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## 9. OVERVIEW OF THE PUBLIC PARTICIPATION PROCESS

This chapter summarizes the public comments received on this Environmental Impact Statement (EIS). The sub-chapters address the following:

*Public Scoping for this EIS*

*Workshops for State and Local Officials Along Potential Transportation Routes Public Comments on the Draft EIS*

*Public Comments on the Draft EIS*

- *Written Comments* (summary and full text with DOE responses)
- *Environmental Protection Agency Rating of Draft EIS*
- *Public Hearing Comments* (summary and DOE responses)

In addition to summarizing public comments received on the Draft EIS, Section 9.5 also includes a reproduction of all of the written comments, a more detailed identification of oral comments from public comment hearings, and DOE's responses to each comment.

### 9.1 PUBLIC SCOPING FOR THIS EIS

On November 19, 1996, DOE published in the Federal Register a Notice of Intent to prepare this EIS ("Notice of Intent to Prepare an Environmental Impact Statement on Management of Certain Plutonium Residues and Scrub Alloy Stored at the Rocky Flats Environmental Technology Site," 61 FR 58866). This notice identified the preliminary scope of the EIS and invited public comments on the preliminary alternatives identified for preparing certain Rocky Flats plutonium residues and scrub alloy for disposal or other disposition.

The alternatives in the Notice of Intent were identified as follows:

*Alternative 1 - No Action (same as in this Final EIS),*

*Alternative 2 - Onsite Treatment (with and without plutonium separation), and*

*Alternative 3 - Offsite Treatment (with and without plutonium separation).*

DOE conducted the public scoping process from November 19, 1996, to December 19, 1996, but continued to accept all comments received beyond the closing date. During the scoping period, two public scoping meetings were held - one at Rocky Flats on December 3, 1996, and one near the Savannah River Site (in North Augusta, South Carolina) on December 12, 1996. Comments were received from individuals at these scoping meetings. In addition, DOE received written comments from 30 organizations and individuals. Copies of all written comments and summaries of comments made at the public scoping meetings are kept on file at DOE Headquarters in Washington, D.C., and in public reading rooms identified on the map in **Figure 9-1** and in Chapter 7 of the Summary.

Almost half of the public scoping comments were from individuals and organizations in the Rocky Flats area (including a coalition of organizations with a specific interest in Rocky Flats activities), and most of the

remainder were from individuals and organizations in the Savannah River Site area (including the Savannah River Site's Citizens Advisory Board). A few were from national organizations.

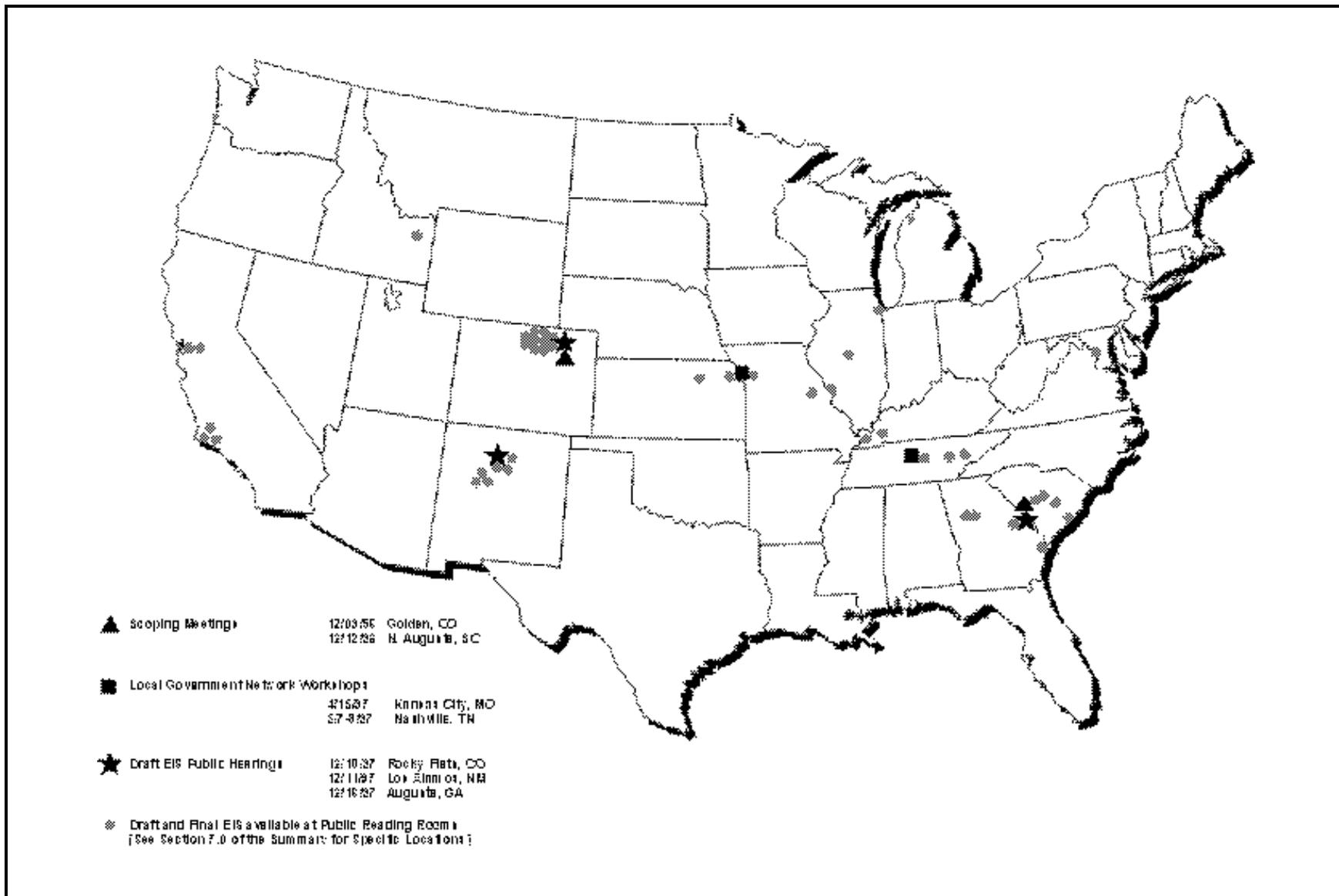


Figure 9-1 Location of Hearings, Workshops, and Public Reading Rooms

Most of the scoping comments included positions for or against the management alternatives presented in the Notice of Intent. No scoping comments were received on processing at Los Alamos National Laboratory or Lawrence Livermore National Laboratory, which were sites also considered in Alternative 3 (the latter site has since been dropped from consideration as an alternative). In providing these comments on the alternatives, specific comments were provided on related issues dealing with the following:

- Storage of the stabilized or processed materials
- Ultimate disposition of the stabilized or processed materials (e.g., Waste Isolation Pilot Plant (WIPP) disposal, mixed oxide fuel)
- Proliferation
- Transportation
- Environment, safety, and health risks
- Costs

A more detailed summary of the public scoping comments is presented in the November 1997 Draft EIS (see Section 9.3).

## **9.2 WORKSHOPS FOR STATE AND LOCAL OFFICIALS ALONG POTENTIAL TRANSPORTATION ROUTES**

Prior to publication of the Draft EIS, DOE held workshops with the Local Government Network (composed of emergency response personnel and State and local officials along DOE transportation corridors). The workshops took place as follows:

- Kansas City, MO, April 16-17, 1997
- Nashville, TN, May 7-8, 1997

About 80 individuals participated in these workshops, during which DOE provided an overview of the upcoming Draft EIS, identified the potential shipments that could take place if a decision were reached to process the materials offsite, discussed the nature of the materials that could be shipped and the transport system that would be used for the shipments (e.g., the Safe Secure Trailer and the Type B shipping containers), and obtained feedback from the workshop attendees on their issues of concern. In addition to the question/answer sessions, the workshops included smaller break-out sessions that allowed participants to focus more in-depth on particular areas of interest. Meeting summaries from these two workshops are available in the DOE Reading Rooms identified in Chapter 7 of this Summary. Key suggestions and comments from those workshops include the following:

- Improve methods for making local citizens and officials more aware of the upcoming shipments (i.e., improve the distribution of information, such as widening the distribution list, using local PBS affiliates or radio stations to advertise and moderate public meetings, making the EIS available on a web page, distributing an information package, etc.).
- Provide more information on the shipment casks and Safe Secure Trailer system, including ongoing research, past history of shipments, amounts and nature of material inside the casks, truck and trailer sizes, and radiological monitoring.
- Share Safe Secure Trailer procedures with local government officials and emergency response personnel.

