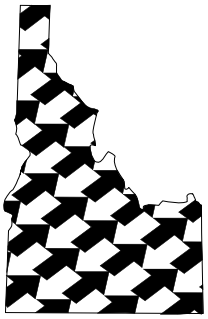

Environmental Management Site-Specific Advisory Board –
Idaho National Engineering Laboratory

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

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, by 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 wide 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.

VOLUME II

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 that 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 River Plain 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.

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Dated September 14, 1994