STATE OF MICHIGAN, STATE REPRESENTATIVE, LANSING, MI, KAREN WILLARD
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April 26, 1996

U.S. Department of Energy
Office of Fissile Materials Disposition
P.O. Box 23786
Washington, D.C. 20026-3786

REF: Storage and Disposition of Weapons-Usable Fissile Materials Draft Programmatic Environmental Impact Statement.

I am writing to communicate my serious concerns regarding one of the options presented in the reactor category of disposition alternatives in the above-cited PEIS.

It is my understanding that one of the reactor sites being considered by the Department is the heavy water Canadian Deuterium Uranium (CANDU) reactors on the shore of Lake Huron near Kincardine, Ontario. It is also my understanding that the plutonium-based mixed oxide fuel used by these reactors may be refined in Washington state and transported to the CANDU site, possibly through the state of Michigan.

I represent the residents of Lapeer and St. Clair counties, located in the lower Thumb region of eastern Michigan. My district is in close proximity to the two sites in Michigan's lower peninsula which serve as ground transportation connections between the United States and Canada: The Blue Water Bridge between Port Huron, Michigan, and Sarnia, Ontario; and the Windsor Bridge/Tunnel system between Windsor, Ontario, and the City of Detroit. The two major highways into Port Huron, Interstates 69 and 94, each run through the area I represent.

My concerns lie primarily with the safety of transporting weapons-grade plutonium fuel, which is volatile and highly carcinogenic, over ground from Washington state through densely populated areas of the U.S. and, particularly, the state of Michigan. If nuclear fuel is to be transported through Michigan to Canada on our Interstate highways, it will have to travel through major metropolitan areas of the lower peninsula either along I-94 (Kalamazoo, Battle Creek, Jackson, Ann Arbor, Dearborn and the Detroit Metro area) or along I-69 (Lansing, Flint, Port Huron). Additionally, the I-69 corridor runs the length of my House district, through Lapeer and St. Clair counties.

1/10.00.00

M-056

10 00 00 Comment Number 1

Under NEPA, DOE is required to evaluate a range of alternatives for Pu disposition. In that regard, the disposition of Pu in a CANDU reactor is one of nine different disposition alternatives analyzed in the PEIS. Six specific sites and a generic site are evaluated for fabricating MOX fuel for Pu disposition. As a result, the transportation analyses performed in the PEIS consider multiple routes from potential fuel fabrication sites to potential reactor sites. Section G.6 provides a description of the DOE safe secure transport system. The design of vehicle and transportation operation procedures is classified. The selection of the routes and coordination with State and local governments are contained within these procedures. However, there has never been a failure of this system to provide safe secure transportation during more than 20 years in operation.

For emergency response circumstances, all shipments will be coordinated with appropriate State and local officials. If requested, DOE will assist appropriate officials with response plans and, if necessary, resources in accordance with guidelines established in DOE Order 5530.3. DOE has developed a Radiological Assistance Program, also outlined in DOE Order 5530.3, to provide assistance in all types of radiological accidents. Regional Radiological Assistance Program plans include coverage of the States and provide guidance for maintaining and executing emergency response plans.

Realizing that the CANDU option is one of just several the Department is considering, I would strongly urge the Department to consider the above described transportation routes through the U.S. to be unacceptable. Especially, I ask you to consider that from the Western U.S. there are many access points to Canada that do not involve international waterways, bridges or tunnels. The environmental and security risk factors involved in transporting this highly volatile nuclear fuel more than 2,000 miles over ground through some of the most densely populated areas of the U.S. and the state of Michigan are deeply concerning. I strongly recommend that the Department look carefully into alternative methods of transportation, including ground transportation from the processing site in Washington state through Canada to the Ontario reactor site.

1/10.00.00
cont.

Thank you for the opportunity to express my views on this important health and safety issue.