- Involve state and local government officials in developing the transportation plans for these shipments, including working out details ahead of time on issues such as safe parking and bad weather protocols; provide advance notifications.
- Improve coordination and funding for training of states and local officials in emergency response and provide the necessary equipment; enhance use of mutual aid agreements.

Following these workshops, DOE prepared a fact sheet on the potential plutonium residue shipments, which included information on the shipping casks and the Safe Secure Trailer, and distributed several copies of the fact sheet to the attendees at this meeting. The attendees volunteered at the workshops to distribute the fact sheets within their communities (e.g., media outlets and libraries). An updated version of this fact sheet is included in Appendix A of the Final EIS. In addition, DOE provided updates on this EIS at subsequent Local Government Network meetings.

### **9.3 ISSUANCE OF THE DRAFT EIS**

In developing the Draft EIS, DOE considered the various scoping comments and presented analyses that addressed many of the concerns or questions. DOE also identified the criteria used to screen the various alternatives considered since scoping. The presentation of the alternatives in the Draft EIS was modified from the Notice of Intent as follows: Alternative 2 was modified to include only processing without plutonium separation, which would be conducted at Rocky Flats. Alternative 3 was modified to include Rocky Flats as a candidate site for processing with plutonium separation and to eliminate Lawrence Livermore National Laboratory as a candidate processing site. Alternative 3 was also modified to only consider processing with plutonium separation. Preferred processing technologies were identified for most of the material categories and subcategories in the Draft EIS.

The Environmental Protection Agency announced the availability of the Draft EIS in the Federal Register on November 21, 1997 (62 FR 62303). In addition, DOE mailed copies of the full Draft EIS and/or the Summary to over 1,000 individuals and organizations who were on DOE's mailing list (from previous requests) or who specifically requested copies during or after the comment period. The public had access to a toll-free number (1-800-736-3282) directed to the DOE Office of Environmental Management's Center for Environmental Management Information in order to request copies of the Summary or full EIS.

The public comment period was held from November 25, 1997, to January 5, 1998. However, DOE continued to accept and consider comments received after the closing date.

### **9.4 SUMMARY OF PUBLIC COMMENTS ON THE DRAFT EIS**

This section summarizes the key comments DOE received on the Draft EIS, both in writing and orally (at public meetings). Key changes made to this EIS since publication of the Draft EIS, in response to public comments and further evaluations, are summarized in Chapter 1. Section 9.5 includes the full text of all written comments and identifies the oral comments received at the public hearings, along with DOE's responses.

#### **9.4.1 Summary of Written Comments on the Draft EIS**

Written submissions were received from 39 individuals and organizations. Of those

- 15 were from representatives of environmental, citizen, or business organizations.
- 10 were from State agencies.
- 5 were from Federal agencies.

- 7 were from individuals.
- 2 were from Cities.

The localities represented by the written submissions were as follows:

- 13 were from individuals or organizations in the Savannah River Site area; however, 7 of them were acknowledgments of receipt/no comment from South Carolina state agencies.
- 11 were from the Rocky Flats area.
- 8 were from the Los Alamos area.
- 4 were from those along transportation corridors.
- 3 were national in representation.

Most commentors provided their positions on the alternatives and processes (many of which addressed plutonium separation processes), provided specific comments on the analyses presented in the EIS, and identified concerns regarding associated issues such as storage; ultimate disposition; proliferation risks; transportation; environmental, safety and health risks; and costs.

Of the 39 written submissions (received by U.S. mail and E-mail), close to 200 specific comments were delineated (see Section 9.5). Key comments are summarized below (along with summaries of DOE responses) and are organized according to the following key issue areas:

- Alternatives or Processes
- Storage
- Ultimate Disposition
- Proliferation Risks
- Transportation
- Environmental, Safety and Health Risks
- Costs
- Other (miscellaneous).

- ☐ **Comments on Alternatives and Processes**—Most of those who provided comments indicated their support for or opposition to a particular alternative or process, along with their reasons. Reasons dealt with issues such as proliferation risk, worker exposures, transportation, storage, ultimate disposition, increase in waste volume, and cost (these are further summarized in the sections following).

#### ***Alternative 1 - No Action -- Stabilize and Store (Rocky Flats)***

Very few commentors stated a preference for the No Action Alternative, which would stabilize the plutonium residues and scrub alloy for interim storage at Rocky Flats. Those who did suggested that the materials be stabilized and stored at Rocky Flats until safer treatment and disposal methods can be developed. While not stated explicitly, most of the commentors did not support this alternative. Instead, they advocated one of the other alternatives or variations to those alternatives (e.g., other processing technologies).

*In response to these comments, DOE has expanded Sections 1.1, 1.2, and 1.3 of the Final EIS to better clarify that the alternatives evaluated under the Proposed Action would not only stabilize the plutonium residues and scrub alloy to address immediate health and safety concerns raised by the Defense*

*Nuclear Facilities Safety Board, but would also convert them into forms that would allow for their disposal or other disposition, thus eliminating health and safety concerns associated with indefinite storage of these materials. The No Action Alternative would not eliminate the long-term health and safety concerns. Nevertheless, DOE is required by the regulations implementing the National Environmental Policy Act to include evaluation of a No Action Alternative in the EIS. DOE has also responded individually to each comment related to the No Action Alternative in Section 9.5 of the Final EIS.*

***Alternative 2 - Processing without Plutonium Separation (Rocky Flats)***

Commentors were split on their positions regarding the implementation of this alternative at Rocky Flats. Comments supporting processing at Rocky Flats included the following reasons and suggestions:

- Alternative 2 is preferred because of opposition to plutonium separation and transportation of such materials.
- Rocky Flats has the capabilities to do all of the required stabilization and processing.
- DOE should minimize the number of processes, or use "one-step" processes.
- DOE should use only those technologies that are mature and have been demonstrated.

Comments against processing at Rocky Flats included the following reasons and suggestions:

- DOE has committed to clean up and close Rocky Flats.
- Rocky Flats has old and unsafe facilities, which lack an "authorization basis" to process.
- Any process that would result in airborne releases at Rocky Flats is not acceptable.
- DOE has better facilities at the Savannah River Site.
- It is more cost-effective to use large-scale and proven facilities at the Savannah River Site.
- DOE should evaluate sites, other than those identified, that have vitrification capabilities.

*In response to these comments, DOE notes that Section 2.9 of the Final EIS provides DOE's rationale for selecting processing technologies (for each material category) for evaluation in this EIS and for the Preferred Alternative. The Preferred Alternative is described in Section 2.5 of the Final EIS. The only processing technology at Rocky Flats identified under Alternative 2 for the Preferred Alternative is blend-down of certain filter media residues (Ful-Flo filters).*

*In selecting processing technologies for evaluation under Alternative 2, DOE eliminated all sites from consideration except Rocky Flats. The costs and risks of preprocessing (which would be required prior to transport of the materials to another site for processing), transportation, and final processing would exceed that of final processing at Rocky Flats without providing any tangible benefits.*

*As described in Section 1.3.1 of the Final EIS, DOE has added Alternative 4, Combination of Processing Technologies, to specifically address those materials for which a variance from safeguards*

*termination limits has been granted. The Preferred Alternative described in Section 2.5 of the Final EIS identifies those materials for which Alternative 4 is part of the Preferred Alternative.*

*DOE has also responded individually to each comment related to processing technologies without plutonium separation in Section 9.5 of the Final EIS.*

***Alternative 3 - Processing with Plutonium Separation (Rocky Flats, Savannah River Site, and Los Alamos National Laboratory)***

About one-third of the commentors expressed strong opposition to shipment of the Rocky Flats residues and scrub alloy to either the Savannah River Site or Los Alamos National Laboratory for plutonium separation processes. Comments included the following reasons and suggestions:

- The proliferation risk would be greater if plutonium is separated during processing.
- Due to risks of accidents, these materials should not be transported.
- It is unnecessary to ship offsite - processing can be done at Rocky Flats.
- The separation process would result in a larger volume of waste than from nonseparation processes.
- DOE would be extending the life of the already aging canyons if processing with plutonium separation were to be chosen at Savannah River Site.
- DOE underestimated the costs of using the canyons.
- Separated plutonium should not be used as mixed oxide fuel in civilian nuclear powerplants.

Other commentors supported plutonium separation (some were directed specifically to plutonium separation at the Savannah River Site) because of the following reasons:

- The Savannah River Site has proven capabilities and is the only large-scale processing facility in the country.
- There is better security at the Savannah River Site and Los Alamos National Laboratory than at Rocky Flats.
- There is urgency to get the materials out of Rocky Flats so that the site can be closed.
- Processing at Savannah River Site would be more cost-effective.
- Plutonium has economic value (as an energy source).
- Separating plutonium and its disposition constitutes waste minimization.

