and formatted and all hand-offs of wastes within sites and between sites should be correctly and consistently portrayed.

(BDM-5) The INEEL CAB recommends that the baseline disposition maps indicate when new facilities will be required to fulfill treatments depicted on the maps. The funding for new facilities will always be less certain than for existing facilities.

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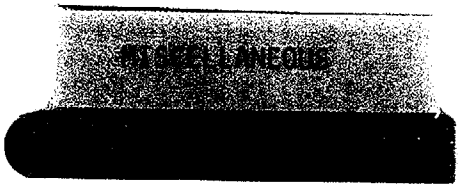
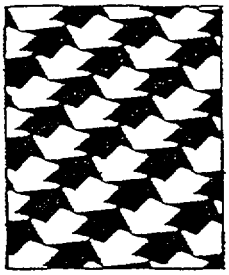




Citizens Advisory Board
Idaho National Engineering and Environmental Laboratory

RECOMMENDATION

Environmental Documentation Process for the Advanced Mixed Waste Treatment Project

July 16, 1997

INTRODUCTION

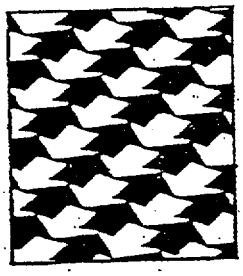
The INEEL Citizens Advisory Board has had numerous discussions, presentations, and committee deliberations on all aspects of the Advanced Mixed Waste Treatment Project (AMWTP). Representatives of DOE, LMITCO, and BNFL have led and participated in these discussions, providing the Board and members of the public with a thorough understanding of the purpose, timing, products and costs associated with the future operations of the project.

DOE, in considering waste stream management and continued operations at the INEEL, has performed and prepared appropriate environmental analysis and documentation in accordance with the National Environmental Policy Act, including the "Department of Energy Programmatic Spent Nuclear Fuel Management and Idaho National Engineering Laboratory Environmental Restoration and Waste Management Programs Final Environmental Impact Statement" (SNF and INEL EIS) completed in 1995. This document establishes the generic management and environmental baselines for subsequent proposed activities and facility operations. It is our understanding that these baselines were assumed in the Request for Proposal for the AMWTP.

RECOMMENDATION

Considering the costs and time associated with full development of an Environmental Analysis and subsequent Environmental Impact Statement, the Board recommends DOE undertake a Supplement Analysis approach to the AMWTP. The Supplement Analysis should incorporate the non-proprietary specifics of the contract with BNFL, including other environmental compliance issues that are applicable. The Board recognizes that the SNF and INEL EIS covers analysis for a ten-year period (from 1995-2005) and the AMWTP will operate beyond that time frame. The Supplement Analysis should address the additional requirements for the anticipated operational life of the facility.

Although not part of the formal process to complete a Supplement Analysis, the Board urges DOE to assure broad public education and involvement throughout the process. The Board also requests DOE provide a status report in September, including the results of additional data due in August, any non-proprietary results of the environmental analysis completed on the BNFL proposal, and DOE's plans for proceeding. If DOE intends to pursue amending the Record of Decision for the SNF and INEL EIS, the Board would like a presentation on the specific public involvement activities that DOE intends to incorporate into that effort.



Environmental Management Site Specific Advisory Board
Idaho National Engineering Laboratory

RECOMMENDATION

INEL LOW-LEVEL WASTE PROGRAM

September 18, 1996

INTRODUCTION

The Environmental Management Site Specific Advisory Board to the Idaho National Engineering Laboratory (EM SSAB-INEL) met with Department of Energy personnel at its May 21-22, 1996, meeting and received a presentation on the disposal options for INEL low-level waste (LLW). During the July 16-17, 1996, meeting, Board members had the opportunity to participate in various table-talks supported by Lockheed Martin Idaho Technologies Company personnel. These table-talks provided detailed information regarding LLW treatment, storage and disposal. The Board received additional information at its September 17-18, 1996, meeting and developed the following recommendation.

