APPENDIX A
THE PUBLIC SCOPING PROCESS

A.1 SCOPING PROCESS DESCRIPTION

As a preliminary step in the development of an environmental impact statement (EIS), regulations established by the Council on Environmental Quality (40 CFR 1501.7) and the U.S. Department of Energy (DOE) require "an early and open process for determining the scope of issues to be addressed and for identifying the significant issues related to a proposed action." The purpose of this scoping process is: (1) to inform the public about a proposed action and the alternatives being considered and (2) to identify and/or clarify those issues considered most relevant by the public.

On February 22, 1999, DOE published in the *Federal Register* a Notice of Intent to prepare an EIS for the treatment of sodium-bonded spent nuclear fuel (SBSNF EIS). As shown in **Figure A–1**, the scoping process is one of the opportunities for public involvement required as part of the National Environmental Policy Act (NEPA) process. The Notice of Intent listed the alternatives and issues initially identified by DOE for evaluation in the EIS. Members of the public, civic leaders, and other interested parties were invited to comment on these issues and to suggest additional issues that should be considered in the EIS. The Notice of Intent also informed the public that comments on the proposed action could be communicated via U.S. mail, a special DOE web site on the Internet, a toll-free phone line, a toll-free fax line, or in person at one of four public meetings.

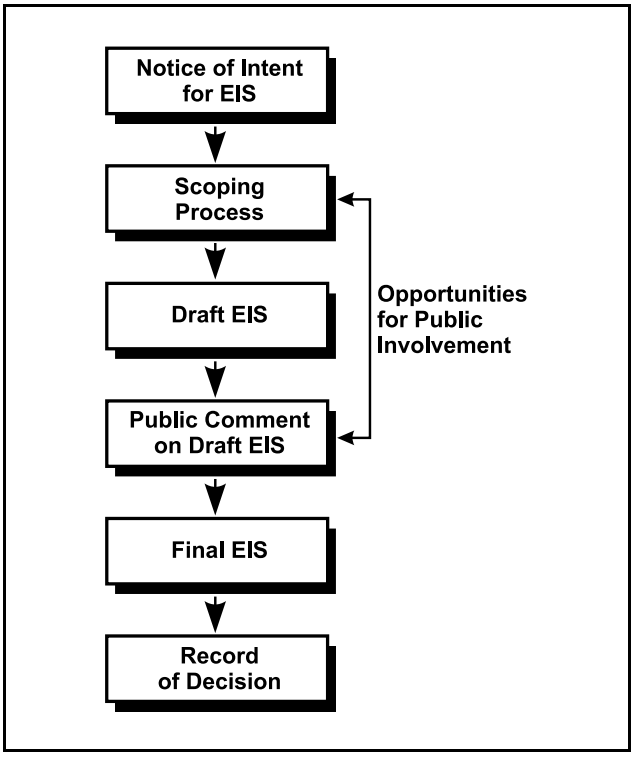

Figure A–1 NEPA Process

Four public scoping meetings were held at locations in Idaho, South Carolina, and Virginia, near the Washington, DC, metropolitan area. The first public meeting was attended by about 60 members of the public and was held in Idaho Falls, Idaho, on March 9, 1999. The second meeting was held in Boise, Idaho, on March 11, 1999, and was attended by about 7 members of the public. Approximately 10 members of the public attended the third meeting, which was held in North Augusta, South Carolina, on March 15, 1999. The fourth meeting was held in Arlington, Virginia, on March 18, 1999, and was attended by about 8 members of the public.

As a result of previous experience and positive responses from attendees of other DOE/NEPA public meetings and hearings, DOE chose an interactive format for the scoping meetings. Each meeting began with a presentation by a DOE representative who explained the proposed action. Afterwards, an impartial facilitator opened the floor to questions, comments, and concerns from the audience. DOE and national laboratory personnel were available to respond to the questions and comments as needed. A court reporter was provided at each of the meetings to record the oral comments, and personnel were available to receive any written statements or comments that were submitted at the meetings. In addition, the public was encouraged to submit written or verbal comments via letters, the DOE Internet web site, the toll-free phone line, or the toll-free fax line until the end of the scoping period on April 8, 1999 (45 days after publication of the Notice of Intent).

It should be noted that, for EIS public scoping purposes, a comment is defined as a single statement or opinion concerning a specific issue. Any statement may contain many separate comments. Most of the verbal and written public statements submitted during the EIS scoping period contained multiple comments on various individual issues.

A.2 SCOPING PROCESS RESULTS

Approximately 228 comments were received from citizens, interested groups, and other stakeholders during the public scoping comment period. Of these, 109 were verbal comments made during the public meetings. The remainder of the comments (119) either were submitted at the public meetings in written form or were received via mail, Internet, fax, or phone during the scoping comment period. In cases where a single commentor provided similar or identical comments both orally at the public meetings and in writing, each individual comment was counted once (i.e., repetitions were not counted).

Many members of the public who spoke at the public meetings asked specific, technical questions about the proposed action that were answered by the DOE and national laboratory representatives at each meeting. Primary areas of interest included:

- Waste volume reduction
- Nature of the spent nuclear fuel wastes at Argonne National Laboratory-West (ANL-W)
- Waste forms characterization
- Waste disposition and qualification (repository acceptance criteria)
- Plutonium-uranium extraction (PUREX)
- Use of facilities
- Nonproliferation impacts
- Transportation
- Demonstration project

The comments obtained through the overall public scoping process addressed several key issues. A number of persons commented on the schedule for the EIS. Many said the Draft EIS should not be issued for public comment before publication of other reports, such as a waste qualification assessment from the National Research Council; the National Academy of Science's Independent Assessment Final Report on the demonstration project; a nonproliferation assessment report by the DOE Office of Nonproliferation and National Security; and an independent study of the costs of the proposed action. Several commentors also said this EIS is premature because the demonstration project will not be completed until after the Draft EIS is published.

Several commentors asked that the EIS include information about the costs of the proposed action and all of the technology alternatives under consideration. Other commentors stated the public should have an opportunity to comment on DOE's ongoing independent nonproliferation assessment within the same time frame as the Draft EIS, or that this EIS should be delayed until the nonproliferation assessment is publicly

available. Some suggested the nonproliferation assessment be included in the EIS. A few commentors expressed the opinion that electrometallurgical treatment of spent nuclear fuels is a proliferation-prone technology.

Waste was another issue that was frequently cited. Many waste-related comments included opinions about whether low-enriched uranium, plutonium, noble metals, and other components of the waste stream should be viewed as waste or potentially valuable resources. Several commentors asked that the EIS clarify which specific waste forms would be generated by the treatment processes. Others said the EIS should clarify whether the waste would remain at the Savannah River Site (SRS) after processing or be returned to Idaho if the PUREX process were used. Some commentors argued that the electrometallurgical treatment alternatives would not reduce the volume of waste to be stored in a repository. A few questioned how DOE can ensure the waste will meet the acceptance criteria for a repository when no one knows what those criteria will be—or if there will be any repository at all. A few others recommended that the EIS evaluate the PUREX process before it is shut down to ensure that the waste forms resulting from electrometallurgical treatment are as good as the borosilicate glass that is being prepared for the geologic repository.

Regarding the alternative technologies being evaluated as part of this EIS, the commentors generally agreed that DOE should evaluate in detail all of the alternative technologies that potentially could meet DOE's treatment and management needs—even those that DOE considers less technologically mature. Several commentors expressed the opinion that DOE already has made a technology decision in favor of electrometallurgical treatment, but that other alternative new technologies should not be dismissed because of a lack of knowledge about them. Some asked that the EIS: (1) explain how DOE can consider the PUREX process a reasonable alternative when, historically, it could not handle sodium-bonded spent nuclear fuel, and (2) evaluate whether changes in the PUREX process would be needed to accommodate sodium-bonded spent nuclear fuel. A few commentors suggested the EIS should analyze blanket and driver fuels separately, since they have different chemical and radiological characteristics and different treatments might be warranted.

Comments concerning environment, safety, and health issues were comparatively few, as were comments about transportation safety and security. A spokesman for the Shoshone-Bannock Tribe, which considers the Idaho National Engineering and Environmental Laboratory (INEEL) land to be part of their original territory, expressed confidence that the proposed electrometallurgical treatment process would not impact the land's cultural resources or native species. Other commentors wanted the EIS to explain whether there were any environmental threats associated with continued storage of the spent nuclear fuel in Idaho and the nature of the environmental impacts of all the alternative technologies listed in the Notice of Intent. Transportation-related comments were rare, but reflected some public concern about the safety and security of transporting spent nuclear fuel and other waste products over long distances.