Some commentors expressed concern about the feasibility of the salt distillation process at Los Alamos, stating that:

- The salt distillation process is not mature enough to be considered a preferred alternative.

- Los Alamos does not have capability to store the resulting americium-contaminated plutonium materials.

*In response to these comments, DOE notes that Section 2.4 of the Final EIS provides DOE's rationale for selecting processing technologies (for each material category) for evaluation in this EIS and for the Preferred Alternative. The Preferred Alternative is described in Section 2.5 of the Final EIS. The only processing technologies under Alternative 3 identified for the Preferred Alternative are the Purex process at the Savannah River Site for certain ash residues (sand, slag and crucible), plutonium fluoride residues, and scrub alloy; and acid dissolution/plutonium oxide recovery at Los Alamos National Laboratory for certain (high assay) direct oxide reduction salts (these salts have two processing technologies under the Preferred Alternative -- the other is repackaging at Rocky Flats).*

*A major consideration in evaluating the potential use of the Savannah River Site canyons for processing a limited quantity of plutonium residues and scrub alloy is that the materials would be handled remotely, resulting in low worker radiation exposures. The canyons have been maintained and upgraded during their life cycle to ensure continued operability. Furthermore, they are currently operating, demonstrating their ability to safely process nuclear materials. Processing the materials under the Preferred Alternative, described in Section 2.5.2 of the Final EIS, would not require extending the operating life of the canyons as these facilities would be processing other previously-scheduled materials. As described in Section 2.5.2 of the Final EIS, salt distillation is no longer part of the preferred alternative. DOE has also responded individually to each comment related to processing technologies involving plutonium separation in Section 9.5 of the Final EIS.*

#### **Other Processing Options Not in Draft EIS**

Some commentors expressed their beliefs that none of the processing options identified in the Draft EIS were reasonable and offered suggestions for additional options. These included:

- DOE should vitrify to meet the "spent fuel standard" in small "cans-in-canisters" or a "large monolith" at Rocky Flats.
- Small, mobile units should be used to conduct immobilization activities - they could be used at multiple sites.

Other commentors suggested that the EIS be delayed in order to more thoroughly evaluate other alternatives or the EIS should provide more rationale on why these are not being considered. Specific suggestions include the following:

- DOE should delay this EIS until more evaluation is done on innovative technologies, such as the Glass Material Oxidation and Dissolution System being developed at Oak Ridge National Laboratory or the cold ceramification immobilization process being developed at the Idaho National Engineering and Environmental Laboratory. These innovative technologies could be demonstrated on a small scale at Rocky Flats.
- DOE should include more sites in the EIS evaluation.

*In response to these comments, DOE notes that the technology and site screening process is described in Section 2.9.2 of this Final EIS. Issues raised during the public scoping process that are not analyzed in the EIS are described in Section 2.9.3 of the Final EIS. DOE has also responded individually to each comment related to other processing options not in the Draft EIS in Section 9.5 of the Final EIS.*

☐ **Comments Related to Storage**—A number of commentors addressed storage in their comments. Comments included the following:

- Continued storage at Rocky Flats is unacceptable (health and safety risks).
- DOE should evaluate contingency storage in the event of delays in opening the WIPP.
- DOE did not adequately address impacts of long-term storage under the No Action alternative in the EIS.
- The materials should stay in storage (following stabilization or processing) at Rocky Flats "for the time being" and not be transported to another site.
- Stored plutonium resulting from plutonium separation poses proliferation risks.
- DOE should address the amount of americium-contaminated wastes that would result from the salt distillation process, as well as low-level waste, at Los Alamos National Laboratory and how these wastes would be stored or disposed.
- The public needs to be ensured that the processed materials at Los Alamos will not be stored indefinitely at that site.
- Separated plutonium from processes at the Savannah River Site canyons could be adequately accommodated in the new Actinide Packaging and Storage Facility.

*In response to these comments, DOE has revised its evaluation of the No Action Alternative (Alternative 1) to explicitly analyze the impacts from continued storage of the stabilized residues and scrub alloy at Rocky Flats until a decision is made concerning their ultimate disposition. A storage period of 20 years was used for the purpose of analysis. A discussion of storage has been added to Sections 2.3, 2.4 and 2.5.1 of this Final EIS, and the associated impacts have been added to Sections 4.2 through 4.11. For the other alternatives, a discussion of storage of processed material has been added to Section 4.14 of the Final EIS to address the possibility of WIPP not opening in the near future.*

*The analysis of storing any plutonium that would be separated during processing of salts at Los Alamos National Laboratory is contained in Sections 2.4.2.3 and 4.14 of the Final EIS. Under the Preferred Alternative, described in Section 2.5 of the Final EIS, the plutonium that would be separated during the processing of salts would not be contaminated with americium. The americium would go into the transuranic waste. DOE has also responded individually to each comment related to storage in Section 9.5 of the Final EIS.*

☐ **Comments Related to Ultimate Disposition**—A number of commentors expressed concern about DOE's reliance on WIPP to dispose of the processed or stabilized residues. Key comments included the following:

- DOE is relying too heavily on WIPP, which is unlikely to open on schedule or may never open (some commentors cited specific problems with WIPP as a safe disposal facility).
- WIPP's compliance certification application with the Environmental Protection Agency (EPA) (and EPA's certification authority) does not cover the amounts and concentrations of plutonium addressed

in the materials covered by this EIS that would be shipped to WIPP. DOE should clearly address the number of shipments, amounts of processed residues and scrub alloy, and plutonium/americium concentrations that would be going to WIPP under this EIS and whether variances would be required.

Some of the commentors who opposed plutonium separation also provided the following comment:

- Separated plutonium should not be used in making mixed oxide fuel for civilian nuclear power plants due to proliferation risks.

*In response to these comments, DOE notes that, in January 1998, DOE issued a Record of Decision regarding alternatives evaluated in DOE's Waste Isolation Pilot Plant Disposal Phase Final Supplemental EIS (discussed in Section 1.5.4 of the Final EIS) to dispose of transuranic waste at WIPP. Nevertheless, the decision to open WIPP is outside the scope of this EIS. Section 4.14 of the Final EIS addresses the impacts from storing processed residues in the event that WIPP does not open on schedule.*

*In addition, in July 1998, DOE published a Draft EIS on Surplus Plutonium Disposition (discussed in Section 1.5.7 of the Final EIS). The disposition of any plutonium separated from Rocky Flats plutonium residues and scrub alloy would be determined in accordance with decisions to be reached under the Surplus Plutonium Disposition EIS. Any plutonium that would be separated under any alternative evaluated in this EIS would be immobilized. DOE has also responded individually to each comment related to ultimate disposition in Section 9.5 of the Final EIS.*

☐ **Comments Related to Proliferation Risks**—Perceived proliferation risks were the primary reasons commentors did not support Alternative 3 - Processing with Plutonium Separation. Comments included the following:

- DOE did not adequately address the issue of proliferation risk in the EIS.
- None of the alternatives were favorable to nonproliferation efforts and, thus, further evaluation should be conducted of innovative immobilization technologies (see "Other Processing Options Not in Draft EIS" above).

Several commentors expressed views concerning DOE's approach in seeking safeguards termination limit variances. These included:

- DOE's approach to seek a variance to safeguards termination limits is acceptable for those materials whose evaluations concluded that the materials presented minimal risk of proliferation.
- Variances to the safeguards termination limits present an invitation to terrorists and, as such, the granting of variances is opposed.
- The EIS should include more discussion on the variances, including the rationale for variances and a clear path for materials that do or do not receive variances.
- State technical agencies should be involved in DOE's variance decisions.

- DOE should delay the EIS until variance decisions were made for all of the categories and subcategories.

*In response to these comments, DOE agrees that nonproliferation goals should be an important factor in deciding the processing technology for each of the Rocky Flats plutonium residues and scrub alloy. Nuclear nonproliferation considerations, including long-term proliferation risks, are discussed in Section 4.1.9 of this EIS. None of the actions evaluated in this EIS, including those that involve plutonium separation, would result in a substantial increase in proliferation risk.*

*In addition, the discussion of variances to safeguards termination limits has been expanded in the Final EIS. The process to obtain a variance is described in detail in Section 1.2.1 of the Final EIS. Section 1.2 of the Final EIS discusses conditions under which a variance to safeguards termination limits may be applied. Section 1.3.1 of the Final EIS identifies materials that have received a variance and introduces Alternative 4, Combination of Processing Technologies, to address materials for which a variance has been granted. DOE has also responded individually to each comment related to proliferation risks in Section 9.5 of the Final EIS.*

- **Comments Related to Transportation**—A number of commentors addressed transportation. Many of these commentors were strongly opposed to any transportation of plutonium-bearing materials and suggested that the materials remain at Rocky Flats. Primary reasons and suggestions were:

- Transportation of materials poses the potential for accidents and resulting exposures to the public and contamination.
- Rocky Flats has the ability to stabilize or process the materials and, as such, transporting the materials is unnecessary.
- DOE should not transport materials through major metropolitan areas, such as Atlanta and Augusta.