RECOMMENDATION

The Board was asked to provide comments to the Department of Energy on the current INEL low-level waste program and its components. Based on information received in several presentations to the Board, it strongly recommends DOE-ID:

- Recategorize low-level waste. Consider stability, solubility, reactivity and the level and/or type of radioactivity to recategorize LLW. This will allow DOE-ID to manage the various types of low-level waste more appropriately. For example, consider the small amount of LLW that is "high risk" separately for treatment, storage and disposal options. The Board recommends DOE-ID dispose of all LLW as cost-effectively as possible, evaluating both on- and off-site options for treatment, storage and disposal. DOE-ID should utilize an integrated management system to efficiently balance volumes, risks and costs.

- Integrate Environmental Restoration (ER) and Waste Management (WM) activities in order to dispose of the radioactively contaminated INEL soils efficiently and more cost-effectively. The Board therefore requests information and presentations from DOE-ID regarding future plans for a soil repository at the INEL, including any consideration of disposal of WM waste at an ER repository.

- Prioritize and capitalize on pollution prevention and waste minimization in all operational activities, including D&D activities. Aggressively implement a "chargeback" system to motivate generators to decrease the volume of waste produced. This incentive program would result in cost savings and assist DOE-ID in extending the capacity of the Radioactive Waste Management Complex (RWMC). Consider the waste minimization solutions employed in the nuclear utility industry and examine the applicability of commercial solutions to government-owned waste, including

(re)instituting worker incentive programs. Emphasize pollution prevention and recycling programs as a means of dealing with waste more effectively. Continue to employ volume reduction techniques, where waste generation cannot be reduced.

- Maximize the use and life-span of existing facilities which are already permitted, such as the disposal capacity at the RWMC. If shown to be cost-effective, maximize the use of the Waste Experimental Reduction Facility (WERF), extending the timeline for its operations, and consider a potential lease arrangement where WERF could continue to operate beyond 2003 as a private facility. At a minimum, coordinate activities at WERF with activities scheduled for the Advanced Mixed Waste Treatment Complex to maximize the use of both facilities and achieve the most cost-effective solution.

- Clarify the technical capabilities of the private sector and the potential costs associated with privatizing treatment of LLW and report these to the Board. Subsequently, allow the Board to review these issues and offer a recommendation.

The Board recommends DOE-ID continue to streamline activities for maximum efficiency and cost savings in the treatment, storage and disposal of LLW.

JOINT STATEMENT OF THE IDAHO NATIONAL ENGINEERING AND ENVIRONMENTAL LABORATORY CITIZENS ADVISORY BOARD AND THE HANFORD ADVISORY BOARD

September 17, 1997
Post Falls, Idaho

The Hanford Advisory Board (HAB) and the Idaho National Engineering and Environmental Laboratory Citizens Advisory Board (INEEL CAB) have received information and presentations on DOE and contractor planning efforts. These have occurred during Board and committee meetings of both boards separately and during a joint session between the INEEL CAB and representatives of the HAB on September 16, 1997. Both Boards have previously and separately provided advice/recommendations on the Focus on 2006 discussion drafts, the Contractor-Led Integration Report, and the Waste Management Programmatic Environmental Impact Statement (WM PEIS).

Based on the information the Boards have received and subsequent discussions among members, the Boards respectfully submit the following comments related to the Focus on 2006 efforts, the Contractor-Led Integration Strategy, and the WM PEIS:

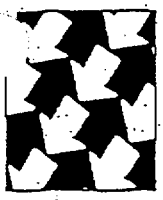
- Each of these efforts is based on assumptions regarding intersite transfers of waste and materials. It is not clear, however, that the assumptions made in each of the planning documents are the same or that the decisions will align. These documents appear to have resulted in parallel and uncoordinated tracks.

- The Boards urge DOE to continue efforts to develop a coordinated decision-making process related to intersite transfers.

- Both Boards urge DOE to provide adequate funding to ensure full compliance with all legally-binding commitments, including the Idaho Settlement Agreement, the Tri-Party Agreement and all Tribal agreements.

We look forward to your response.

