



**DEPARTMENT OF ENERGY-OWNED  
SPENT NUCLEAR FUEL STRATEGIC PLAN**

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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.

**EM SSAB-INEL Spent Nuclear Fuel Strawman Questionnaire Results**

In an effort to clarify areas of possible consensus among the SSAB members on SNF issues, the following “Strawman” statements were developed by the SNF committee. Board members were asked to rate each statement on the following scale:

- SA** = Strongly Agree
- A** = Agree
- N** = Neutral
- D** = Disagree
- SD** = Strongly Disagree
- II** = Inadequate Information to Respond
- NR** = No Response - This means none of the above were chosen, but the individual provided a comment.

Eleven Board members completed the questionnaire before the May 2-3, 1995, Board meeting. Their responses, along with their narrative comments, are summarized below.

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1. I want to assure that the resources and knowledge base at INEL are used to address waste cleanup and SNF issues.

SA A N D SD II NR  
 9 2 0 0 0 0 0

- **SA** Effort is needed to keep from losing base in budget cuts.
- **SA** But this doesn't mean I'm willing to agree to shipments of new waste or SNF to the INEL site.
- **A** How will anyone ever be “assured” of this? Assurance is implicit - unless there is absolutely no trust. (Non-issue)

2. I recommend that DOE increase its efforts to provide the public with clear, factual information on the transportation, storage, and disposal of SNF.

SA A N D SD II NR  
 7 3 1 0 0 0 0

- **SA** DOE may be assuming that using the SSAB is sufficient. Public involvement must include many other venues also.
- **SA** (replace “increase” with “improve”) - improve might express my feelings better. They need accomplishment press releases more than just 3-4 page mailings to selected people.
- **A** Information is available, but it is difficult to access and requires effort.
- **A** More information is always better than less - but what we need most of is more consensus building, not more information.
- **SA** Wrong word - “increase” - “improve” would be better - quality, not quantity.

3. I support continued research and development on handling, processing, and storing SNF in a better, safer, faster, and more cost effective way.

SA A N D SD II NR

6 3 0 0 0 2 0

- SA I also support reprocessing and think this can be done to increase protection from proliferation
  - SA Don't spare the costs!
  - A Yes - so long as more research is not used as an excuse to delay action on permanent disposal or used as an excuse to ship more SNF to Idaho.
  - II "Processing" has a wide range of meanings - need more info. I don't know what "foster" means here.
  - II Depends on if you are talking about imported SNF to INEL.
4. I feel that we shouldn't tell another state what to do with SNF unless we are ready to do likewise.

SA A N D SD II NR

5 1 1 0 2 1 1

- SA We need to assure safety, stability of our wastes and SNF independent of availability of a repository. Don't use actions beyond our control as excuses.
  - SD \*&\$#@, if we don't take a position who will? We don't tell, we recommend?
  - D However, if we have already spent millions of dollars preparing sites located in other states for long-term storage, it must be pursued ambitiously by the federal government to open these sites.
  - NR We - Idaho? or We - Americans?
  - SD I believe that there are geologic and hydrologic differences between sites -- so arguing that disposal there is appropriate does not necessarily mean that disposal here is also appropriate.
  - N Invalid question -- we are not telling other states - NGC should work out.
  - II Depends on if we are talking about permanent waste repository.
5. I insist that any plans for interim storage must realistically address the contingencies of what happens if there is no permanent solution in sight after the interim period.

SA A N D SD II NR

9 0 1 0 0 0 1

- SA Get all waste and SNF ready and stable for final disposition. I think for some fuel that may include reprocessing.
  - SA Insist -- wrong! Recommend.
  - SA I believe that it will be very difficult to get anyone interested in moving the stuff again after 50 years -- I would like to see a discussion of that.
  - SA Those contingencies are covered in 1, 3, and 9.
  - SA Starting now.
6. I want INEL to continue to clean up existing SNF, related assemblies, and contaminants where current knowledge indicates that problems exist.