Other comments on transportation included the following:

- Transportation can be accomplished safely (citing DOE's safe transportation record).
- DOE should better communicate with the public on the safety of DOE's shipments.
- The public should have input to routing decisions.
- DOE should not transport materials in Type B shipping containers that have not been certified by the U.S. Nuclear Regulatory Commission.

*In response to these comments, DOE notes that the amount of transportation that would occur is dependent on the processing technology that would be selected in the Record of Decision for each plutonium residue and scrub alloy. Under the Preferred Alternative described in Section 2.5.2 of the Final EIS, most of the materials considered in this EIS would be repackaged (with stabilization as necessary) at Rocky Flats, with minimal shipments to Los Alamos National Laboratory and the Savannah River Site for offsite processing (3 and 39 shipments, respectively). Section 2.8 of the Final EIS discusses the transportation system, including the Type B packaging used to transport these materials for any offsite processing. Appendix E, Section E.6, of this Final EIS shows that the incident-free radiological risk to the public in the form of latent cancer fatalities from transportation would be*

*less than one fatality. The accident risk to the public, including latent cancer and traffic fatalities, would also be less than one. DOE has also responded individually to each comment related to transportation in Section 9.5 of the Final EIS.*

- ☐ **Comments Related to Environmental, Safety, and Health Risks**—About half of the comments addressed issues dealing with environment, safety, and health. These included comments on DOE's risk analysis methodology to determine impacts and concerns about risks posed by the alternatives.

Some commentors stated that the EIS analyses were adequate in addressing the impacts.

Others believed they were not adequate. Those comments dealing with inadequacies included the following:

- DOE underestimated worker exposures in the analyses (comments included both Rocky Flats and Savannah River Site processes). For example, DOE underestimated the condition of facilities at Rocky Flats (old and unsafe) and did not consider recent accidental exposures at the Savannah River Site.
- DOE should not compare voluntary activities (e.g., cigarette smoking) with involuntary activities.
- DOE underestimated waste volumes to be generated during processes.
- DOE underestimated water usage at Los Alamos National Laboratory.
- DOE needs to address RCRA permit modifications dealing with mixed waste in the EIS.
- WIPP documentation needs to address criticality due to some of the residue packages to be sent to WIPP.
- Transportation accidents pose unacceptable risks.

Some commentors (federal and state agencies) noted no impacts from the proposed actions in this EIS, including no impacts to endangered or potentially endangered species and critical habitats. Some commentors offered comments on environmental justice or equity issues.

*In response to these comments, DOE has made refinements to the impact analyses in Chapter 4 of the Final EIS. Some of the changes occurred because DOE re-evaluated many of the processing technologies and introduced some new processing technologies. DOE believes that the processing methods analyzed in this EIS would be safe, based on the small potential impacts (less than one latent cancer fatality), as described in Sections 4.21, 4.22, and 4.23 of the Final EIS. DOE has also responded individually to each comment related to environmental, health and safety risks in Section 9.5 of the Final EIS.*

- ☐ **Comments Related to Costs**—A few commentors included cost as a factor in their support or opposition of a technical alternative. These comments included the following:

- DOE should minimize costs devoted to duplicate processing facilities.
- The preferred alternative in the Draft EIS is not the least costly alternative.

- The plutonium separation processes will be more costly - DOE underestimated the costs of operating the canyons.
- Using Rocky Flats facilities for processing (no shipments offsite to more capable facilities) will be more costly.
- Rocky Flats should be prepared to cover costs of extending the life of the canyons if required to complete processing of Rocky Flats' materials.
- DOE must provide the necessary funding to implement the alternatives.
- Money devoted to plutonium separation should be redirected to pursuit of innovative immobilization technologies.

*In response to these comments, DOE has provided a comparison of the costs of processing technologies in Section 4.17 of this Final EIS. Cost estimates range from \$428 million for the Minimize Cost Approach to \$1,129 million for the No Action Alternative. The Preferred Alternative has an estimated cost of \$524 million. DOE has also responded individually to each comment related to costs in Section 9.5 of the Final EIS.*

**Other Comments - Miscellaneous**—DOE should define the ultimate decisionmaker for processing under this EIS.

- DOE should specify which site has ownership of the processed residues that will be shipped to WIPP.
- DOE has issued this EIS prematurely - more information on other innovative processing technologies, contingencies, and nonproliferation impacts is needed.
- DOE waited too long to address steps needed to remove the residues from Rocky Flats; expeditious DOE decisionmaking is vital to cleanup of Rocky Flats.
- More information is needed on selection criteria; the processing technologies in the preferred alternative are not consistent with selection criteria.
- The EIS was well-written and adequately addresses impacts.
- DOE should make the EIS available electronically.

*DOE has responded individually to each miscellaneous comment in Section 9.5 of the Final EIS.*

#### **9.4.2 Environmental Protection Agency Rating of EIS**

The U.S. Environmental Protection Agency, Region VIII, reviewed and rated the Draft EIS in its "Category EC-2," which indicates that "EPA has identified potential environmental impacts and the EIS does not contain sufficient information to fully assess these impacts." This rating was based on EPA's comment that there is no assurance that WIPP will be open any time in the near future or if it will ever be open to accept waste. Thus, EPA is concerned that the alternatives analyzed in the Draft EIS did not specifically analyze interim storage of the processed residues pending disposal or other disposition, e.g., onsite storage. EPA commented

that the EIS needs to have a back-up plan to safely secure and store all waste on site, including the evaluation of the use of existing buildings (upgrading) or the building of an additional structure.

*DOE has addressed this comment by revising the alternatives and adding additional analyses for contingency storage in Section 4.14 of the Final EIS.*

### **9.4.3 Summary of Public Hearings and Comments Received**

Public comment hearings on the Draft EIS were held at the following locations during the public comment period:

- Rocky Flats Environmental Technology Site, Golden, Colorado, December 10, 1997
- Los Alamos Area Office, Los Alamos, New Mexico, December 11, 1997
- Savannah River Site area, Augusta, Georgia, December 16, 1997

The hearings were announced in the Federal Register Notice on the availability of the Draft EIS, as well as in local newspapers. The public comment hearings were informal in nature in order to allow for a free-flowing dialogue. The hearing attendees were offered an opportunity to provide formal remarks, which some opted to do. However, for the most part, attendees were able to ask questions, provide comments, and engage in open discussion. Attendees also had an opportunity to have one-on-one discussions with DOE representatives prior to and after the hearing sessions. A fact sheet and corresponding poster exhibits were made available at the hearings. The fact sheet is included in Appendix A of the Final EIS.

About 50 people attended the three public hearings. Attendees included local citizens, site employees, State and local officials, and representatives of various environmental or citizens organizations. About 40 comments and questions were received at the hearings. Key comments focused on the following concerns:

- More clarification on safeguards termination limits and variances to those limits, including conditions under which a variance would be granted, processing technologies that would be used for materials that have received or not received a variance, percentages of plutonium covered by existing variances, and status of variances.
- Questions or comments about specific processing technologies, such as salt distillation, salt scrub, water leach, Purex, and cementation.
- Suggestions to further evaluate vitrification options and use mobile vitrification units.
- Clarification on the final forms of the processed residues and separated plutonium.
- Clarification of the disposition path for separated plutonium.
- Clarification on the forms of the residues to be processed.
- Comments and clarification on the "pipe and go" concept (which is encompassed under the repackaging option in Alternative 4), including analyses that have been performed to address criticality.
- Suggestions to consider contingency storage at Rocky Flats.
- Suggestions to minimize transportation.

- Suggestions to consider other locations for smaller scale processing.
- Suggestions and questions on particular impacts analyses, including waste generated, emissions, process safety in terms of accidents, and transportation.
- Clarifications of materials that would be shipped to WIPP.
- Concerns about the Resource Conservation and Recovery Act designations for some residue categories, WIPP not receiving a State of New Mexico permit for receiving mixed wastes, and Colorado's jurisdiction over proposed disposition of RCRA wastes.