Sincerely,

Karen Willard
State Representative, 82nd District

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STATE OF NEVADA, DEPARTMENT OF ADMINISTRATION, CARSON CITY, NV, JULIE BUTLER
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BOB MILLER
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June 7, 1996

J. David Nulton
Director, NEPA Compliance & Outreach
U. S. Department of Energy
Office of Fissile Materials Disposition
P.O. Box 23786
Washington, D.C. 20026-3786

Re: SAI# 96300140: State of Nevada Comments on the U.S. Department of Energy's Draft Programmatic Environmental Impact Statement on the Storage and Disposition of Weapons-Usable Fissile Materials

Dear Mr. Nulton:

Thank you for providing us the opportunity to review the Draft Storage and Disposition of Weapons-Usable Fissile Materials Programmatic Environmental Impact Statement (PEIS). As you might recall, in October 1994, the State of Nevada submitted detailed scoping comments on the Notice of Intent (NOI) for this PEIS.

The following comments on this Draft PEIS focus on national issues relevant to the storage and disposition of fissile materials, as well as on local issues pertinent to the Nevada Test Site. We conclude with a summary of these national and local issues.

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NATIONAL PERSPECTIVE

Over the past six years, State of Nevada officials have consistently and deliberately participated in the review of Department of Energy (DOE) plans and programs concerning the management and disposition of DOE-controlled radioactive waste and fissile materials. We have offered substantive comments on a variety of proposed actions including the NOIs for the now defunct Reconfiguration PEIS and the "active" Pantex EIS, as well as lengthy comments on the Idaho Spent Fuel PEIS, the Environmental Management PEIS, the PEIS for Stockpile Stewardship, and the NTS Site-Wide EIS. In all of these comments, we have consistently tried to embrace a national perspective while acknowledging that DOE must address local issues and concerns in order to achieve workable decisions concerning the long-term management and disposition of nuclear wastes and fissile materials.

In previous comments, we have stated that the federal government must first develop a preferred alternative for the permanent disposition of special nuclear materials like plutonium and highly enriched uranium (HEU), before selecting sites for interim or long-term storage. Specifically, we stated that "DOE should link long-term materials consolidation and management with options for final materials disposition."[1]

In reference to surplus plutonium, we concur with the National Academy of Sciences' finding that disposition options for this long-lived material will take decades to carry out. Therefore, we believe that to reduce the risks of fissile material

1/01.00.00

[1] Letter dated October 29, 1993 from Robert R. Loux, State of Nevada, to Mr. Howard Canter, Deputy Assistant Secretary, Office of Weapons Complex Reconfiguration.

M-268

01 00 00 Comment Number 1

Comment noted. Consideration will be given to the link between storage and disposition in the decisionmaking process.

STATE OF NEVADA, DEPARTMENT OF ADMINISTRATION, CARSON CITY, NV, JULIE BUTLER
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proliferation, a major policy concern for the country and the world, DOE must link plutonium storage and disposition functions at as few federal sites as possible. Taking such action would reduce the overall risks to public health and the environment. Linking plutonium storage and disposition functions would also diminish the socioeconomic impacts caused by risk and stigma issues typically associated with transporting nuclear materials and radioactive waste on public highways.

Given our recent participation in numerous briefings and meetings with Department officials, however, we believe that DOE will not seriously consider linking surplus plutonium storage with materials disposition. In essence, this means that DOE will likely segregate the decision process for long-term (50 year) plutonium storage from the nine separate plutonium materials disposition alternatives evaluated in the Storage and Disposition PEIS (*see attached*). Unfortunately, adopting such a strategy will result in the federal transportation of plutonium-bearing materials through cities and communities throughout the country. We contend that such a campaign will not be acceptable to the public.

1/01.00.00 cont.

For example, if DOE selects the "No Action Alternative" for long-term storage of surplus plutonium at the six existing DOE sites[2] assessed in the PEIS and then decides to adopt a plutonium disposition strategy such as Immobilization[3] and Reactor

[2] Hanford, WA; Los Alamos, NM; Rocky Flats, CO; Pantex, TX; Savannah, SC; and INEL, Idaho.