Environmental Management Site Specific Advisory Board - Idaho National Engineering Laboratory



RECOMMENDATION:

INTEGRATION OF ENVIRONMENTAL MANAGEMENT ACTIVITIES AT THE IDAHO NATIONAL ENGINEERING LABORATORY

August 2, 1995

INTRODUCTION

The Environmental Management Site Specific Advisory Board - Idaho National Engineering Laboratory (EM SSAB-INEL) met on August 1 and 2, 1995. Following presentations and discussion with Department of Energy-Idaho Operations Office (DOE-ID) and Lockheed Martin Idaho Technologies (LMIT) personnel, the Board participated in a facilitated, consensus-building process through which the following recommendation was developed. This recommendation was unanimously accepted by the Board.

RECOMMENDATION

The EM SSAB-INEL, since its inception, has sought two commitments from the DOE-ID and its Idaho National Engineering Laboratory (INEL) contractor(s): 1) early EM SSAB-INEL involvement in the development of policies and plans for the INEL; and 2) integration of DOE-ID documents, policies, funding priorities, and clean-up activities. The recently completed Integrated Product Team activity using systems engineering to integrate environmental management activities at the INEL appears to be responsive to the spirit of these and other EM SSAB-INEL recommendations, such as prioritized treatment of highest risk waste in the most cost-effective manner. We commend DOE-ID and LMIT for this effort and the resulting document.

The methodology appears to be a comprehensive and useful tool, assuming that the input is valid and that all applicable activities are incorporated. We support the effort to continue to apply and leverage systems integration at the INEL. We suggest application of a similar approach throughout the DOE complex. We especially support progress toward actual clean-up and management of the INEL wastes in a cost-effective manner that meets all applicable regulations and agreements as opposed to generating further studies. We recognize that the National Environmental Policy Act (NEPA) process, including continuing public involvement, is required for technology implementation, facility development, and changes to the existing environmental impact statement Records of Decision. This integration effort gives a solid basis for any such changes.

The EM SSAB-INEL believes that technical reviews are needed by experts not involved in the study in addition to management reviews. The assumptions used in this activity and the impact of changes in the assumptions should be evaluated, including technologies, re-negotiations of compliance agreements, and privatization. Understanding this and the need to meet NEPA requirements, the EM SSAB-INEL supports the full treatment option as being most cost-effective, timely, and responsive to public concerns.

The EM SSAB-INEL has the following additional recommendations:

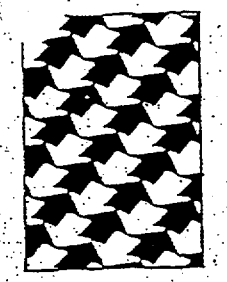
All stakeholders, internal and external, need to be fully involved in the development of the environmental management integration strategy.

The impact of regulatory drivers (Comprehensive Environmental Response, Compensation, and Liability Act and Resource Conservation and Recovery Act) and NEPA requirements should be assessed and described. Additional options S3, S4, and S6 from the alternatives described in Figure 8 of the report should be evaluated to reflect the possibility of outside policy impacts, such as unavailability of a high level waste (HLW) repository, the absence of a no-migration determination for the Waste Isolation Pilot Plant (WIPP) and the need for additional transuranic waste (TRU) and HLW repositories. The impact of reduced funding needs to be considered, including the minimum funding needed to continue the preferred option.

The third bullet on page 16, "Provide relief from guidance documents and unnecessarily restrictive legal and regulatory interpretations," needs to be clarified in future iterations of this study to avoid the impression of circumventing regulatory oversight.

All assumptions and bases, including waste quantities, need to be documented and shown to be consistent with the Programmatic Spent Nuclear Fuel and Idaho National Engineering Laboratory Environmental Restoration and Waste Management Environmental Impact Statement, the Proposed Site Treatment Plan, and other current planning documents.