*In response to these oral comments, DOE has provided additional clarifications in the applicable sections of Chapter 2 of the Final EIS, as well as in the DOE responses provided in Section 9.5.1 below. (See also above summary of written comments and DOE responses.)*

## **9.5 DOE RESPONSES TO PUBLIC COMMENTS**

Individual responses to each of the comments submitted to DOE, including all of those summarized above, are provided in the sections below.

## 9.5.1 Oral Comments at Public Hearings and DOE Responses

### 9.5.1.1 Rocky Flats Public Hearing

The public hearing at Golden, Colorado was held at the Rocky Flats Environmental Technology Site at Building 060 on December 10, 1997. Twenty people attended the meeting. The meeting discussion was interactive in nature. A summary of the key comments and issues that were raised and the DOE responses follow.

<i>Summary of Issues Raised at Rocky Flats Public Hearing and DOE Responses</i>		
<i>Key Issues Raised</i>		<i>DOE Responses</i>
1	DOE should define Safeguard Termination Limits (STL) and clarify how Rocky Flats would obtain variances from the STL requirements.	See response to Written Comment 28-5.
2	Sand, Slag, and Crucible (SS&C) material is stated to have low technical uncertainty on pg. 4-106 of Volume 1 of the Draft EIS. However, Appendix C, page C-41, states that processing risks are minimal, with the exception of SS&C. Please address this apparent difference.	Table 4-56, Technical Uncertainties for Processing Options, p. 4-106 of Volume 1 of the Draft EIS, correctly states that there is low technical uncertainty associated with the Purex processing option for ash residues at the Savannah River Site. Therefore, the citation specified in Appendix C, page C-41, has been corrected appropriately.
3	More attention should be given to furthering the development of vitrification technology to allow for other vitrification approaches at Rocky Flats.	See responses to Written Comments 31-8 and 31-9.
4	There should be greater research into a versatile mobile vitrification unit at Rocky Flats that could provide Rocky Flats with the capability to handle weapons-grade material stored at Rocky Flats. Vitrification with high-level waste at Rocky Flats should not be ruled out.	See response to Written Comment 8-7 regarding mobile vitrification units. The vitrification with high-level waste concept is not considered to be a viable alternative since the concept would require shipping high-level waste to Rocky Flats, where none now exists, constructing a vitrification facility at Rocky Flats, and qualifying the waste form for disposal. As described in Section 2.9.3 of this EIS, DOE does not consider constructing a new vitrification facility at Rocky Flats to be economically or technically viable, give the relatively small amounts of material requiring vitrification at the site.

<i>Summary of Issues Raised at Rocky Flats Public Hearing and DOE Responses</i>		
<i>Key Issues Raised</i>		<i>DOE Responses</i>
5	Offsite transportation of materials for further processing should be minimized.	See response to Written Comment 35-4.
6	DOE should consider smaller scale processing activities in several locations, rather than processing at only Los Alamos National Laboratory, the Savannah River Site, or Rocky Flats.	See response to Written Comment 17-3, second and third paragraphs.
7	DOE should assess waste produced by each option. All the different input/outputs, such as the hazardous chemicals in the waste streams and those used in the processes, should be specified in the EIS.	The EIS does specify the types of wastes produced by each processing alternative and any hazardous chemicals that would be used. Wastes associated with processing are given for each residue type and scrub alloy in Sections 4.2 through 4.11 of the EIS. Hazardous chemicals released to the atmosphere are addressed in these same sections and also in Section 4.12. A detailed process description for each process considered in the EIS is provided in Appendix C.
8	Cementation is not considered to be a good option; pondcrete is cited as an example of a failed project.	The EIS evaluates cementation as an alternative for all ash residues to stabilize these materials. The impacts that would result from use of this alternative are specified in Section 4.2 of the EIS. There are no alternatives considered in the EIS that resemble the "pondcrete" project. In the pondcrete project, settling basin materials from the solar evaporating pond were mixed with cement and water to form concrete that ultimately crumbled. In the cementation alternative analyzed in the EIS, the ash residue material is a more uniform material than that used in the pondcrete project. When blended with cement, the ash residues would result in better quality concrete.
9	Pollution liabilities and possible process safety issues in terms of accidents should be presented in the EIS.	Pollution issues and possible process safety issues in terms of accidents are presented in the EIS. Assessments are presented in terms of types of wastes generated and potential accident impacts for each processing technology evaluated. Sections 4.2 to 4.11 of Chapter 4 of the EIS describe all wastes generated during processing and estimate air emissions for hazardous chemicals, non-radiological air pollutants, and radiological materials. Accidents analyzed in the EIS are presented in Chapter 4 and Appendix D.

### 9.5.1.2 Los Alamos National Laboratory Public Hearing

The public hearing at Los Alamos, New Mexico, was held at the Los Alamos Area Office, on December 11, 1997. Seven people attended the meeting. The meeting discussion was interactive in nature. A summary of the key comments and issues that were raised and the DOE responses follow.

<i>Summary of Issues Raised at Los Alamos Public Hearing and DOE Responses</i>		
	<i>Key Issues Raised</i>	<i>DOE Responses</i>
1	Clarify the status of the Office of Nonproliferation and National Security's approval of Rocky Flats safeguard termination limit variances for certain materials. (A commentator asserted that approvals for combustible and direct repack residues were put on hold. The commentator also stated that correspondence from DOE/NN-51 was in process that would direct Rocky Flats not to implement safeguard termination limits variances until a vulnerability assessment is completed whereby Rocky Flats must demonstrate that the material will be safeguarded outside the protected area.)	See response to Written Comment 17-5.
2	Were the impacts from transporting waste from processing at Los Alamos to WIPP assessed?	The environmental impacts of shipping transuranic wastes to WIPP and the impacts of disposal at WIPP were analyzed in the <i>Waste Isolation Pilot Plant Disposal Phase Final Supplemental Environmental Impact Statement (WIPP SEIS-II)</i> described in Section 1.5.4 of this EIS. DOE has summarized these impacts and incorporated them by reference in Appendix E, Section E.6, of the Final EIS.
3	Why are there no emissions from salt processes?	The technology descriptions for the processes used at Los Alamos National Laboratory reported low levels of radioactive emissions from the processes but no hazardous chemical emissions. The radioactive doses to the offsite public for these processes are listed in Table 4-12 of the EIS. No hazardous chemicals are present in the residues and none are added during processing.
4	Is there a range of plutonium isotopes or just one isotope?	The isotopes are those contained in weapons-grade plutonium at Rocky Flats. These include: Plutonium-238, -239, -240, -241, -242, and Americium-241. These isotopes are referenced in Appendix D, Table D-22 and Table D-80, of the EIS.
5	Is there any mixed waste to be processed at Los Alamos?	See response to Written Comment 24-4.

<i>Summary of Issues Raised at Los Alamos Public Hearing and DOE Responses</i>		
	<i>Key Issues Raised</i>	<i>DOE Responses</i>
6	How much residue material would come to Los Alamos National Laboratory from Rocky Flats for processing under the preferred alternative? Specifically, how much plutonium and how much americium?	See responses to Written Comments 11-1 and 11-10.
7	How much material could go to WIPP?	See response to Written Comment 28-2.
8	Under the water leach processing option, would the material or residue leftover from extraction be considered low-level waste or transuranic waste?	The residual calcium chloride salt would be transuranic or low-level waste depending on the residual plutonium content. In this EIS, we assume it is all transuranic waste.
9	What is the plutonium concentration in the salts.?	The average plutonium concentration in the pyrochemical salt residues is approximately 6.7 percent; however, this plutonium concentration varies widely from one container to another. Full descriptions of the salts and other residues are addressed in Appendix C of this EIS.
10	The EIS appears to focus on direct disposal of all materials at WIPP without giving full consideration to the alternatives. Plutonium removal from certain materials seems to be more appropriate than putting more plutonium material in WIPP. If plutonium is recovered, the volume of waste will be vastly reduced. This point should be presented as the main focus of the EIS analyses.	<p>As described in Section 1.2 of this EIS, the purpose and need for agency action is to process certain plutonium residues and scrub alloy currently in storage at Rocky Flats to address health and safety concerns raised by the Defense Nuclear Facilities Safety Board Recommendation 94-1, and to prepare them for offsite disposal or other disposition, while supporting site closure and limiting worker exposure and waste production.</p> <p>Section 2.5.2 of the Final EIS identifies the preferred alternative, which is comprised of preferred processing technologies for each material category (and some sub-categories). The detailed rationale for selecting the preferred technologies is provided in Section 2.4.</p> <p>With the exception of the No Action alternative, the management approach, "Process with Maximum Plutonium Separation," described in Section 4.22, does produce the minimum number of transuranic waste drums (based on the total of stabilized residue and transuranic waste which would both be sent to WIPP), as shown in Table 4-79, but also results in the highest number of canisters of high-level waste. Different processing technologies will have a different mix of high-level waste, transuranic waste, low-level waste, and low-level mixed waste.</p>