[3] Two primary immobilization technologies include vitrification (i.e., into glass) and ceramic immobilization. Vitrification is the technology of choice for treatment of the estimated 100 million gallons of defense high-level waste in storage at DOE's Hanford and Savannah River sites.

M-268

Burn[4], surplus plutonium-bearing materials will be continuously transported for many years between several DOE sites. While DOE's risk analyses for the routine transportation of radioactive waste and fissile materials always seem to demonstrate little or no impact in terms of accident fatalities and latent cancer deaths, these analyses routinely fail to address the perceived risk issues which inevitably will result from these transportation activities. 2/10.00.00

Risk Perception: Large scale shipments of plutonium-bearing materials along the nation's highways and rail lines, especially through large urban areas, will cause significant adverse socioeconomic and cultural impacts even if no accidents occur. Typically these impacts will manifest as negative stigmatizing socioeconomic effects. Research[5] has demonstrated that nuclear-related activities such as radioactive material transportation have the potential to result in significant socioeconomic impacts. These impacts originate in intense negative perceptions and avoidance behaviors by the public. Public and media interest in "things nuclear" makes it almost certain that these negative perceptions will adversely affect a community's quality of life and subsequently its commercial, residential, and business investment opportunities. 3/09.08.08

[4] Reactor burn refers to "burning" surplus plutonium in one or more nuclear reactors. To achieve this, surplus plutonium must be converted into fresh fuel for use in one or more U.S. reactors or in one of the CANDU reactors owned and operated by the Canadian government. Using weapons-grade plutonium, primarily from DOE's Pantex plant in Texas, DOE would process or convert plutonium 'pits' into fresh fuel at a new Mixed Oxide (MOX) fuel fabrication facility to be located at one of the six DOE sites evaluated in the PEIS. This fresh fuel would in turn be burned at an existing commercial reactor, the Canadian CANDU reactors at the Bruce Power Station, or a newly constructed (or acquired) DOE reactor.

[5] State of Nevada, Nuclear Waste Project Office. Publication numbers NWPO-SE 022-89; 056-93; and 063-95.

10 00 00 **Comment Number 2**

Historically, the risk from transporting highly radioactive materials is low. This is because safety is built into the packaging. There has not been an accident release of radioactive material which has caused injury or death during more than 40 years of DOE shipment activity. Perceived risk is beyond the scope of this PEIS. The potential risks from the transportation of materials for each alternative are evaluated and presented in Section 4.4 and Appendix G.

09 08 08 **Comment Number 3**

The socioeconomic analysis estimates impacts to employment, income, housing, and community services. These impacts are estimated using standard methodology, and can be quantified and compared across sites. Addressing "risk perception" issues would be highly speculative and not quantifiable. Furthermore, it would not be possible to compare alternatives in a consistent manner.

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There is also considerable uncertainty about the federal government's ability to safely manage radioactive materials, and because of this, the public has developed a very strong aversion to "things nuclear." Given this legacy, along with the inevitability of associated negative risk perceptions caused by the transportation of nuclear materials, we are disappointed that this Draft PEIS fails to address risk perceptions issues and their relationship to potential negative socioeconomic impacts as part of the NEPA (National Environmental Policy Act) impact analysis process. 4/15.00.00

Accordingly, if DOE adopts a proposed action and implements a Record of Decision that results in a fragmented approach between the management of long-term plutonium storage and a final disposition strategy, then the Department should be prepared for widespread public controversy and litigation leading to additional and costly NEPA documentation. Such action, of course, will be driven by the public's aversion to the "excessive" transportation of plutonium-bearing materials on the nation's highways. And any accidents or incidents that occur during the shipping campaigns will only serve to exacerbate the situation. 5/10.00.00

Cumulative Impacts: If plutonium storage and disposition are not consolidated at one or more federal sites, DOE's decision process could result in a deficient analysis of cumulative impacts to the human and natural environments. This situation could intensify as other "programmatic," department-wide NEPA decisions are made that cover the treatment, storage, and disposal of other waste forms[4] at the same sites selected for long-term plutonium storage and disposition.