Some commentors simply opposed the proposed action as a waste of money or an example of corporate welfare. Others stated that DOE already has determined its choice of alternatives and is merely engaging in a show process that meets the bare minimum legal requirements.

A.3 COMMENT DISPOSITION AND ISSUE IDENTIFICATION

Comments received during the scoping period were systematically reviewed and evaluated to determine whether the issues raised fell within or outside the scope of the EIS as contemplated in the Notice of Intent (64 FR 8553). Where possible, comments on similar or related topics were grouped under comment categories as a means of summarizing the comments. An attempt was made to avoid duplication in counting the number of comments received; however, comments submitted in both written and verbal form may have been counted twice in some cases. The comment categories were used to identify specific issues of public concern. After the issues were identified, they were evaluated to determine whether they fell within or outside the scope of the EIS. Some issues were found to be already "in scope," i.e., they were among the EIS issues already

identified by DOE for inclusion in the EIS. **Table A–1** lists these issues along with references to the specific EIS sections where each issue is discussed.

Table A–1 Issues Already Included in the EIS (In Scope)

Issues	*No. of Comments*	*EIS References*
The EIS should specify what the stable sodium compound technology alternative is and how it is derived	1	Section 2.3
The EIS should explain how the PUREX process, which could not handle sodium-bonded spent nuclear fuel before [in the aluminum-bonded Spent Nuclear Fuel EIS], now is considered an acceptable alternative for the proposed action.	1	Section 2.3.2
DOE says the Savannah River PUREX process will handle the sodium, but more research will be needed to improve the sodium-handling ability of the PUREX process. If research is needed to make the Savannah River PUREX process work for sodium, DOE might as well do research in Idaho in some different process. I'm in favor of Idaho; DOE should be cautious about talking PUREX and sodium-bonded stuff.	2	Section 2.3.2
The EIS should evaluate whether changes in the PUREX process would be needed to accommodate this material. After the plutonium is separated in the PUREX process, the high-level radioactive waste will be essentially no different from what is being handled now—no new ground broken, no new qualifications in materials. The uranium also will be unchanged after it goes through the PUREX process. The same with plutonium; if it goes through the PUREX, you haven't changed the existing process. So people should not get excited about this new stuff coming in—we've handled it for fifty years.	2	Sections 2.3.2 and 2.5.4
The EIS should analyze blanket and driver fuels separately since they have different chemical and radiological characteristics and different treatments might be warranted for each.	6	Sections 2.5, 4.3, 4.4, 4.5, 4.6, 4.7, and 4.8.
We're glad to see the melt and dilute alternative, a nonseparation technology, is being considered in this EIS.	1	Sections 2.5.5, 4.6, 4.7, and 4.8
The EIS should not assume that everything is known about the C-22 canister's performance in all conditions that could affect disposal; therefore, this canister should not be the only type of containment considered for encapsulation.	1	Section 4.12
The EIS should clarify whether, if the PUREX process were used, the waste would remain at the Savannah River Site after processing or be returned to Idaho.	4	Section 4.5.6
The EIS must clarify whether DOE considers low-enriched uranium to be a waste.	1	Section 4.3
The EIS must clarify which specific waste form will be used before any spent nuclear fuel is treated.	2	Sections 4.2.6, 4.3.6, 4.4.6, 4.5.6, 4.7.6, and 4.8.6
Will all of the technology alternatives shown on the poster handout be evaluated in this EIS? Has DOE made the ultimate decision concerning which alternatives will be evaluated in this EIS?	1	Section 2.5
Is there anything different about handling the materials involved in this EIS that would make the chloride volatility alternative more viable than was found for aluminum enriched uranium fuels? Hasn't this alternative already been evaluated in another EIS?	1	Section 2.7
The chemistry of the electrometallurgical process and the other alternatives should be provided.	1	Appendix C

Issues	*No. of Comments*	*EIS References*
Blanket fuel can be mechanically declad and stripped of elemental sodium without the need for dissolution and separation of the solid fuel. While the minimal discussion in DOE documents stresses the difficulties of this approach, it is extremely hard to believe that the difficulties, costs, and risks of such minimal processing would be greater than those incurred by electrometallurgical treatment of the fuel. It is difficult to understand DOE's argument that this option is not as mature as electrometallurgical treatment, since it was employed for 15 times as many blanket rods as those that ultimately will be processed during the electrometallurgical treatment demonstration.	1	Section 2.5.3
Both DOE and the U.S. Nuclear Regulatory Commission (NRC) underplay the significance of the mechanical decladding of 17 metric tons of heavy metal of blanket fuel. NRC refers to this as a small amount even though it is 75 percent of the existing Experimental Breeder Reactor-II (EBR-II) blanket inventory. This is only one example of the loaded language in the Notice of Intent and its reference documents that strongly suggests the mechanical decladding alternative is not being fairly evaluated.	1	Section 2.5.3
All alternatives investigated and considered in this EIS should be viable and demonstrable. Unproven technologies preclude realistic bounding of environmental impacts and consequently do not appear to meet the intent of NEPA by providing implementable alternatives.	1	Section 2.5
Coordinate development of this EIS with others that are currently in preparation, including the Idaho National Engineering and Environmental Laboratory (INEEL) High Level Waste and Facilities Disposition, the Savannah River Spent Fuel, and the Yucca Mountain EISs.	3	Section 1.6
What are the plans for treatment of sodium-based fuel located at the other sites (about 2 percent of inventory)?	1	Section 2.2
Political decisions, such as the Idaho Settlement Agreement (which says that spent nuclear fuel must be out of Idaho by 2035), should not preclude any of the No Action Alternatives from being considered.	1	Sections 2.5.1, 4.2, and 4.12
I was pleased to hear you say you were looking at several options connected to the No Action [alternative].	1	Sections 2.5.1 and 4.2
The EIS should be specific about the stable compound of sodium and how that makes it like table salt (i.e., not a problem).	1	Appendix C and Section 2.3
How does this EIS relate to other EISs for treatment and disposal of other spent nuclear fuel types?	1	Section 1.6
What is the enrichment of the uranium?	1	Section 2.2.1
DOE should consider whether adequate information exists to allow estimation of bounding impacts for at least one treatment alternative in addition to the PUREX process at the Savannah River Site, the proposed electrometallurgical treatment at Argonne National Laboratory-West (ANL-W), and the No Action Alternative. Instead of dismissing various treatment alternatives from further analysis, DOE should use existing information about those alternatives to support evaluation of as many treatment alternatives as possible. For example, the processing experience at Idaho Nuclear Technology and Engineering Center (INTEC) of the driver fuel using the PUREX-type process might be used in the analysis of the PUREX process at Savannah River.	1	Sections 2.5.3, 2.5.5, 4.4, 4.6, 4.7, and 4.8
To support public review of the alternatives under consideration, the EIS should offer complete descriptions of how each alternative would be implemented.	1	Appendix C and Section 2.3

Issues	*No. of Comments*	*EIS References*
Each alternative should include full descriptions of all materials (including wastes) resulting from treatment; proposed handling of all materials used in the treatment process; environmental impacts; measures to provide environmental protection; measures to ensure worker and public safety; facilities needed; full and complete discussion of waste handling facilities, magnitude and characteristics of the waste streams, type and amount of storage, and ultimate disposal method and location.	1	Sections 4.2, 4.3, 4.4, 4.5, 4.6, 4.7, and 4.8
The EIS should provide bounding estimates of the size, frequency, and number of expected shipments of products leaving Idaho on an annual basis.	1	Section 4.10
The EIS should provide bounding estimates of the duration of time that INEEL would store any products before shipment elsewhere after treatment.	1	Sections 4.2.6, 4.3.6, 4.6, 5.6, 7.1, and 8.0
Preparation of the EIS and the related decision-making process should be coordinated with related environmental documentation being prepared to ensure they are based on common data and common planning assumptions.	1	Section 1.6
The EIS should deal with disposition of all the waste streams resulting from this proposed action.	2	Sections 2.8, 4.2.6, 4.3.6, 4.4.6, 4.5.6, 4.6.6, 4.7.6, and 4.8.6
To help the public understand DOE's rationale for moving forward with this decision, the EIS should describe how each treatment alternative would address the waste acceptance criteria for resulting waste products destined for disposal at current and planned disposal facilities.	1	Sections 2.8 and 4.12
The Draft EIS should include a complete subject index and not just an alphabetically arranged list of headings.	1	Chapter 9
DOE should coordinate the related projects [e.g., the Idaho High-Level and Facilities EIS; the Management of Savannah River Spent Nuclear Fuel EIS; and the Geological Disposal Repository for Spent Nuclear Fuel and High-Level Waste at Yucca Mountain, Nevada, EIS] to support consistent, coordinated decision-making.	1	Section 1.6

Additional issues were added to the scope of the EIS as a result of the public scoping process. These issues are listed in **Table A-2**.