SA A N D SD II NR

6 3 0 0 0 2 0

- **A** Recommend.
  - **SA** “Clean up/manage” rather than just “clean up.”
  - **II** Depends on whether talking about INEL only inventories -- and which cleanup technologies applied.
7. I don’t want to agree on anything that might endanger the Snake River Plain Aquifer or downwind residents under even the most dire future circumstances.

SA A N D SD II NR

6 3 0 2 0 2 1

- **II** All steps are being taken to ensure this doesn’t happen. This is just an emotional statement.
  - **NR** Good grief - how dire is dire?
  - **SA** For me, this is the most important consideration.
  - **SA/II** As amended - need definition of dire.
  - **D** “Endanger” needs to be more definitive - too vague as it stands (e.g. every overdose of liquid pesticide on farm land “endangers” the aquifer, every puff of wind from the west “endangers” the Poky residents with Simplot and FMC fumes).
  - **SA/A/D** Also “agree on anything” doesn’t sound right. Subject to what we mean by “might” (i.e. risk based) and within what we consider reasonable risk in other practices.
8. I feel strongly that existing vulnerabilities in SNF storage at INEL should be corrected, and that it is a high priority to maintain such facilities in a safe condition.

SA A N D SD II NR

8 1 0 0 0 3 0

- **SA** Keep on strong scientific and engineering basis.
  - **II** What are the vulnerabilities?
  - **SA/II** Need to have them defined - seems STP and BEMR do so.
9. I think we should proceed to treat both the onsite SNF and any new shipments using the best available technology as a way to indicate Idaho’s sincerity to Nevada.

SA A N D SD II NR

5 2 0 1 0 3 0

- **SA** We should also do it if it turns out to be the best overall action.
- **II** Who said Idaho was insincere? And I thought the best available technology was being used.
- **A** We -- U.S.? Idaho/Nevada -- states in U.S.?
- **D** Yes for onsite -- I don’t want new shipments.
- **SA** Two questions. Nevada not germane.
- **II** What does “treat” mean? -- Need more info. Why would this matter to Nevada?
- **II** Assumes Nevada is best site and INEL being regional interim repository.

- **SA** But this is a “smoke screen” as Idaho wants Nevada as destination.
- **A** Are we confusing WIPP and Yucca Mountain here? However, that said and wherever it goes, if it ever goes, I agree with the principle of the statement.

10. I want strong assurance that SNF will be moved (sooner rather than later) to more appropriate monitored retrievable storage and/or a permanent deep geologic repository.

**SA A N D SD II NR**

3 4 1 1 1 1 1

- **SA** Provided MRS at the INEL is included as one option more appropriate.
- **D** INEL has the technology to handle it here.
- **II** Must state other than INEL.
- **SA** My preferences are for deep geologic repository.
- **A** What “form” should this assurance come in?
- **N** Usually two different concepts -- MRS and permanent. I think we need to take care of our site regardless and make it safe.

11. I don’t want to agree to any actions now that will lessen the chance that acceptable permanent solutions to the SNF disposal problem will be found.

**SA A N D SD II NR**

4 2 3 0 2 0 0

- **SD** We need to deal with our situation and not play games.
- **SA** I believe that interim storage will seriously reduce our national will to move toward a permanent deep geologic repository.
- **N** Such as?

12. Despite government policy aimed at characterization and apparent selection of Yucca Mountain as a permanent repository, I doubt that we can achieve a permanent solution for disposal of SNF and high-level waste during the next generation because of strong local opposition and the complexity of demonstrating 10,000-year safety.

**SA A N D SD II NR**

3 1 2 2 0 2 1

- **A** 10,000 - year safety - no such animal.
- **N** Not sure valid question - should keep trying opinion which does not lead to solution.
- **NR** Then what?
- **D** I am somewhat optimistic that if we don’t get sidetracked into interim storage, that we can reach consensus on a repository.
- **SA** Need to involve the public early, listen to their concerns, trust their judgment when presented with honest, factual information and get away from polarization. Look at programs in other countries, be more flexible.

13. To the extent that interim storage occurs at INEL, I want assurances that such activities along with state and local costs, will be properly funded by DOE.