Environmental Management Site Specific Advisory Board - Idaho National Engineering Laboratory



RECOMMENDATION:

IDAHO NATIONAL ENGINEERING LABORATORY DRAFT COMPREHENSIVE FACILITY AND LAND USE PLAN (DOE-ID 10514)

November 15, 1995

INTRODUCTION

The Environmental Management Site Specific Advisory Board - Idaho National Engineering Laboratory (EM SSAB-INEL) met on November 14-15, 1995 in Idaho Falls. After discussion with Department of Energy-Idaho Operations Office (DOE-ID) and Lockheed Martin Idaho Technologies (LMIT) personnel regarding the document, and after having discussed the issue and previous Board meetings, the Board participated in a facilitated, consensus-building process through which the following recommendation was developed and unanimously adopted.

RECOMMENDATION

The Environmental Management Site Specific Advisory Board to the Idaho National Engineering Laboratory (EM SSAB-INEL) determined that there is a major imbalance in the weight given the land use section and the facilities section of the Draft Comprehensive Facility and Land Use Plan (CFLUP). Twenty-nine (29) pages generally "outline" the resources that exist on the site while the rest of the 241-page document focuses primarily on the existing facilities and infrastructure. The EM SSAB-INEL strongly recommends:

1. That the Comprehensive Facility and Land Use Plan (CFLUP) address and better define the rationale for preserving the unique, contiguous and isolated 892-square miles of federally-controlled land for future programs. This definition should clearly state the need for continuity of its boundaries to provide site integrity to lessen the possibility of contaminant migration.

2. Define a preferred core area to determine exactly what land is needed for facilities development and what it will be used for. This includes recognizing (or at least not precluding) the possibility of nuclear energy research as a component of a larger research mission. The plan should also address the need for future waste disposal sites.

3. The plan identifies many of the resource values and constraints found on the INEL site but does not go into any detail on planning for their future use and management. Grazing, wildlife, cultural, archaeological, minerals, endangered species, recreation, hydrology, and others are mentioned, but the plan is silent on whether to use and manage the resources or to preserve them.

4. The INEL should continue to coordinate its planning activities with those of adjoining entities.

5. Address in more detail those policies, treaties, regulations, statutes, and physical characteristics which affect land usage in areas of the INEL. Provide references where land use is impacted (for example, 100-year flood plain). Areas where significant data gaps exist which impact land use (for example, seismology and levels of contamination) should be described.

6. Expand the "Land Description" and "History of Land Acquisition, Terms, and Agreements" to reflect the historical and current Native American presence as legitimized by the Fort Bridger T[illegible] of 1868 between the United States and Shoshone-Bannock Tribes, DOE Order 1230.2 ("DOE-ID Native American Policy"), the subsequent "working agreement," and Memoranda of Agreement with the Shoshone-Bannock Tribes. They should be fully described in the Land Use Chapter 1 as they impose restrictions on future land use development (for example, cultural and historic preservation sites).

7. A section should be devoted to detailing the Public Land Orders that removed the land from the public domain and put it under the jurisdiction of the Department of Energy (DOE). The constraints and implications of each Order should be outlined. In addition, any MOUs or MOAs pertaining to land management (for example, fire protection and rehabilitation) should be addressed.

8. The Plan should be a living document that incorporates land use planning implications of other related INEL documents as well as planning based on system integration principles across program lines.

9. The Plan should include proposals for creative uses of the available land, such as development of an INEL Interpretive Center in conjunction with the EBR-I facility. This could be an Interagency Visitor Center to explain the various missions of INEL and describe the ongoing projects and research. The facility would help remove the cloak of secrecy that surrounds the site and inform the public that it is a "world class" nuclear research facility. Also, from an interagency standpoint, the surrounding federal lands and their resources could be interpreted. This could be a privately-run center or a cost-shared federal facility.

10. The Board made a recommendation at the May meeting that basically supported the 15 [illegible]mptions on which the land use plan was being based, and the Board added two additional [illegible]mptions and a footnote related to concerns of the Tribes. In the August meeting DOE responded to a query to the effect that all the Board's recommendation had been incorporated in the draft land use plan. To the contrary, the draft document did not reflect the Board's recommendation.

Editorial Comments:

- Include document sources in the text, using original references, not just DOE documents.
- Include a more detailed index.
- Correct maps and labels (for example, include Clark County on the map on page 10 and provide a clearer indication of what the floodplain map is).