Table A–2 Issues Added to the Scope of the EIS

Issues	*No. of Comments*	*EIS References*
Analyses related to the No Action Alternative should include the environmental consequences of not doing anything...and [this alternative] should not be written off because somebody made a political decision that this stuff will be out of Idaho by 2035.	1	Section 4.2
The proposed structure of the EIS as described in the Notice of Intent is inconsistent with DOE's approach to spent nuclear fuel management at other sites and prematurely promotes a preferred option for managing sodium-bonded spent nuclear fuel. By presuming the proposed action is electrometallurgical treatment, the proposed structure of the EIS effectively establishes this treatment as the preferred alternative for stabilization of this material. While it is reasonable to rule out obviously impractical alternatives in the scoping process, several of the alternatives described in the Notice of Intent are technically viable and should not be prematurely dismissed.	3	Sections 1.2, 1.3, 1.4, and 2.5

Issues	*No. of Comments*	*EIS References*
DOE should consider the possibility of using different treatment processes for treatment of the driver fuel and the blanket fuel. Could the driver fuel be handled as part of the ongoing demonstration? Treatment alternatives for the blanket fuel could conceivably include direct disposal, as it is not yet clear that it will require treatment before disposal.	1	Sections 2.5.3, 2.5.4, 2.5.5, and 2.5.6
The three alternatives presented for treatment of the EBR-II fuel are the most reasonable ones politically available, namely (1) separate the highly enriched uranium and make the other materials into a ceramic using a hot isostatic press, or (2) separate both the uranium and plutonium using the PUREX process at the Savannah River Site and...vitrify the wastes, or (3) direct burial.	1	Sections 2.5, 4.2, 4.3, and 4.4

DOE responded to all issues raised during the scoping period. Many of the public issues were not analyzed for a specific reason or were determined to be outside the scope of the EIS. These issues are listed in **Table A–3**. Corresponding responses from DOE also are provided in Table A–3 to explain why each issue was not analyzed.

Table A–3 Other Issues Considered

Issues	*No. of Comments*	*DOE Responses*
Costs		
The public needs information about the cost of the proposed action and the costs of the other technology alternatives before it can adequately comment on the EIS.	6	Information on cost will be made available to the public via the Cost Analysis Report, which will be issued during the Draft EIS public comment period.
This program is not worth the money it will cost.	1	Information on cost can be found in the Cost Analysis Report which, along with the EIS, will factor into the Record of Decision.
The cost assessment has to be part of the EIS.	2	Although the cost assessment is not part of the EIS, it has been prepared concurrently with the EIS. The Cost Analysis Report, along with the EIS, will factor into the Record of Decision.
If you don't account for the low-enriched uranium stream, your cost estimates are going to be wrong or at least off. If you don't have a disposition scenario, you have to look at the long-term economic and environmental storage costs that will belong to DOE for a long time.	2	The environmental impacts and cost of storage of the low-enriched uranium stream have been analyzed in the EIS and Cost Analysis Report, respectively.
We think that combining the research and development efforts on these two different types of fuel [blanket and driver] might lead to considerable cost savings.	1	If an alternative technology is chosen that could treat both the driver and blanket fuel, research and development efforts would be combined, as they were for electrometallurgical treatment research and development.
As Savannah River has a huge vitrification facility and that technology already is available, DOE should compare the costs of vitrification with the costs of the PUREX process.	1	The vitrification facility at the Savannah River Site treats the high-level radioactive waste that results from PUREX processing. The two are not independent. The cost of vitrification will be included in the cost of the PUREX alternative in the Cost Analysis Report. Direct vitrification of sodium-bonded spent nuclear fuel, however, is not technically feasible.

Issues	*No. of Comments*	*DOE Responses*
Cost analysis should include: (1) program costs so far in detail, including whether these costs were for pyroprocessing or for the EBR-II to shut down; (2) how much it would cost to close out the program at the end of the test, including decommissioning the machinery and dealing with all the waste streams (such as low enriched uranium); (3) what it would cost to scale-up the program, including commissioning and dealing with all waste streams at the end of the scale-up.	1	The Cost Analysis Report does not include EBR-II shutdown costs. The Cost Analysis Report includes the cost of any new machinery, if needed; treating the sodium-bonded spent nuclear fuel; deactivating machinery; and dealing with the waste streams. The low-enriched uranium product is not a waste. Its disposition will be the subject of a future NEPA review, however, the cost of storage of the low-enriched uranium is included in the cost analysis report.
The EIS should include the cost of transportation if this stuff is moved across country from Idaho to South Carolina and then from South Carolina to wherever.	1	The cost of offsite and onsite transportation is included in the Cost Analysis Report.
Environment, Safety, and Health		
The Shoshone-Bannock Tribe considers the INEEL land to be part of their original territory and believes the electrometallurgical treatment process will not impact the land's cultural resources or native species and will make the best uses of these resources.	1	The commentor's support for the electrometallurgical technology is acknowledged.
DOE should explain the environmental considerations that are pushing this EIS to completion in such a short period of time, including the environmental threats of continuing to store the EBR-II spent nuclear fuel in Idaho, if any. Then, DOE should compare these environmental threats with the R&D schedule for all the alternative technologies being considered, especially the nonseparation technologies.	1	The purpose and need for agency action is discussed in Section 1.2. Under the No Action Alternative, the Department may decide to continue to store the sodium-bonded spent nuclear fuel indefinitely, or until research and development of an alternative treatment technology is successfully completed.
DOE should be able to provide the environmental impacts for all of the alternative technologies listed in the Notice of Intent; they should not be dismissed because DOE does not know enough about them.	1	Alternative technologies were not dismissed solely based on the lack of available information on the respective technologies. As discussed on Section 2.6, chloride volatility was dismissed due to the potentially significant (in comparison to other treatment technologies) occupational and public risks from the volatilization of fission products and chloride gas.
Nonproliferation		
Nonproliferation should not be addressed in a separate report; the nonproliferation assessment should be part of the EIS. Short-circuiting the nonproliferation analysis is particularly egregious in light of the pledge in the Notice of Intent to include this assessment in the draft EIS and the existence of such a DOE assessment from December 1998.	3	The Notice of Intent stated, " The combination of the information contained in the Draft EIS, the public comment in response to the Draft EIS, and the nonproliferation impacts assessment report will enable the Department to make a sound decision..." Although the nonproliferation report is separate from the EIS, it will fully analyze the nonproliferation impacts of the alternatives in the EIS.
The public should have an opportunity to comment on the ongoing nonproliferation assessment, and the assessment should be publicly available before the comment period is closed on this EIS.	9	The report will be available to the public prior to the end of the public comment period for this Draft EIS. However, the nonproliferation report will be issued as a final document.