<i>Summary of Issues Raised at Los Alamos Public Hearing and DOE Responses</i>		
	<i>Key Issues Raised</i>	<i>DOE Responses</i>
11	The EIS should clearly point out that plutonium is a valuable resource. Under the preferred alternative, plutonium disposed of at WIPP would be wasting several million dollars of electrical power resource (if the plutonium were recovered and converted to mixed oxides).	See response to Written Comment 17-7.
12	The EIS should clarify the approach for presenting data concerning the analysis of air quality pathways. Specifically, the rationale for why wind roses (for certain years) were used at some sites and an average was used for others should be provided.	See response to Written Comment 24-8.
13	Concern was expressed regarding the extent to which discarding residues at WIPP had been evaluated during the development of the WIPP SEIS-II. Greater public disclosure is needed as to the nature of these materials and the amount of plutonium content. Otherwise, WIPP could be prevented from opening when it is really needed for the disposal of transuranic wastes.	See response to Written Comment 16-1.
14	Concern was expressed that the bounding case numbers for WIPP may be exceeded. In particular, with decontamination and decommissioning and environmental restoration, Rocky Flats will exceed its allotment of WIPP drums (as cited in the <i>Baseline Environmental Management Report</i> ).	See response to Written Comment 17-8.

*Summary of Issues Raised at Los Alamos Public Hearing and DOE Responses*

	<i>Key Issues Raised</i>	<i>DOE Responses</i>
15	<p>Some residue categories have RCRA designations and New Mexico has not certified DOE to send this material. Performance assessment assumed no reactive, corrosive codes; 15 Item Description Codes (IDCs) are prohibited in the WIPP/WAC. The treatment descriptions contained in the EIS should explicitly address the IDCs in question. Additionally, the Colorado Department of Public Health &amp; Environment (CDPHE) has approval authority over the disposition of RCRA-regulated residues. Therefore, the CDPHE must be satisfied with any proposed disposition.</p>	<p>See response to Written Comment 17-4.</p>
16	<p>The EIS postulates that risks at Los Alamos and Rocky Flats are increased for plutonium separation. However, in the case of Los Alamos, it should be noted that plutonium separation is part of the facility's authorization basis. Rocky Flats has no authorization basis for nuclear operations.</p>	<p>See response to Written Comment 17-3.</p>

### 9.5.1.3 Savannah River Site Public Hearing

The public hearing at Augusta, Georgia, was held at the downtown Ramada Plaza Hotel on December 16, 1997. Nineteen people attended the meeting. The meeting discussion was interactive in nature. A summary of the key comments and issues that were raised and the DOE responses follow.

<i>Summary of Issues Raised at Augusta Public Hearing and DOE Responses</i>		
<i>Key Issues Raised</i>	<i>DOE Responses</i>	
1	<p>Given DOE's goal to clean up and close Rocky Flats by 2006 [as specified in the <i>Rocky Flats Cleanup Agreement</i> between DOE, EPA, and the State of Colorado], it is uncertain whether Rocky Flats intends to do any processing of the residues.</p>	<p>The purpose and need for agency action is to process certain plutonium residues and the scrub alloy currently in storage at Rocky Flats to address health and safety concerns regarding storage of the materials and to prepare the materials for offsite disposal or other disposition. The processes identified in this EIS support Rocky Flats' ability to clean up and close the site by 2006. The alternatives analyzed for processing at Rocky Flats were selected based on Rocky Flats' ability to conduct those processes during the 1998-2004 timeframe. The action would be taken in a manner that supports site closure and limits worker exposure and waste production. DOE is committed to closing Rocky Flats by 2006, as described in DOE's "Accelerating Cleanup: Paths to Closure," described in Section 1.5.11 of this EIS.</p>
2	<p>Clarify how the EIS alternatives would be affected if additional variances are not granted (i.e., can Rocky Flats process those residues that do not receive a variance).</p>	<p>See responses to Comments 15-3 and 15-5.</p>
3	<p>Clarify how decisions can be made and implemented from this EIS when variance evaluations and technology studies are still ongoing?</p>	<p>Decisions to be made from this EIS will be based upon information available and the status of technology at the time of the Record of Decision. See also response to Comment 15-5.</p>
4	<p>Clarify the schedule for issuance of the Final EIS and Record of Decision.</p>	<p>See response to Comment 15-5.</p>
5	<p>Clarify the percentage of plutonium covered by the existing variances compared to the total amount of plutonium analyzed in the EIS.</p>	<p>Approximately 2,780 kilograms of plutonium are contained in all of the residues and scrub alloy analyzed in this EIS. A variance to safeguards termination limits has been granted to all of these materials, except the plutonium fluorides, Ful Flo filters and scrub alloy, which contain, collectively, approximately 362 kilograms of plutonium (142 kilograms in the fluorides, 19.6 kilograms in the Ful Flo filters, and 200 kilograms in the scrub alloy). This equates to about 2,418 kilograms of plutonium in materials for which a variance has been granted. Therefore, the percentage of plutonium covered by an existing variance represents about 87 percent of the total plutonium analyzed in the EIS. [Note: As a result of further characterization of the residues since the Draft EIS was issued, Rocky Flats concluded that many residues would only need to be repackaged prior to disposal at WIPP because much of the residue inventory would not require stabilization prior to repackaging to meet WIPP waste acceptance criteria. Rocky Flats requested and obtained a variance to safeguards termination limits that covers residues, including Ful Flo filters, with plutonium concentrations below 10 percent. However, Ful Flo filters were not identified in the Draft EIS as a material for which a variance to the safeguards termination limit had been requested, and accordingly, application of a variance was not considered for the Final EIS.]</p>

<i>Summary of Issues Raised at Augusta Public Hearing and DOE Responses</i>		
<i>Key Issues Raised</i>	<i>DOE Responses</i>	
6	<p>The salt distillation process may not be workable at Los Alamos National Laboratory; salt scrub should be considered as the preferred alternative at Los Alamos National Laboratory.</p>	<p>Although salt distillation is no longer the preferred processing technology for salts, the analyses conducted as part of this EIS have indicated that salt distillation at Los Alamos National Laboratory is a feasible process for certain materials (molten salt extraction electrorefining salts). Water leach at Los Alamos National Laboratory or Rocky Flats is also identified as a reasonable processing technology. However, at the recommendation of Los Alamos National Laboratory, the Final EIS includes evaluation of an additional process, acid dissolution followed by plutonium oxide recovery, for processing direct oxide reduction salts (with high-concentration plutonium) at Los Alamos National Laboratory. This is a mature process and has been identified as the preferred alternative for processing these direct oxide reduction salt residues at Los Alamos National Laboratory. The reasons for adding the acid dissolution processing technology are explained in Section 2.4.2 of this EIS.</p>
7	<p>Clarify the disposition path for plutonium separated in the Savannah River Site canyons.</p>	<p>The disposition path for any plutonium separated under Alternative 3 of this EIS is discussed in Sections 1.2.2 and 2.7.2 of the Final EIS.</p>
8	<p>Clarify the final forms of the processed residues that will be shipped to the WIPP (including repackaged and immobilized materials).</p>	<p>The residues to be disposed of in WIPP would be repackaged, stabilized, or processed to conform to the WIPP waste acceptance criteria. The forms would vary depending on the material category or subcategory. Immobilized materials would be placed into glass, cement, or ceramic forms. Repackaged and stabilized residues would be in various forms, including cements, metals, clinkers of ash and firebrick, rubber, wood, and glass. (Refer to Appendix C for more details on the forms of the stabilized or processed wastes to be shipped to WIPP.)</p>
9	<p>Clarify DOE's consideration of the "pipe and go" alternative and whether sufficient analyses have been conducted on this approach.</p>	<p>The "pipe and go" concept is encompassed under Alternative 4. Alternative 4, described in Sections 1.3.1, 2.1, and 2.4, provides for direct repackaging of certain residues into a pipe component when characterization data indicates that the residue poses low risk. (In some cases, stabilization and blending would be required prior to repackaging.) The pipe component and the drum into which it is placed would be used to store most plutonium residues after processing or repackaging. The drum containing the pipe component would be placed inside a TRUPACT-II shipping container before transporting the residues to the WIPP. The pipe component is described in Section 2.6.1.</p> <p>The pipe component was originally developed to create a safe interim storage alternative (until WIPP is available) to the existing facilities/conditions. Subsequent analysis has shown that the robustness of this container (designed to prevent dispersal during a design seismic event) also eliminates the criticality risks of the residues, greatly improves the efficiency of TRUPACT-II transportation, decreases vulnerability of materials to terrorist attack during shipment, and potentially avoids the need to process materials for plutonium separation before disposal.</p>