**SA A N D SD II NR**

7 4 0 0 0 0 0

- **SA** We are politically relatively weak compared to other sites; the “standard” for how bad we have to get before it is a crisis is lower than what we currently have on site, so tendency to ignore INEL until it becomes a Hanford.
- **SA** I fear that the feds will send us the stuff -- and then lose interest in paying the costs.
- **SA** DOE funding should include the Shoshone-Bannock Tribes as the INEL is located on the Shoshone-Bannock Tribes’ aboriginal homeland.
- **A** Insert “realistic” between “with” and “state.”
- **A** DOE doesn’t fund --Congress does.
- **SA** Costs -- compensation would be very preferred word instead.

14. I feel that the paramount concerns which must guide nuclear waste decisions are fairness, environmental protection, the health and safety of workers and local communities, and this nation’s nonproliferation goals.

**SA A N D SD II NR**

5 4 2 1 0 0 0

- **SA** Environmental protection doesn’t mean putting everything in one spot-terrible can of worms.
- **A** But it’s too broad a statement--I thought we were dealing with SNF.
- **SA** Now, let’s apply these goals with as little fear and bias. For example, I think putting DOE and commercial fuel in a repository does not necessarily meet these goals.
- **A** Factors need to be ranked and/or defined, i.e. fairness, nonproliferation goals.
- **A** a) I believe this nation’s nonproliferation goals are already a lost battle and need to be revisited, redefined, and revamped b) The nation’s needs for handling, storing, disposing and other waste decisions must be included as a paramount concern for me to agree.

15. I feel that SNF should be stored in ways that assure retrievability and recyclability for possible future use for domestic or defense purposes.

**SA A N D SD II NR**

5 2 1 1 2 0 0

- **SD** Recyclability/defense purposes NO.
- **D** For the foreseeable future, plutonium is a waste not a fuel. Our stockpile greatly exceeds our defense needs.
- **SA** We are resource and recycle conscious in most of the rest of our industries except nuclear.

16. I believe we need to accept that DOE actions on SNF will be driven largely by budget and larger political considerations, and proceed accordingly.

**SA A N D SD II NR**

4 2 1 1 3 0 0

- **SA** But don’t throw in the towel.



- **A** But we should work for it using scientific smarts not financial and politically correct bases.
- **SD** I don't intend to accept that--and will continue to apply what pressure I can to see that things are done right.
- **SD** Roll over--NO.

17. I feel that we should immediately discontinue shipments of SNF to INEL, unless such actions truly jeopardize national security, health, and welfare.

**SA A N D SD II NR**

3 0 2 2 3 1 0

- **SD** It is sad that many Idahoans have such a strong fear of SNF and it has gotten so polarized. DOE/Navy could learn someday to deal with the fears in an open and honest way.
- **SD** Who decides "truly"??--No solution.
- **II** Must demonstrate --jeopardize.

18. I want DOE to continue clean up and upgrade of SNF storage facilities at INEL to address existing problems with the storage of materials presently at the site.

**SA A N D SD II NR**

8 3 0 0 0 0 0

- **SA** The integrity of containers should be as good as the storage.
- **SA** So long as this is not used as an excuse to allow in additional SNF or to return to reprocessing.

19. I think that DOE should fund programs at INEL to develop improved cost effective procedures to assure short and long term safety and well being of workers, the public, and the environment in transporting, handling, processing, storing and managing SNF and hazardous waste.

**SA A N D SD II NR**

6 3 0 0 0 2 0

- **SA** "Hazardous" wouldn't this be better stated as TRU? Otherwise you are opening the whole STP issue to the SNF issue.
- **A** Congress--should fund--don't blame DOE!
- **SA** When will we get it? Cultural resources are inclusive to environmental resources.
- **SA** DOE doesn't provide funding, Congress does.
- **II** Sounds like an endorsement of more shipments.
- **II** Processing????

20. I don't want to encourage any activities at DOE sites in the name of cleanup or SNF handling that might worsen international nuclear proliferation problems.