Issues	*No. of Comments*	*DOE Responses*
The public needs information about the nonproliferation impacts of the proposed action before it can comment on the EIS.	1	The nonproliferation report will be available to the public prior to the end of the comment period for this Draft EIS.
The EIS should not be released until nonproliferation concerns no longer are being debated; there is a potential for exporting this technology.	1	The nonproliferation report will be available to the public prior to the end of the comment period for this Draft EIS.
Given that obtaining fuel material is the greatest hurdle to producing nuclear weapons, DOE should take nonproliferation concerns about small-scale reprocessing technologies like pyroprocessing more seriously and give them greater weight in its decision-making.	2	DOE is concerned with the nonproliferation impacts of all of its proposed actions. It is for this reason that a separate nonproliferation impacts assessment report will be prepared specifically to address the alternatives under consideration.
Pyroprocessing is a proliferation-prone technology. For example, although plutonium no longer would be separated as a separate step in the EBR-II treatment, the original pyroprocessing technology was intended to remove plutonium and actinide components in a liquid cadmium cathode, and that option is always there.	4	DOE has conducted four independent nonproliferation assessments of electrometallurgical technology over the past 11 years. A new assessment that addresses the alternatives under consideration for treating sodium-bonded spent nuclear fuel is being conducted concurrently with the EIS and the report will be available for public review. Previous assessments have concluded that electrometallurgical technology was not capable of separating plutonium in a form that would be suitable for weapons. Development of the liquid cadmium cathode was canceled before significant engineering issues were resolved. No liquid-cadmium cathode was ever completed for the electrorefiners used in the Fuel Conditioning Facility, where the spent nuclear fuel treatment would take place under the preferred alternative.
Pyroprocessing will continue to search for other missions before the issue of whether it can be shut down and decommissioned on a timely basis is decided. Use of pyroprocessing should be “nipped in the bud” because of nonproliferation concerns.	1	Electrometallurgical treatment technology is a promising technology for the management of spent nuclear fuel. DOE is considering applying this technology for the management of some or all of its sodium-bonded spent nuclear fuel at sometime in the near future. DOE is conducting a nonproliferation assessment that focuses on the application of electrometallurgical and alternative treatment technologies to sodium-bonded spent nuclear fuel. This new assessment will be made available to the public during the Draft EIS public comment period. Previous nonproliferation assessments have found electrometallurgical technology to be in accordance with the U.S. nuclear nonproliferation policy for the specific applications considered.
The Savannah River nonproliferation assessment states that pyroprocessing can be modified to produce plutonium. This modification may not be easy, but it would be easier than building an entire PUREX facility or adding such a capability to any of the other nonseparation technology options—and it would certainly be of interest to rogue states who are interested in producing nuclear weapons.	3	The modification referred to in the Savannah River nonproliferation assessment involves adding a proven aqueous process such as PUREX onto the electrometallurgical process. Because the aqueous processes would be incompatible with the dry inert atmosphere required by the electrometallurgical process, a separate facility would be required. If a nation bent on weapons production had this capability, it could separate weapons-usable plutonium directly from spent nuclear fuel or plutonium production targets without the need for the electrometallurgical process equipment.
This program is inconsistent with the present U.S. position on reprocessing. The United States should not be funding new separation technologies.	2	The DOE Office of Arms Control and Nonproliferation will assess the nonproliferation impacts of the alternative treatment technologies under consideration in this EIS in a separate report to determine if the alternatives are consistent with U.S. nonproliferation policy and goals.

Issues	No. of Comments	DOE Responses
Pyroprocessing is reprocessing. MacArthur Prize Fellowship winner Frank Von Hippel and Professor James Warf, inventor of several reprocessing technologies, underscore this fact and express concern about the nuclear nonproliferation impacts of pyroprocessing: "...because pyroprocessing facilities are more compact than conventional facilities, they are easier to conceal. The world would become a more dangerous place."	2	In a nonproliferation assessment conducted for DOE in 1992, a panel of experts stated that there was no reason to conclude that electrometallurgical process facilities would be any easier to conceal than a conventional reprocessing plant. The electrometallurgical process requires a large heavily shielded hot cell with highly purified argon atmosphere and specialized process equipment.
While the Notice of Intent states that DOE has no plans to apply this technology (electrometallurgical treatment) to any other types of spent nuclear fuel, it clearly leaves the door open for other applications and raises the concern that ANL-W will continue to hunt for other materials that can be used to keep the electrometallurgical treatment apparatus operating after the sodium-bonded fuel campaigns are completed, or even to justify construction of new facilities. This open-ended approach... has severe implications for nonproliferation.	1	Electrometallurgical treatment technology is a promising technology for the management of spent nuclear fuel. DOE is considering applying this technology for the management of some or all of its sodium-bonded spent nuclear fuel at sometime in the near future. DOE is conducting a nonproliferation assessment that addresses the application of electrometallurgical technology, as well as the other alternatives under consideration, to sodium-bonded spent nuclear fuel. This new assessment will be made available to the public during the Draft EIS comment period. Previous nonproliferation assessments have found electrometallurgical technology to be in accordance with U.S. nuclear nonproliferation policy for the specific applications considered.
The electrometallurgical treatment process can be modified to produce plutonium. Moreover, there are no plans to place ANL-W facilities under international safeguards. Therefore, from an arms control standpoint, the Fuel Conditioning Facility must be regarded as a dual-use facility capable of being operated as a reprocessing plant. In view of this, it is highly advisable to prepare for timely shutdown of the facility when any campaigns for which it is determined to be essential (if any) are completed.	1	DOE has conducted four independent nonproliferation assessments of electrometallurgical technology. A new assessment that focuses on the application of electrometallurgical technology to sodium-bonded spent nuclear fuel is being conducted concurrently with the EIS and will be available for public review. Previous assessments have concluded that electrometallurgical technology was not capable of separation plutonium in a form that would be suitable for weapons. Development of the liquid cadmium cathode was canceled before significant engineering issues were resolved. No liquid-cadmium cathode was ever completed for the electrorefiners used in the Fuel Conditioning Facility, where the spent nuclear fuel treatment would take place. The Fuel Conditioning Facility operates under DOE safeguards and security requirements.
DOE should make the nonproliferation assessment of the proposed electrometallurgical treatment action a part of the NEPA process. The assessment should cover not only the proposed action, but the broader proliferation implications of continued research and development of this reprocessing technology.	1	DOE is concerned with the nonproliferation impacts of all of its proposed actions. It is for this reason that a separate nonproliferation impacts assessment report will be prepared that will specifically address electrometallurgical treatment technology. DOE will consider this report in its decision-making process.
One issue that should be covered in the nonproliferation assessment is whether promotion of electrometallurgical treatment as a "proliferation-resistant" technology ultimately will prove harmful to U.S. nonproliferation goals. If this designation does not have a sound technical basis (as we believe it does not), the ultimate result will be an increased danger of proliferation.	1	DOE is concerned with the nonproliferation impacts of all of its proposed actions. It is for this reason that a separate nonproliferation impacts assessment report will be prepared that will specifically address electrometallurgical treatment technology.

Issues	*No. of Comments*	*DOE Responses*
For nations that reprocess spent nuclear fuel, switching to electrometallurgical treatment may enable them to argue that their current safeguards burden should be relaxed.	1	Prior to the export, to a foreign nation, of any technology that may have nonproliferation impacts, the Department assesses the impacts, if any, to ensure that U.S. nonproliferation goals are met.
The EIS should include a detailed, thorough analysis of the weapons proliferation implications of each treatment alternative.	1	DOE's Office of Arms Control and Nonproliferation is preparing a report on the proliferation implications of each treatment alternative. This new assessment will be made available to the public during the Draft EIS public comment period.
One of the justifications for proceeding with the mixed oxide (MOX) proposal was to satisfy the international community's desire to forestall the ready availability of weapons-grade materials. This proposal creates the ready availability of those same materials. The EIS must account for this apparent contradiction of policy and address the measures intended to safeguard the byproduct(s) of this process.	1	The Department recognizes the need to identify nonproliferation impacts of the treatment technologies. Therefore, the DOE Office of Arms Control and Nonproliferation will assess the nonproliferation impacts of the alternative treatment technologies in a report, separate from this EIS.
Alternative Technologies		
The EIS should re-evaluate and address plutonium separation; it would be less expensive to separate the plutonium because that would mean the repository would need to last only 300 years, instead of 10,000.	1	The EIS is evaluating plutonium separation as a part of the PUREX option for the blanket fuel. Plutonium separation would not guarantee a different performance requirement for the repository, since the long-term requirements are driven by other radioisotopes.
DOE has already made up its mind. Other methods than pyroprocessing haven't been given sufficient attention. These alternative methods continually are slated as "not developed enough." Yet in three years, there hasn't been much attention given to developing them to a point where they could be reviewed fairly. Alternative new technologies should not be dismissed due to lack of knowledge about them.	4	In response to public comments, DOE has reformulated the scope of the EIS to address more generally the treatment and management of DOE sodium-bonded spent nuclear fuel. Information developed in the course of preparing this EIS suggests that alternative technologies may have certain advantages (e.g., cost) for some or all of the fuel. Accordingly, DOE has no preferred alternative at this time. With respect to less developed technologies, in the EIS DOE is considering an option under the No Action Alternative in which the Department would actively conduct research and development of promising new technologies.
The Notice of Intent is biased toward electrometallurgical treatment because it disparages the other alternatives, which are tacked on just to satisfy a legal requirement. The program is taking the wrong approach toward electrometallurgical treatment because the alternatives are not really valid.	2	In response to public comments, DOE has reformulated the scope of the EIS to address more generally the treatment and management of DOE sodium-bonded spent nuclear fuel. Information developed in the course of preparing this EIS suggests that alternative technologies may have certain advantages (e.g., cost) for some or all of the fuel. Accordingly, DOE has no preferred alternative at this time. With respect to less developed technologies, in the EIS DOE is considering an option under the No Action Alternative in which the Department would actively conduct research and development of promising new technologies.
There is a danger that other technologies will be abandoned if, as it appears, DOE is rushing to produce waste or materials to go to a waste site somewhere or is pushing pyroprocessing ahead of other technologies.	1	In response to public comment, DOE has restructured the alternatives to be considered, including an option of deferring a treatment decision and developing alternative technologies.
The EIS should identify the alternative sites if Idaho is not selected and which sites will be needed for the alternative technologies.	1	The EIS has identified the Savannah River Site as an alternative site for the PUREX and melt and dilute alternatives.