RECOMMENDATION:

LONG-TERM LAND USE FUTURE SCENARIOS FOR THE IDAHO NATIONAL ENGINEERING LABORATORY

May 2, 1995

**1. The INEL will remain under government management for at least the next 100 years. The implementation of this management and control becomes increasingly uncertain over this time period.

** *This assumption was not agreed upon unanimously by the Board. Chuck Broscious dissented on Revised Assumption #1 as he felt it should read "50 years" rather than "100 years."*

2. Advances in DOE and private-sector research will result in the obsolescence of existing facilities. It is further assumed that new facilities will need to be constructed in response to the need to provide state-of-the-art research facilities. Other programs, however, will be discontinued entirely after the facilities become obsolete.

3. New construction may include structures in existing facility areas; other new construction may require the development of new facility areas. New development should be restricted to core areas already developed.

4. As contaminated facilities become obsolete, D&D will be required. Similarly, contaminated areas will require remediation. D&D and ER requirements may vary based on risk. The D&D process will commence following closure of a facility.

5. To the extent practical, new development will be encouraged in developed facility areas to take advantage of existing infrastructures. Such redevelopment will educe environmental degradation associated with construction activities in previously undeveloped areas.

6. The CFA will remain the focal area for support and infrastructure activities assuming continuity of existing or similar INEL missions.

7. Incorporated with #4.

8. Environmental restoration and waste management activities will continue. Cleanup of hazardous, mixed, and low-level waste sites is expected to be completed within 10 years following completion of a Record of Decision (ROD) for the CERCLA-mandated cleanup.

9. Research and development facilities will be expanded to accommodate "new frontier research". To support such efforts, cooperative partnerships between the public and private sectors may be developed to achieve mutual goals. This could result in the re-use of INEL facilities by private-sector interests, supplemented with technology support by INEL personnel.

10. Incorporated with #9.

11. INEL may be called upon to support defense-related operations.

12. Regional development trends are closely related to activities at the INEL. The weight of INEL's influence on the region may increase or decrease over time depending on the diversity and strength of the regional economy.

13. No residential development (i.e. housing) will occur within INEL boundaries. Grazing will be allowed to continue in the buffer area.

14. No new, major private developments on public lands (residential or nonresidential) are expected in areas adjacent to the Site. There is uncertainty about the applicability of this assumption to privately held land. Beyond 25-50 years there is less certainty about this assumption.

15. An 890 square mile site dedicated to nuclear research, development, testing, evaluation and environmental management is irreplaceable. It was therefore assumed that it is unlikely that the siting of a similar DOE facility and land withdrawal would occur in the future at any other location in the contiguous 48 states.

› additional assumptions added by the Board:

16. New locations for Low Level Waste disposal may need to be sited. If new locations are needed they will be subject to regulatory approval processes.

17. The United States government has trust responsibility to federally recognized Tribes. If portions of land become the responsibility of another owner or agency, the same trust responsibility will be conferred to the affected Tribe.

Footnote to assumption #17:

The SSAB is keenly interested in DOE-ID taking all necessary steps at the INEL to both correct the mistakes of the past and protect the environmental and cultural resources in the future. The SSAB also recognizes that the Shoshone-Bannock Tribe's unique relationship to the Site gives rise to a particular interest in future land use.

The Site itself lies on aboriginal territory of the Shoshone and Bannock people. The Shoshone-Bannock Tribes have used the lands and waters within and surrounding the Site for fishing, hunting, plant gathering, medicinal, religious, ceremonial and other cultural uses since time immemorial. These lands and waters provided the Tribe's home as well as their way of life.

When the Tribes signed the Treaty of Fort Bridger in 1868 with the United States, the Tribes protected their rights to subsistence and traditional activities on the unoccupied lands of the federal government, which includes the Site in the event of any alterations to the land base for future land use scenarios and/or INEL borders. Effective exercise of these treaty rights, however, depends upon the health of the resources upon which these rights are based.