SA A N D SD II NR

3 2 1 2 0 3 1

- **II** For God's sake--look at the countries where SNF is coming from.
- **N/II** Connection not clear and what would worsen proliferation problems?
- **D** Decisions can always be amended during a time of national security.
- **A** Too broad
- **SA** I fear that some schemes for fuel use and treatment of SNF could have nonproliferation repercussions.
- **SA** Let's not prejudice what can worsen the problems-sometime we focus on parts of the problem which seem minor compared to other parts, such as theft of actual weapons.
- **D** "Might worsen" too inexact. It's like saying I don't want to take any medicine to counteract my heart attack that might increase my potential for cancer.

21. I want the federal government to get on with the decision regarding a second permanent repository for SNF. If one is needed, the location should be determined without delay and a time line set for making it operational.

SA A N D SD II NR

4 3 2 0 1 1 0

- **A** However, this statement is reminiscent of wanting a permanent station on the moon before we made our first landing thereon.
- **SA** But don't stop doing what we have control of.
- **II** Too broad!
- **SA** Yucca is already full.
- **SD** We don't have a first yet. How would the decision be made? i.e. what about a headline--Congress and the DOE have chosen the Arco desert for the 2nd repository?

22. Rather than spending dollars on SNF storage, I feel we should expedite any method by which we can use nuclear fuel beneficially.

SA A N D SD II NR

3 3 0 3 3 0 0

- **D** One cannot stand without the other. A reactor which produces electrical power (which I am in favor of) produces more SNF and we must have a plan to deal with it.
- **A** Too broad.
- **SD** From what I've read--use is more expensive than disposal--use may have nuclear proliferation implications.
- **SA** Check some of the European actions in nuclear materials - Germany, France, etc.
- **A/D** We need to balance both--not one OK the other. Agree for long term disposal, but take care of current vulnerabilities.
- **D** We should do both.

23. I feel that the US must proceed quickly with a decision on the location of a permanent repository for SNF and set a time line for bringing it into full operation as soon as practical.

**SA A N D SD II NR**

5 3 1 1 0 1 0

- **A** But that's like agreeing on God, Beauty, Nature and Grandma's apple pie. Sounds great, but the body politic has no stomach for hard choices until the country is bankrupt or waste filled.
- **D** Too much of ramming something down somebody's throat. Govt. decision seems to have little impact until affected peoples make a decision.
- **SA** Narrow to DOE.
- **II** How would the decision be made? Need more information.

24. I think that nuclear waste is a national problem requiring a national solution, rather than agency or legislative fiat. Only broad public involvement based on understanding why something must be done, what should be done, and where is the best location, can generate a policy that can succeed.

**SA A N D SD II NR**

5 1 1 1 1 1 1

- **SA** Too broad -we were asked to comment on DOE plan.
- **N** This can only produce the appropriate solution as long as the information provided to the public comes from a neutral position. Let us not forget how DOE concluded the results of SNF EIS.
- **NR** Red herring, I think.
- **D** No solution.
- **II** Evaluate risk--leave some low level waste where it is. No agreement on what must or should be done. Solve that, then work with public.
- **SD** You can't even get sizable fraction of the minority - eligible voters registered to vote! That being the case, how do you expect to get broad public involvement on this issue. Its a "smoke screen" to assure that the nuclear system is totally constipated, preventing all the medical, research, energy and other technological benefits the atom can bring to this country while at the same time assuring that Japan, France, Great Britain, Russia, China, and others capitalize on our lack of national leadership.

25. Because of the political uncertainties of achieving permanent disposal or long-term storage of SNF, I believe it would be wise to develop (with full public involvement) long-term contingency plans for handling such materials.

**SA A N D SD II NR**

4 2 3 1 1 0 0

- **SD** If you leave out "with full public involvement" I agree. If you include it's the same conundrum as 24 and I disagree. So as it stands, I strongly disagree.
- **SA** Too broad--what about DOE plan?
- **N** Define--safe interim storage--solution.
- **SA** What do we do to get rid of the stuff 50 years from now?