Issues	*No. of Comments*	*DOE Responses*
The EIS should include a stabilization timeline on environmental grounds for EBR-II spent nuclear fuel. The timeline should include the time needed to more fully develop other alternatives.	2	EBR-II spent nuclear fuel must be removed from the State of Idaho by the year 2035 in accordance with a DOE/State of Idaho Settlement Agreement, signed in October of 1995. DOE believes that treatment to remove sodium from EBR-II and other spent nuclear fuel will make acceptance of this fuel in a national geologic repository much more likely.
Will the EIS look at the vitrification facility at INTEC?	1	The proposed Vitrification Facility at INTEC is not compatible with any of the proposed waste forms or metal fuel such as the EBR-II or Fermi-1 fuel. It is for this reason that DOE has not analyzed this facility in the EIS.
The EIS should address the size of the electrometallurgical treatment facility and whether the plant capacity is greater than needed for the proposed mission (more than 62 metric tons of heavy metal).	1	The plant capacity of the electrometallurgical treatment equipment as described in the preferred alternative is approximately 5 metric tons of heavy metal per year. It would therefore require 12 years to treat the entire 60-metric ton DOE sodium-bonded spent nuclear fuel inventory.
The Notice of Intent indicates that DOE has no plans to apply electrometallurgical treatment to any other spent nuclear fuel types, suggesting the plant would be decommissioned after completing the electrometallurgical treatment mission for sodium-bonded spent nuclear fuel. The EIS, therefore, should address the impacts of decommissioning the plant.	2	At this time, DOE has no intent to apply electrometallurgical treatment to any other spent nuclear fuel types. The electrometallurgical treatment process equipment is housed within a large multipurpose hot cell facility which has programmatic value to DOE, even in the absence of a spent nuclear fuel treatment program. Any specific electrometallurgical treatment equipment would be deactivated at the end of any treatment program; however, there are no plans to discontinue use of the hot cell facility.
Use a reactor or accelerator to fission the transuranic material.	1	This is not a reasonable alternative because the transuranic materials resulting from the electrometallurgical treatment process would require extensive additional processing before they would be suitable for fission in a reactor.
Adding another furnace and cathode to ANL-W's facility would both accelerate the processing and provide opportunities for new research.	1	The existing electrometallurgical treatment equipment would provide DOE an adequate processing rate for the sodium-bonded spent nuclear fuel inventory. New research would be accomplished with equipment in a nonradioactive laboratory environment.
Regarding the use of melt and dilute and Savannah River—the Savannah River process will not be sized or configured to handle INEEL fuels (which should be contrary to the Foreign Research Reactor Record of Decision). Melt and dilute at INEEL solely should be the alternative.	1	The sodium-bonded fuel would have its cladding and sodium removed before being placed in aluminum cans for shipment to the Savannah River Site, where the proposed melt and dilute process would take place. This pretreatment step would make the fuel compatible with the proposed Savannah River Site process.
Sodium is highly reactive with water/moisture, and this property could be taken advantage of by controlled reaction on a limited scale—exposing the sodium-bonded material to moisture. The sodium hydroxide formed could be neutralized with an appropriate acid, allowing the remaining spent nuclear fuel to loose its pyrophoric properties. Please address this in the EIS.	1	For those fuels in which the sodium can be exposed, the EIS describes a process for safely removing it by vacuum distillation. The process described in the comment would accelerate corrosion of the uranium, resulting in an unsafe pyrophoric condition.
DOE may want to consider an alternative that examines the relationship between the EBR-II fuel at INEEL and the high-level radioactive waste at the stabilization facility.	1	The proposed INEEL high-level radioactive waste management EIS is considering methods to manage the calcine that was produced from the reprocessing of DOE spent nuclear fuel at INTEC. With the decision to shutdown the reprocessing facilities, no processes are currently available that would make the sodium bonded fuel compatible with the calcine.

Issues	*No. of Comments*	*DOE Responses*
The fall 1996 National Research Council report on pyroprocessing at ANL states that even more time and money than originally planned will be needed to "achieve the program's objectives" and raises troubling questions about several aspects of the research itself. Later reports, unfortunately, do not specifically follow up on these concerns.	1	The Demonstration Project has addressed concerns that have been raised by the National Research Council. Their 1998 report has recognized the progress in the Demonstration and has stated it should continue to completion.
The fall 1996 National Research Council report raises serious concerns about several aspects of the research including a lack of coordination between ANL East and West. This lack of coordination and differing goals have led to duplicate efforts in at least one case and equipment failures. The report notes the lack of a "well-coordinated implementation plan between ANL East and West...."	1	The electrometallurgical demonstration project, which is nearing completion at ANL-W, has successfully met National Research Council criteria to date. The success of this demonstration project has been possible only through close coordination between scientists and engineers at ANL East and West.
The [fall 1996 National Research Council] report found that equipment is not performing at expected levels and separation efficiencies are lower than expected. This means that, so far, the basic goal of the pyroprocessing program—to separate the uranium from the rest of the irradiated fuel—has not been met.	1	In the spring 1998 status report, the National Research Council recognized the progress made in the demonstration and recommended that the demonstration be carried to completion.
Research on selected alternatives should have been carried out to support a defensible analysis of their feasibility in the EIS.	1	The alternatives to be analyzed in detail are described in Chapter 2 of the EIS. An analysis of their feasibility is included in this chapter.
DOE has not demonstrated there is a safety-based need to process the driver fuel by experimentally assessing the impact of elemental sodium on radionuclide leach rates.	1	DOE has proposed treatment to remove the sodium from sodium-bonded spent nuclear fuel to allow acceptance of this fuel in a national geologic repository. This is because sodium reacts with water in the environment to form corrosive sodium hydroxide solutions and potentially explosive hydrogen gas.
DOE should initiate a process similar to the Processing Needs Assessment to determine at the earliest possible date the "small quantities of certain spent nuclear fuels" that may be considered for electrometallurgical treatment in the future. Such an effort is essential for shutdown and decommissioning planning.	1	At this time DOE has no intent to apply electrometallurgical treatment to any other spent nuclear fuel types. If, during the sodium-bonded fuel treatment program, DOE finds another application for electrometallurgical treatment at ANL-W, the development of plans to deactivate the electrometallurgical treatment equipment at ANL-W would be delayed accordingly.
A study similar to the 1997-98 Processing Needs Assessment should be conducted to identify all materials in the DOE complex that might need reprocessing in the Savannah River Site canyons for stabilization purposes, thus limiting the universe of potential uses for the canyons and facilitating planning for their shutdown. A similar process should be conducted for the Fuel Conditioning Facility as part of this EIS process, with the opportunity for full public participation and comment.	1	The EIS is being coordinated with other DOE EIS documents and Records of Decision concerning complex-wide management of spent nuclear fuel. These EISs are described in Section 1.6 of this EIS.