Since the creation of the Site, many activities at the INEL have injured the land, natural and cultural resources both on the Site and off-Site. INEL's decisions regarding future waste management, remediation, D&D, R&D, and storage activities must provide for the protection of the Tribe's natural and cultural resources. The Tribes, as a sovereign and constitutional government, are determined to protect and restore natural resources and to provide opportunities for Tribal members to exercise treaty-reserved rights throughout traditionally occupied lands, including undeveloped areas of the Site.

The United States government has the obligation to recognize and commit to a government-to-government relationship with Native American Tribal governments and fulfill its trust responsibility to those tribes, including the concepts of tribal sovereignty and tribal rights (DOE-ID Order 1230.2). In furtherance of this responsibility, the DOE must consult with and involve the Tribes in decisions affecting them when considering any future land use of the INEL.

Citizens Advisory Board
Idaho National Engineering and Environmental Laboratory

IMPLEMENTATION OF THE COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT AT THE IDAHO NATIONAL ENGINEERING AND ENVIRONMENTAL LABORATORY

INTRODUCTION

The following recommendation is submitted to the Department of Energy's Idaho Operations Office (DOE-ID); Region X of the U.S. Environmental Protection Agency; and the State of Idaho as the Idaho National Engineering and Environmental Laboratory (INEEL) Citizens Advisory Board's (CAB) comments on the approach being followed by the three agencies to comply with the Comprehensive Environmental Response Compensation, and Liability Act (CERCLA) at the INEEL.

The INEEL CAB has recently completed reviews of the Proposed Plans for Waste Area Group 1 (WAG 1 – Test Area North), Waste Area Group 8 (WAG 8 – Naval Reactors Facility), and Waste Area Group 9 (WAG 9 – Argonne National Laboratory–West). Our recommendation and comments are based on those reviews.

The INEEL CAB recommends that the agencies consider involving the Board when Proposed Plans are in the draft stage. We believe that we could better serve the agencies as a sounding board, with an overall goal of helping to produce documents that are ready for review by the public. In addition, we submit the following comments.

Responses to questions addressed to the DOE-ID Manager for WAG 1 revealed that the selection of the preferred alternatives may have involved consideration of issues beyond the evaluation criteria required by CERCLA. The full rationale should be fully explained and should include consideration of whether the alternative will resolve the problem at hand or simply move it somewhere else.

With regard to cost estimates and how they are presented, the three Proposed Plans we have recently reviewed present cost estimates for all remedial alternatives considered, yet the cost estimates do not appear to represent DOE's best estimates of the total life cycle costs. This conclusion is based on notes in the comparison tables in the Proposed Plans as well as remarks made during presentations to the Board and the Board's Environmental Restoration Committee. In addition to cost estimates that are required for presentation in Proposed Plans, the INEEL CAB recommends that future Proposed Plans for remediation at the INEEL include total life cycle costs for each alternative that are calculated in as straightforward a manner as possible and represent DOE's best estimate of the true and real costs.

If cost information is presented in the requested manner, the public will be better able to make comparisons among the alternatives based on costs. In addition, the Board recommends that all assumptions that provide the basis for the cost estimates be uniformly applied.

The Board's review of the WAG 1 Proposed Plan resulted in concerns that extend beynd the scope of that document. As a result, we have two additional recommendations that apply to all future Proposed Plans.

The proposed remediation plan for the Mercury Spill Area (TSF-08) at WAG 1 will be the third cleanup that has occurred at that site since the mercury was spilled. The description of prior cleanup activities in the WAG 1 Proposed Plan raised concerns about repeated efforts that prove to be insufficient to reduce risks to acceptable levels. The Board recommends that all future remediation activities, whether interim or final, be carried out in such a way that they will reduce risks to humans and the environment sufficiently that remediation activities will not have to be repeated at a later time. Repeating remediation activities at the same site is unacceptable. The INEEL CAB is certain that cleaning up a contaminated site multiple times is more costly than doing it once.

Finally, the INEEL CAB thought the Proposed Plan for WAG 1 was very difficult to read as there were so many alternatives presented for so many different types of contaminated sites. The presentation to the Board included details that allowed for an improved understanding of the nature and extent of the contamination not provided in the Proposed Plan. The Board recommends that future Proposed Plans provide descriptions that the public can understand.