*Summary of Issues Raised at Augusta Public Hearing and DOE Responses*

<i>Key Issues Raised</i>		<i>DOE Responses</i>
10	Clarify whether DOE has analyzed criticality risks associated with an accident involving water submersion of the pipe component -- where water intrudes into the package, the salts dissolve, and the water transports the plutonium to another location where it could deposit in a critical configuration.	As the basis for developing the WIPP waste acceptance criteria, extensive accident analyses using computer modeling were performed for the maximum amount of plutonium that could be placed in 14 drums within a TRUPACT-II shipping container. The maximum amount was based upon 200 fissile gram equivalent per drum. This made the total amount of plutonium considered to be 2,800 fissile gram equivalent, which is the maximum amount allowed in a TRUPACT-II using pipe components. One of the modeling scenarios was total immersion of the TRUPACT-II in water, along with total immersion of the drums in water inside the TRUPACT-II, as well as simultaneously having all internal containers disappear (i.e., drums and pipe components) and all the plutonium being available to conglomerate in one corner of the TRUPACT-II. Even with this idealized scenario, the modeling showed no concerns regarding criticality of the plutonium.
11	Address whether the “pipe and go” packaging system referred to in comment 9, above, results in higher concentrations of plutonium in the package than considered in analyses performed for WIPP. If so, has DOE considered the potential for criticality when emplaced in WIPP?	<p>The pipe-and-go concept (see response to Comment 9 above) would not result in higher concentrations of plutonium in the package than previously considered in criticality analyses performed for WIPP. The maximum amount of plutonium allowed in a pipe component to be placed inside a 55-gallon drum is 200 fissile gram equivalent. All of the analyses performed for WIPP have been based on a 200-fissile gram equivalent limit per drum, which has been the standard loading for transuranic waste drums for over 20 years. The use of the pipe component instead of only a drum would allow a greater amount of plutonium to be placed into a TRUPACT-II (2,800 fissile gram equivalent versus 325 fissile gram equivalent) for shipment to WIPP. However, the total amount of plutonium shipped from Rocky Flats using this “pipe-and-go” packaging system would not exceed the amount allocated for Rocky Flats shipments in WIPP’s criticality analyses. When account is taken of this and the limited amount of plutonium that could be placed inside a drum, the need to perform additional criticality calculations is precluded.</p> <p>The WIPP waste acceptance criteria established the conditions that govern the physical, radiological, and chemical composition which transuranic waste must meet before it can be accepted and emplaced at WIPP. Radiological criteria include the maximum plutonium-239 equivalent activity for stored transuranic waste to avoid the potential for nuclear criticality. Acceptable package limits are less than 200 fissile gram equivalent per drum. These limits are two times the measurement error when the waste packages are assayed. On average, a drum of Rocky Flats plutonium residue waste would contain 8.6 curies of plutonium-239 and 50.5 curies of plutonium-241 per drum, which represents approximately 139 fissile gram equivalent in a drum. The proposed processing under consideration in the Final EIS could further reduce the fissile gram equivalent concentrations in this waste.</p>
12	DOE should consider developing a new storage facility at Rocky Flats to (1) resolve near-term problems of drums exposed to the elements (e.g., strong winds); and (2) provide for contingency in the event of scheduling delays with WIPP.	See response to Written Comment 23-2.

<i>Summary of Issues Raised at Augusta Public Hearing and DOE Responses</i>		
<i>Key Issues Raised</i>		<i>DOE Responses</i>
13	Clarify requirements for storage of separated plutonium (i.e., would storage be in accordance with DOE Standard 3013?).	Storage of separated plutonium resulting from processes analyzed in this EIS would be in accordance with DOE-STD-3013-96, <i>DOE Standard: Criteria for Preparing and Packaging Plutonium Metals and Oxides for Long-Term Storage</i> (DOE 1994b). For a more detailed discussion, refer to Section 2.6.2.

### **9.5.2 *Written Comments and DOE Responses***

This section provides a side-by-side display of the written comments received (full-text reproductions) and DOE's responses. Individual comments are numbered in the margins of the comment letters, and DOE responses to each of the numbered comments are provided on the right side of each page. To aid the reader in locating particular comments, indexes are provided at the beginning by:

- Name and Affiliation
- Key Issue Areas.

**INDEX OF WRITTEN SUBMISSIONS BY NAME AND AFFILIATION**

1. Lois Pohl, Coordinator, Missouri Clearinghouse, State of Missouri, Office of Administration
2. Kenneth W. Holt, MSEH, Special Programs Group (F16), National Center for Environmental Health, Department of Health and Human Services, Centers for Disease Control and Prevention for Oceans and Atmosphere, Atlanta, Georgia
3. Susan B. Fruchter, Acting NEPA Coordinator, Office of the Undersecretary for Oceans and Atmosphere, U.S. Department of Commerce, Washington, D.C., forwarding comment by Charles W. Challstrom, Acting Director, National Geodetic Survey, National Oceanic and Atmospheric Administration, Silver Spring, Maryland
4. Carl M. Edstrom, Arvada, Colorado
5. *Intentionally left blank.*
6. Craig C. Kocian, City Manager, City of Arvada, Colorado
7. Ronald A. Hellbusch, Director Public Works and Utilities, and Mary Harlow, Rocky Flats Coordinator, City of Westminster, Colorado
8. Deborah Reade, Citizens for Alternatives to Radioactive Dumping (CARD), Albuquerque, New Mexico
9. Tom C. Smith, Port Arkansas, Texas
10. Donald F. Dustin, Boulder, Colorado
11. Greg Mello, Director, Los Alamos Study Group, Santa Fe, New Mexico
12. Fred E. Humes, Director, Economic Development Partnership, Aiken, South Carolina
13. Joel T. Cassidy, Executive Director, South Carolina Employment Security Commission, Office of State Budget, South Carolina Project Notification and Review, Columbia, South Carolina (forwarded by Rodney P. Grizzle, Grants Services Coordinator, State Budget and Control Board, Office of State Budget, State of South Carolina)
14. Robert F. Stewart, Regional Environmental Officer, Office of Environmental Policy and Compliance, Office of the Secretary, U.S. Department of the Interior, Denver, Colorado
15. Joe Schieffelin, Permitting and Compliance Unit Leader, Federal Facilities Program, Hazardous Materials and Waste Management Division, Colorado Department of Public Health and Environment, Denver, Colorado
16. Dana C. Christensen, Los Alamos, New Mexico
17. Mark A. Robinson, Los Alamos, New Mexico

18. Danny Johnson, (for Robert E. Duncan, Environmental Programs Director), South Carolina Wildlife and Marine Resources Department, State of South Carolina (forwarded by Rodney P. Grizzle, Grants Services Coordinator, State Budget and Control Board, Office of State Budget, State of South Carolina)
19. Turner Styons, Deputy Executive Director, South Carolina State Housing Authority, State of South Carolina (forwarded by Rodney P. Grizzle, Grants Services Coordinator, State Budget and Control Board, State of South Carolina)
20. George Bistany, Grants Manager, South Carolina Department of Commerce, State of South Carolina (forwarded by Rodney P. Grizzle, Grants Services Coordinator, State Budget and Control Board, Office of State Budget, State of South Carolina)
21. Beth McClure, Director, RP&D, South Carolina Department of Parks, Recreation and Tourism, State of South Carolina (forwarded by Rodney P. Grizzle, Grants Services Coordinator, State Budget and Control Board, Office of State Budget, State of South Carolina)
22. Ronald E. Mitchum, Berkeley-Charleston-Dorchester Council of Governments, State of South Carolina (forwarded by Rodney P. Grizzle, Grants Services Coordinator, State Budget and Control Board, Office of State Budget, State of South Carolina)
23. Cynthia Cody, Chief, NEPA Unit, Office of Ecosystems Protection and Remediation, U.S. Environmental Protection Agency, Region VIII, Denver, Colorado
24. Gedi Cibas, Ph.D., Environmental Impact Review Coordinator, State of New Mexico Environment Department, Santa Fe, New Mexico
25. Tom Marshall, Chair, Rocky Flats Citizens Advisory Board, Westminster, Colorado
26. Victor Holm, Member, Rocky Flats Citizens Advisory Board
27. Brian Costner, Energy Research Foundation, South Carolina (on behalf of 13 organizations)
  - Carolina Peace Resource Center, South Carolina
  - Citizens for Environmental Justice, Georgia
  - Concerned Citizens for Nuclear Safety, New Mexico
  - Georgia Peace Action, Georgia
  - GE Stockholders' Alliance for a Sustainable, Nuclear-Free Future, Arizona
  - Global Resource Action Center for the Environment, New York
  - Los Alamos Study Group, New Mexico
  - Oak Ridge Environmental Peace Alliance, Tennessee
  - Rocky Mountain Peace and Justice Center, Colorado
  - Snake River Alliance, Idaho
  - Southwest Research and Information Center, New Mexico
  - STAND of Amarillo, Texas
28. Robert H. Neill, Director, Environmental Evaluation Group, Albuquerque, New Mexico
29. *Intentionally left blank.*
30. Ann Loadholt, Chairperson, Savannah River Site Citizens Advisory Board