Issues	*No. of Comments*	*DOE Responses*
It is unfortunate that the option of separating the plutonium along with the uranium by the electrometallurgical process could not have been considered. Although the resulting fissile material would only have been suitable for a fast-neutron reactor...at least we would not have the agony of worrying about putting this plutonium in a repository.	1	The electrometallurgical process cannot separate plutonium. Because of potential nonproliferation implications, the Department elected not develop the capability for electrometallurgical processing to produce any plutonium-bearing product. Plutonium separation is an integral part of alternative 3, PUREX processing of the blanket fuel at the Savannah River Site. However, removal of the plutonium would not significantly affect the long-term performance of the repository, which is driven by other radioisotopes.
Since the electrometallurgical method works, is ready to go, and is not expensive, it is in the public interest to get the fuel treatment job done rather than delay while developing some other method.	1	The commentor's support of the electrometallurgical treatment technology is acknowledged.
The addition of depleted uranium to the electrometallurgical treatment process is both a waste of depleted uranium and enriched uranium. Why add the depleted uranium?	1	Blending depleted uranium with the highly enriched uranium recovered from the spent EBR-II driver fuel results in low-enriched uranium. This step, which is consistent with U.S. nonproliferation policy, results in lower costs for storing and safeguarding the uranium. Because the uranium ingots still contain more enrichment than is required for commercial power reactor fuel, their potential economic value is not decreased. The Department currently stores more than 500,000 tons of depleted uranium for which no immediate use is planned. Using some 10 tons of this inventory for treating spent nuclear fuel would have no discernable impact.
Waste		
The EIS should address the disposal specifications for spent nuclear fuel, and DOE should make sure that, whatever technology is selected, the spent nuclear fuel will meet repository specifications. This determination should be made before the canyons are shut down to avoid precluding a way to get rid of the materials.	1	The ceramic and metal high-level radioactive waste forms that would be produced from the proposed action are expected to be at least as durable as the borosilicate glass high-level radioactive waste form. The design criteria for the national spent nuclear fuel repository include receipt and disposal of the borosilicate glass high-level radioactive waste.
The EIS should explain why stainless steel and noble metals are considered wastes and not potentially valuable resources.	1	The stainless steel and noble metals would be part of the metal high-level radioactive waste forms. High-level radioactive waste is a material that NRC has determined requires permanent isolation.
Waste characterization is a problem. Low enriched uranium is a problem-it's a waste not a product. The EIS should look at the long-term storage costs of uranium.	2	DOE does not consider low-enriched uranium to be a waste. No highly enriched uranium would result from any of the alternatives considered at INEEL.
Discussion of the low-enriched uranium stream must include a full analysis of what happens to this stream and when.	1	DOE has not made a decision concerning future uses for the low-enriched uranium other than that the low-enriched uranium would not be used for defense purposes.
Spent nuclear fuel is not a waste.	1	Spent nuclear fuel is a fuel that has been withdrawn from a nuclear reactor following irradiation; the constituent elements have not been separated for reprocessing.

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The project is being sold as a way to reduce the volume of waste to Yucca Mountain. It won't reduce actual volume; it will only increase floor space by putting ceramic and metal waste forms closer together while still avoiding criticality issues. That's where your 65 percent comes from. You don't have volume reduction; you just have split the waste into lots of different forms which you still have to find a home for. But the message that is getting out is that you will be sending a smaller by weight number of packages to Nevada.	3	Waste volumes, masses and disposal paths for all types of wastes are considered for the different alternatives in this EIS. The volume of high-level radioactive waste or spent nuclear fuel that would be sent to a geologic repository are some of the things considered in the waste management sections. The potential impact on different disposal sites is considered and discussed. However, the purpose and need for the proposed action is to treat and manage the spent fuel, not to reduce the volume of waste that eventually will be sent to a repository.
DOE does not know if electrometallurgical treatment wastes will meet the repository waste acceptance criteria. DOE does not know what those criteria will be—or if there will be any repository at all. Will the waste be acceptable? We need honest assumptions on the waste stream.	4	The repository waste acceptance criteria are still being developed. However, the ceramic and metal waste forms that would result from the electrometallurgical treatment process are expected to be accepted into the repository.
DOE should consider dealing with this high-level radioactive waste as part of the high-level radioactive waste being dealt with at INTEC.	1	The proposed INEEL high-level radioactive waste management EIS is considering methods to manage the calcine that was produced from the reprocessing DOE spent nuclear fuel at INTEC. With the decision to shutdown the reprocessing facilities, no processes are currently available that would make the sodium bonded fuel compatible with calcine. The restart of these facilities was considered and eliminated from the alternatives.
DOE admits to having no knowledge of the whereabouts of the documents pertaining to previous removal of the sodium bonding from 17 metric tons of EBR-II blanket fuel via mechanical decladding. Such mismanagement, if true, is of concern and should be investigated. We request that a greater effort be undertaken to find these documents and make them publicly available during the EIS period.	1	DOE has found the documents that describe the process, equipment, operating procedures and waste disposal paths for the decladding and sodium removal of the 17 metric tons of EBR-II blankets. These documents were considered during the selection of the proposed decladding and sodium removal alternatives.
DOE's plans for disposing of the low-enriched uranium created from this process—will it be stored as a waste or sold as a resource?	2	DOE has not made a decision concerning future uses for the low-enriched uranium produced by the electrometallurgical treatment other than the decision that the low-enriched uranium would not be used for defense purposes.
This program [electrometallurgical treatment] has no place in a sound nuclear waste management policy. Proponents of this program are.....making the problem worse not better. This program will increase the complexity and amount of nuclear waste generated at ANL. We do not support an expansion of this program and urge that it be terminated.	1	DOE believes that treating sodium-bonded spent nuclear fuel is in keeping with sound nuclear waste management. This is because the proposed action would reduce uncertainty regarding waste disposal. Also, the number of canisters that must be disposed of in a geologic repository is reduced. Further, ceramic and metal waste material is very durable and has been formulated to be unreactive in the environment.
If DOE creates high-level radioactive waste in a vitrified form, there will be three forms of high-level radioactive waste in one Idaho county (ceramic, metal, vitrified).	2	The statement is correct. Different waste streams often require different stabilization techniques. The ceramic, metal and vitrified waste forms are being developed because they are best suited for specific waste streams.

Issues	*No. of Comments*	*DOE Responses*
If this material won't meet the disposal specifications for the repository, a specification should be incorporated into the Record of Decision to say that DOE will look at this material and its proposed specifications before the canyons are shut down to ensure it is as good as the PUREX borosilicated glass that is being prepared for the Yucca Mountain repository.	1	DOE will consider the programmatic impacts including schedule and technical uncertainties such as availability and waste acceptance when a Record of Decision is made.
Since the waste acceptance criteria at Yucca Mountain currently is not confirmed, how do you intend to meet and store [the waste] for "road-ready" conditions?	1	The present goal is to place the spent nuclear fuel and high-level radioactive wastes at ANL-W in retrievable storage so that it can be shipped to the proposed packaging facility that will ship the INEEL DOE spent nuclear fuels to the repository. For the Savannah River Site alternatives, the high-level radioactive waste glass or melt and dilute product will be coordinated with these streams that will be produced at Savannah River Site.
Will planned dry storage have to be retreated later to meet acceptance criteria at Yucca Mountain?	1	The No Action alternative may require future treatment. The goal of the other alternatives is to put the waste in road ready condition without further treatment. The uncertainty in the final repository waste acceptance criteria is part of the programmatic considerations.
Uranium metal also is reactive; will it be treated before placement in a geologic depository?	1	Uranium metal is currently managed as part of the materials disposition program and is out of the scope of the EIS.
The Environmental Assessment contained ridiculous estimates of waste streams, especially the low-level radioactive waste streams. Actual information about wastes generated from the demonstration project should be released to the public for use in the EIS.	1	The actual waste generation rates for the demonstration project have been used to calculate estimates of waste streams in this EIS.
Previous National Research Council reports have concluded that several of the waste forms generated by this technology [pyroprocessing] would not be suitable for placement in a geologic repository. The fall 1996 National Research Council report raises serious concerns about the testing procedures used to determine whether one of the new waste forms will be suitable for placement in a geologic repository. Most troubling of all is the analysis of ANL's choice of test protocol. A key issue is the release of the radionuclides from the waste. The report notes that the test protocol focuses on a radionuclide release mechanism that is... "incorrect at best, and potentially misleading at worst."	1	In order to address the question on waste form qualification, DOE has asked the National Research Council to conduct a specific review on this subject. The report that discusses the results of this waste qualification review and the other NRC reports will be considered when a record of decision is formulated.
Since getting waste ready for a geologic repository is the justification for this project, it must not go forward until the waste produced by the demonstration project has been fully characterized, which will occur early in the next century.	1	The uncertainty and status of each waste or spent nuclear fuel characterization are part of the programmatic consideration when a record of decision is formulated.

Issues	*No. of Comments*	*DOE Responses*
Spent nuclear fuel must be removed by 2035 as a result of processing. One concern is that transuranic waste will go to the repository, but low-enriched uranium and highly enriched uranium will stay at INEEL.	1	No highly enriched uranium would result from any of the alternatives considered at INEEL. DOE has not made a decision concerning future uses for the low-enriched uranium other than the decision that the low-enriched uranium would not be used for defense purposes. DOE will compare all reasonable alternatives on the basis of cost, including the cost of long-term storage of materials.
Compare heat loading with the ceramic and metal waste forms to heat loading of the highly enriched uranium rods—are they comparable with commercial spent nuclear fuel?	1	As packaged for disposal in a geological repository, the heat loading for the ceramic and metal waste forms are higher than that for the highly enriched uranium fuel because of fissile material limits for disposal packages. These high-level radioactive waste packages in general have lower heat loads than commercial spent nuclear fuel. Heat load would not be a concern regarding potential disposal in a geologic repository.
Transportation		
These materials should not be transported throughout the United States.	1	It is DOE's intention to minimize transport of radioactive materials associated with its sodium-bonded spent nuclear fuel inventory wherever possible.
If the ultimate burial place for the high-level radioactive waste is 1,000 miles away instead of 2,000 miles away, is that fact insignificant to transportation?	1	Generally, the environmental impacts of transporting spent nuclear fuel and high-level radioactive waste are small and would not differ significantly under the example posed by the commentor. DOE recommends the commentor see the *Department of Energy Programmatic Spent Nuclear Fuel Management and Idaho National Engineering Laboratory Environmental Restoration and Waste Management Programs Final Environmental Impact Statement* for additional information on this subject.
The EIS should evaluate the potential for terrorism, especially during transportation.	2	The potential for terrorist acts involving material transports does not fall within the scope of this EIS.
Is it not known that, if the waste is sent to South Carolina [SRS], it will have to go somewhere else eventually; it won't stay in South Carolina?	1	As described in Section 2.5 of the EIS, Alternatives 3 and 5 would result in the storage of wastes or byproducts at SRS in South Carolina. For Alternative 3, the products from processing blanket fuel in the PUREX facility would be plutonium metal, borosilicate glass logs, and depleted uranium . For Alternative 5, the metal waste product from the blanket fuel melt and dilute process would be stored in the L Area at the Savannah River Site.
The EIS should provide bounding estimates of the size, frequency, and number of expected shipments of products coming into Idaho.	1	Chapter 4 and Appendix G of the EIS provide estimates of the size, frequency, and number of expected shipments of products coming into Idaho. The Record of Decision for the 1995 *Department of Energy Programmatic Spent Nuclear Fuel Management and Idaho National Engineering Laboratory Environmental Restoration and Waste Management Programs Final Environmental Impact Statement* also describes the size, frequency, and number of spent nuclear fuel shipments coming to Idaho.
DOE should develop an agreement with the Shoshone-Bannock Tribes to allow and appropriately manage the transport of any radioactive materials across the reservation.	1	Regardless of the alternative chosen, DOE will proceed in accordance with the DOE/Shoshone-Bannock Tribes Agreement-in-Principle, which covers notification and coordination of the transport of radioactive materials across the Fort Hall Reservation.

Issues	*No. of Comments*	*DOE Responses*
EIS Schedule		
This EIS may not be needed because the 1996 Environmental Assessment may be adequate.	1	DOE prepared an Environmental Assessment for the demonstration of electrometallurgical treatment on a limited amount(1.6 metric tons) of sodium-bonded spent nuclear fuel. In the May 15, 1996 Finding of No Significant Impact for the Environmental Assessment, DOE committed to prepare an EIS before applying the electrometallurgical treatment technology to the production-scale treatment of the sodium-bonded spent nuclear fuel inventory.
The Draft SBSNF EIS should not be issued for public comment before publication of relevant reports (e.g., waste qualification) from the National Research Council or the ongoing nonproliferation study. The schedule implies that DOE is not interested in incorporating the results from these studies into the EIS. Therefore, the timeline for the EIS should delay its completion until at least three months after completion of these studies.	5	The electrometallurgical treatment demonstration project is scheduled to conclude in August of 1999. At that time DOE will know if it has met the success criteria established by the National Research Council for the electrometallurgical treatment demonstration. Publication of the final report on the electrometallurgical treatment demonstration by the National Research Council may require a few months past the end of the demonstration project. DOE expects that the report will be available before it makes a decision on the management of the sodium-bonded spent nuclear fuel. DOE has prepared a nonproliferation impacts assessment report that addresses the treatment of sodium-bonded spent nuclear fuel.
This EIS is premature. The Draft SBSNF EIS should not be issued for public comment before publication of the National Academy of Science's Independent Assessment Final Report on the demonstration project, which probably won't be issued until October or November 1999. The National Academy of Sciences Final Report is answering the question, "Will it work," not, "Will it help?"	6	DOE believes that the results from the demonstration and the need to effectively utilize available resources justify the preparation of the EIS in parallel with the final demonstration reviews. The National Research Council has conducted ongoing reviews and issued status reports on the Demonstration Project. These reports are available for review and the final report will be considered when a record of decision is formulated.
DOE is premature in preparing this EIS because the demonstration project will not be completed until after the Draft EIS is published.	11	The electrometallurgical treatment demonstration project that began in June of 1996 is scheduled to conclude in August of 1999. At that time DOE will know if it has met the success criteria established by the National Research Council for the electrometallurgical treatment demonstration. DOE has obtained encouraging data from the demonstration to date, and is confident that the technology holds promise for the management of its sodium-bonded spent nuclear fuel inventory. Publication of the final report on the electrometallurgical treatment demonstration by the National Research Council may require a few months past the end of the demonstration project. DOE plans to make its decision in January of 2000 based on the NRC final report, and other factors such as cost, environmental consequences, and nonproliferation impacts.
DOE's willingness to proceed at this pace without even the completion of their demonstration project indicates the decision on pyroprocessing was made years ago.	2	DOE has made no decision on how the sodium-bonded spent nuclear fuel should be treated. The EIS addresses reasonable alternatives for treatment of this fuel.
More research and development should be completed before the Record of Decision on the alternatives.	1	DOE believes that enough is known about the alternatives to assess their environmental consequences in the EIS. DOE plans to make its decision on how to manage its sodium-bonded spent nuclear fuel in January 2000 based on such factors as technical feasibility, cost, environmental consequences, and nonproliferation impacts.

Issues	*No. of Comments*	*DOE Responses*
The EIS is premature in that there has not been enough time allowed to include the cost analysis.	1	A report comparing costs of the alternatives will be made available to the public during the public comment period for the Draft EIS.
We question the issuance of the Notice of Intent at this time and believe that it should be withdrawn pending compilation of all the technical documentation necessary to inform the scoping process.	1	DOE believes that adequate presentations, displays and written materials on the proposed action and alternatives were provided to the public during the scoping process.
Although there is a regulatory driver for removal of this fuel from Idaho, that is not until 2035, and budget maintenance does not justify going ahead with this process until concerns about its technical feasibility, cost-effectiveness, and potential for proliferation have been adequately addressed. I recommend that DOE provide compelling evidence that it is prudent to proceed with preparing an EIS at this time.	2	DOE believes that enough is known about the alternatives to assess their environmental consequences in the EIS. DOE plans to make its decision on how to manage its sodium-bonded spent nuclear fuel in January 2000 based on such factors as technical feasibility, cost, environmental consequences, and nonproliferation impacts.
Miscellaneous		
This activity could be viewed as corporate welfare which, whether true or not, always is a concern.	2	DOE has identified the purpose and need for the proposed action, which is found in Section 1.2 of the Draft EIS. Action is necessary for the responsible management of DOE's inventory of sodium-bonded spent nuclear fuel.
The intent of the agreement between the Governor of Idaho and DOE involves removing large amounts of radioactive materials, not just spent nuclear fuel.	1	The approximate 60 tons of sodium-bonded spent nuclear fuel currently stored in Idaho contains radioactive materials that cannot be reused, recycled, or disposed of in its current condition. Part of the intent of DOE's proposal is to prepare these materials for disposal or possible reuse for commercial purposes.
If a source is referenced in the EIS, it should be summarized in the EIS (e.g., EAR in the Depleted Uranium Hexafluoride Programmatic EIS).	1	Some reference documents are very large and difficult to summarize. Where practical, DOE has provided a brief summary of reference documents in the EIS.
DOE is not going to consider public comments; instead it is engaging in a show process that meets the bare minimum legal requirements.	1	DOE is considering and will continue to consider public comments in its sodium-bonded spent nuclear fuel management decision process. For example, DOE will provide a comparative cost report and a nonproliferation impacts report to the public in response to comments received during the scoping process. Further, DOE has reformulated its proposed action in response to public comments.
It seems a bit of a waste of the public's time to continue to have these EISs in which we comment saying, "Slow down, we want more information," and DOE says, "Sure," and proceeds right along with its decision in the first place.	1	DOE is committed to providing the public the opportunity to review and comment on the proposed action to manage its inventory of sodium-bonded spent nuclear fuel.
This is not an EIS asking, "We've got a bunch of sodium-contaminated fuel. What should we do with it? We have the following five alternatives." We don't have an action that says, "We need to treat this fuel. We have EISs on it. We want to do pyroprocessing." It is lip service to the other alternatives that are available to deal with this spent nuclear fuel.	1	In response to public comments, DOE has revised the proposed action of the EIS from electrometallurgical treatment of sodium-bonded spent nuclear fuel in the Fuel Conditioning Facility at ANL-W to the treatment and management of sodium-bonded spent nuclear fuel.