31. Rocky Mountain Peace and Justice Center, Boulder, Colorado
32. Tom Marshall, Chair, Rocky Flats Citizens Advisory Board, Westminster, Colorado
33. Susan Gordon, Director, Alliance for Nuclear Accountability (ANA)
34. Candace M. Thomas, Chief, Environmental Analysis Branch, Planning Division, Corps of Engineers, Omaha District, Department of the Army, Omaha, Nebraska
35. Ralph Hutchison, Coordinator, Oak Ridge Environmental Peace Alliance, Oak Ridge, Tennessee
36. Diana Lobrano, Women's Action for New Directions, Atlanta, GA
37. Virginia Dollar, Co-Director, Alternatives In Action!
38. Adele Kushner, President, Action for a Clean Environment, Alto, GA
39. Donn Kesselheim, Lander, Wyoming
40. Emily B. Calhoun, Alto, GA
41. Nadean Young, Women's Action for New Directions (Rochester Chapter), Rochester, NY

## INDEX OF WRITTEN COMMENTS BY KEY ISSUE AREA

### A. COMMENTS DEALING WITH THE TECHNICAL ALTERNATIVES

(These include comments on the specific alternatives and sites that would implement the alternatives)

#### Alternative 1: No Action

2-1, 6-1, 8-1, 8-2, 8-10, 12-2, 26-1, 40-2

#### Alternative 2: Processing without Plutonium Separation

6-1, 7-2, 7-3, 7-4, 8-1, 9-1, 27-14, 31-7, 32-2, 33-6, 35-3, 36-2, 37-2, 38-2, 39-2, 41-2

#### Alternative 3: Processing with Plutonium Separation

6-1, 7-5, 8-8, 9-1, 10-1, 10-2, 10-3, 11-1, 11-3, 11-4, 11-5, 11-6, 11-7, 11-8, 11-9, 11-10, 11-11, 11-12, 12-3, 15-6, 17-6, 26-3, 27-1, 27-14, 27-17, 30-1, 31-1, 31-2, 31-3, 31-10, 31-11, 32-3, 32-4, 33-1, 33-3, 33-4, 33-5, 33-11, 36-3, 37-3, 38-3, 39-3, 41-3

#### Other Processing Options (Not Included in Alternatives Identified in Draft EIS)

(These include comments on direct repackaging in a pipe container for shipment to WIPP; other immobilization technologies, such as cold ceramification and GMODS; and other site locations)

7-6, 8-7, 26-4, 27-14, 27-23, 31-1, 31-7, 31-8, 31-9, 32-6, 33-11

#### Specific to Rocky Flats

6-1, 7-1, 7-2, 7-3, 8-1, 8-2, 8-6, 10-1, 10-3, 11-12, 12-2, 12-3, 15-2, 15-6, 17-2, 17-3, 26-1, 26-4, 31-4, 31-7, 31-9, 32-2, 32-5, 35-3, 35-4, 36-2, 36-4, 37-2, 37-4, 38-2, 39-2, 39-4, 41-2, 41-4

#### Specific to Savannah River Site

7-5, 9-2, 11-12, 12-3, 15-6, 17-3, 26-3, 27-17, 30-1, 31-10, 33-3

#### Specific to Los Alamos National Laboratory

11-1, 11-5, 11-6, 11-7, 11-8, 11-9, 11-10, 11-11, 11-12, 15-6, 17-3, 24-2, 24-3, 24-4, 27-18

### B. COMMENTS DEALING WITH STORAGE

(These include comments on the need to address contingency storage at Rocky Flats in the event of delays in opening WIPP, interim storage at other processing sites, risks of continued storage at Rocky Flats, and storage of americium-contaminated materials.)

6-1, 6-2, 8-1, 8-7, 8-8, 10-3, 11-1, 11-10, 11-11, 11-12, 12-2, 17-2, 23-2, 24-3, 26-1, 26-3, 30-1, 31-1, 31-4, 31-5, 31-9, 31-11, 32-1, 32-2, 32-4, 33-5, 33-6, 36-2, 37-2, 38-2, 39-2, 41-2

**C. COMMENTS DEALING WITH ULTIMATE DISPOSITION**

(These include comments on the Waste Isolation Pilot Plant and disposition of separated plutonium under Alternative 3, which is being addressed by the Plutonium Disposition EIS)

6-1, 8-11, 9-3, 16-1, 17-2, 17-4, 17-7, 17-9, 23-2, 24-5, 27-1, 27-14, 28-3, 28-4, 28-5, 28-6, 28-7, 28-8, 28-11, 28-12, 28-14, 31-4, 31-5, 32-2, 33-6, 33-7

**D. COMMENTS DEALING WITH PROLIFERATION RISKS**

(These include comments about risks of terrorism or theft as a result of any of the technical alternatives or transportation, safeguards termination limits, and variances to the safeguards termination limits)

6-1, 6-2, 8-8, 8-9, 8-14, 11-3, 15-3, 15-4, 15-5, 17-1, 17-4, 17-5, 23-1, 26-2, 26-3, 27-1, 27-2, 27-3, 27-4, 27-5, 27-16, 27-23, 28-4, 28-5, 28-6, 28-8, 28-9, 31-1, 31-2, 31-3, 31-4, 31-5, 33-1, 33-2, 36-3, 37-3, 37-4, 38-3, 39-3, 41-3

**E. COMMENTS DEALING WITH TRANSPORTATION**

(These include comments about the transportation of the materials offsite for processing and to WIPP following stabilization, repackaging, or processing)

6-1, 8-3, 8-4, 8-5, 9-2, 9-3, 9-5, 10-2, 17-8, 24-1, 27-21, 27-22, 28-1, 28-2, 28-12, 30-1, 31-11, 33-8, 35-2, 35-4, 36-1, 36-2, 37-1, 37-2, 37-4, 38-1, 38-2, 39-1, 39-2, 40-1, 41-1, 41-2

**F. COMMENTS DEALING WITH ENVIRONMENTAL, SAFETY, AND HEALTH RISKS**

(These include comments about the health and safety risks to workers and the public from implementing the alternatives in this EIS or from transportation, amounts of waste/materials generated, emissions, RCRA, ecological impacts, environmental justice, and DOE's methodologies for analyzing and presenting risks)

2-2, 3-1, 6-1, 7-2, 7-5, 8-1, 8-3, 8-5, 8-10, 8-12, 8-13, 10-1, 10-2, 11-3, 11-4, 11-5, 11-6, 11-7, 11-8, 11-9, 11-11, 14-1, 14-2, 17-2, 17-3, 17-4, 17-6, 17-8, 17-9, 24-4, 24-7, 24-8, 26-3, 27-7, 27-8, 27-9, 27-10, 27-11, 27-12, 27-13, 27-15, 27-20, 27-22, 28-3, 28-7, 28-10, 28-11, 28-14, 30-1, 32-3, 33-5, 33-8, 33-9, 34-1, 36-1, 36-3, 37-1, 37-3, 38-1, 38-3, 39-1, 39-3, 41-1, 41-3

**G. COMMENTS DEALING WITH COSTS**

(These include comments about increasing or decreasing costs due to implementing any of the alternatives and funding availability)

3-1, 6-1, 7-3, 9-4, 11-4, 12-3, 17-2, 17-7, 17-9, 27-17, 30-1, 31-9, 31-10, 32-3, 33-4

**H. OTHER**

(These include other comments not captured in the above categories, such as general comments on the adequacy of the EIS, DOE's decision process, equity, public involvement process, EIS availability, and editorial comments)

4-1, 4-2, 6-3, 7-1, 7-7, 8-14, 11-1, 11-2, 11-3, 11-4, 12-1, 13-1, 15-1, 15-2, 16-1, 17-7, 23-3, 24-5, 24-6, 25-1, 27-6, 27-19, 27-20, 28-13, 31-1, 31-6, 31-12, 32-5, 33-10, 33-11, 35-1