Issues	*No. of Comments*	*DOE Responses*
We are gravely concerned with the project. We oppose it. We have opposed it all along.	1	DOE acknowledges the commentor's opposition to the proposed action.
That DOE is not waiting for the National Academy of Sciences' Final Report raises a question that Pit Nine also raises. DOE gets a lot of research and development money every year; do the data you collect mean anything?	1	The electrometallurgical treatment demonstration project that began in June of 1996 is scheduled to conclude in August of 1999. At that time DOE will know if it has met the success criteria established by the National Research Council for the electrometallurgical treatment demonstration. DOE has obtained encouraging data from the demonstration to date, and is confident that the technology holds promise for the management of its sodium-bonded spent nuclear fuel inventory. Publication of the final report on the electrometallurgical treatment demonstration by the National Research Council may require a few months past the end of the demonstration project. DOE plans to make its decision in January of 2000 based on the NRC final report, and other factors such as cost, environmental consequences, and nonproliferation impacts.
What is the endpoint for the National Research Council's waste characterization study? Is it a moving target or a dead horse?	1	The National Research Council is reviewing the waste qualification process and the acceptability of the waste forms.
I would like to see the products identified [cost analysis, nonproliferation analysis] in the briefing placed on a schedule that fits into the Secretary of Energy's decision on the Record of Decision. This schedule ought to be made available to the stakeholders.	1	DOE is preparing a nonproliferation impacts assessment report that addresses the treatment of sodium-bonded spent nuclear fuel. This report will be made available to the public during the Draft EIS public comment period. DOE is also preparing a comparative cost report which will be made available to the public during the Draft EIS public comment period.
In the past, DOE has had to redo work because of an inadequate initial assessment of a problem. The commentor hopes DOE will avoid such costly problems by proceeding only if it is clear that treatment is necessary. The commentor will be pleased to see DOE proceed with treating the spent nuclear fuel once adequate environmental documentation has been completed and once it has been established that treatment will be necessary before disposal.	1	This NEPA process will aid DOE in making an informed decision on how to proceed with the management of its sodium-bonded spent nuclear fuel. The alternatives analyzed in this EIS include no action and direct disposal with no treatment. DOE will make its decision in January of 2000 based on the analytical results of this EIS combined with public comments on the Draft EIS and the outcome of the demonstration project, as well as cast, schedule, and nonproliferation considerations.
Would it not be more realistic to base risk analysis on a Hormissis theory rather than the Linear Threshold theory?	1	The EIS acknowledges that there are other views on the effects of radiation at low dose rates. However, the linear dose response is the most accepted as well as the most conservative of current models, and is therefore appropriate for this analysis.
Press for the quickest, most scientifically proven solution to the preparation of this spent nuclear fuel for a repository.	1	DOE will make its decision in January 2000 based on the analytical results of this EIS combined with public comments on the Draft EIS and the outcome of the demonstration project, as well as cost, schedule, and nonproliferation considerations.
Has integration/consolidation with other treatment/conditioning being performed at other DOE sites (Hanford, Savannah River) been considered?	1	DOE has considered the use of other DOE facilities as options for the management of sodium-bonded spent nuclear fuel. These issues were a major consideration of the DOE Programmatic Spent Nuclear Fuel EIS (April 1995). Alternatives 3 and 5 of the current EIS involve the use of two different facilities at the Savannah River Site in South Carolina.

Issues	*No. of Comments*	*DOE Responses*
What happens in the No Action [Alternative] after 2035?	1	Under the No Action Alternative, the EIS evaluates the viability of direct disposal of sodium-bonded spent nuclear fuel in a geologic repository with no treatment, as well as storing the spent nuclear fuel and pursuing the research and development of a new or immature technology
Can the sodium be leached from the uranium?	1	The bond sodium could be melted and drained from the blanket fuel. The melt and drain process would not be effective on the sodium-bonded driver fuel because some of the bond sodium is inside, or encapsulated within the uranium material and the uranium has become mechanically attached to the stainless-steel cladding.
Put the uranium into commercial fuel.	1	Although DOE has not made a decision regarding the disposition of low-enriched uranium, there is a possibility that the low-enriched uranium could be sold to the commercial reactor fuel industry as a feedstock material.
Few details about the [electrometallurgical treatment] process were provided [in the presentation].	1	The intent of the public scoping meeting presentation was to give the public a general overview of the NEPA process, the preferred alternative (electrometallurgical treatment), and other alternatives. The public meeting presentations during the Draft EIS comment period will contain more detail about the electrometallurgical treatment process.
We believe that important questions about cost and waste characterization have been left out of most reviews of this program and urge the Energy Information Agency take an honest, comprehensive look at these issues.	1	As requested by members of the public during the scoping process, DOE is preparing a comparative cost report which will be made available to the public during the Draft EIS comment period. DOE will make its decision in January of 2000 based on the outcome of the Electrometallurgical Treatment Demonstration Project, and other factors such as cost, environmental consequences, and nonproliferation impacts.
This program was featured on *NBC Nightly News* as a "Fleecing of America." According to DOE, this program is being created to cover the "redirection of valuable intellectual and physical resources at ANL.....as a result of the shutdown of the nuclear breeder reactor program known as the Advanced Liquid Metal Reactor). We are outraged that a key piece of a program that was supposedly terminated by Congress—the Advanced Liquid Metal Reactor—continues to squander taxpayer dollars on questionable "termination costs" and a wrong-minded "redirection" program known as pyroprocessing or electrometallurgical treatment at ANL. ...We are extremely concerned that this new "Nuclear Technology Research and Development" program represents nothing more than a continuation of the fuel reprocessing activities supported by the Advanced Liquid Metal Reactor program	1	The electrometallurgical treatment technology under consideration in the EIS for treating sodium-bonded spent nuclear fuel is a technology that was originally developed as part of DOE's Advanced Liquid Metal Reactor Program, which was discontinued in 1994. This technology was developed at significant expense to the taxpayer. DOE would be remiss in its responsibilities not to evaluate the potential application of this technology to the Department's sodium-bonded spent nuclear fuel. DOE believes that its proposal to apply electrometallurgical technology to the management of its sodium-bonded spent nuclear fuel inventory has the potential to solve a significant problem for the Nation.
DOE's record with other reprocessing technologies has been abysmal.	1	DOE has successfully used reprocessing technologies in the past to provide nuclear materials for research and defense purposes. The use of PUREX processing for the declad and cleaned blanket fuel [Alternative 3] is a viable option..

Issues	***No. of Comments***	***DOE Responses***
The [Snake River] Alliance encourages DOE to include ANL-W as part of INEEL in environmental analyses.	1	DOE has included the ANL-W facility as part of the INEEL in analyzing the environmental consequences of the alternatives in this EIS as well as the *DOE Spent Nuclear Fuel Management and Idaho National Engineering Laboratory Environmental Restoration and Waste Management Programs Final Environmental Impact Statement*.
The commentor would prefer to see the spent nuclear fuel treated only once if possible.	1	DOE also would prefer to treat its sodium-bonded spent nuclear fuel only once, if at all, before its final disposition.
To support informed public review of the Draft EIS, the schedule for this EIS should allow for adequate public review of related documents before the close of the public comment period.	1	The schedule for this EIS allows 45 days for public comment, in accordance with NEPA requirements. Related reports such as those on costs and nonproliferation issues will be available to the public within the same time frame as this Draft EIS.