[4] Civilian and defense spent reactor fuel, mixed waste, low-level waste, special-case waste, etc.

15 00 00 Comment Number 4

Risk perception is a subjective issue that varies from person to person. DOE does not attempt to quantify risk perception in order to provide an objective environmental impact analysis.

10 00 00 Comment Number 5

The maximum number of shipments of radioactive materials for an entire campaign, regardless of the alternative selected, is very small (about 0.03 percent per year) compared to the number of hazardous material shipments made nationally. Furthermore, the DOE safety history record is excellent. There have been no injuries or deaths caused by the release of radioactive materials in over 40 years of DOE shipments. While a transportation accident is possible, it is highly unlikely that there would be a release of radioactive material due to the stringent safety standards required for the packaging and operations.

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As DOE is aware, decisions concerning materials storage and disposition will play a key role in determining the potential cumulative environmental impacts and radiological human health risks at the federal sites selected for such activities. How DOE chooses to address the timing of these decisions in relationship to other department-wide programmatic NEPA decisions that pose similar risks is not at all clear. If political interests supersede environmental and radiological human health concerns in this uncertain decision process, then again we contend that such decisions will likely not be acceptable to the public. 6/11.00.08

Cost-Benefit Analysis: State officials also believe that a cost-benefit analysis should be developed to support a programmatic decision concerning which technology is eventually used for plutonium disposition. The National Environmental Policy Act requires federal agencies to balance the environmental costs of a proposed action against the action's economic and technological benefits.[7] According to the regulations of the Council on Environmental Quality concerning cost-benefit, "an environmental impact statement should at least indicate those considerations, including factors not related to environmental quality [cost-benefit], which are likely to be relevant and important to a decision."[8] Selecting a disposition option(s) for surplus plutonium is clearly a major programmatic decision that will have significant cost implications. 7/08.03.00

According to the analysis of socioeconomic "benefits" presented in the PEIS, it is clear that the Reactor Burn Alternative along with the need for developing a MOX

[7] 42 U.S.C. § 4332(2)(B)

[8] CEQ CFR Part 1502.23

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11 00 08 **Comment Number 6**

Comment noted. The cumulative impacts of various potential actions at the DOE sites are analyzed in Section 4.7 of the PEIS. In response to public comment, the analysis of cumulative impacts has been expanded for the Final PEIS. The Final PEIS, including public comments and cumulative impacts, will be considered in the DOE decisionmaking process.

08 03 00 **Comment Number 7**

The Department of Energy is not required to prepare a cost-benefit analysis. However, if one is prepared and it can help differentiate between the alternatives, it would be included in the PEIS. DOE has determined that a cost-benefit analysis is not needed on the storage and disposition of weapons-usable fissile materials, since there are a number of factors that distinguish the alternatives from each other.

Cost data, along with technical and schedule data, was provided for public comment in Technical Summary Reports for both storage and disposition in the summer of 1996.

(Mixed Oxide) fuel fabrication facility will generate the greatest economic impact when compared to the other disposition alternatives under consideration. Yet, without a general assessment of comparative life-cycle costs for the various disposition technologies, the public is unable to determine the long-term costs/benefits of selecting one alternative over another. Because the Reactor Burn Alternative could have significantly different life-cycle costs impacts in comparison to the other disposition technologies, the Final PEIS should at least contain an informal cost-benefit analysis. The Final PEIS should also discuss the relationship between the cost-benefit analysis of the various disposition technologies and any unquantified environmental effects such as reactor decommissioning, the generation and disposal of mixed, low-level, and solid wastes, etc.

7/08.03.00 cont.

Under the current Administration's guidance, DOE has initiated several "openness initiatives" aimed at both expanding and soliciting public participation in the Department's decision making process. DOE has also demonstrated a certain sensitivity toward assessing the costs associated with other major programmatic decisions[9] involving the production of nuclear materials and/or disposition of nuclear waste. However, these analyses were specifically excluded from the formal NEPA documentation process and were generally reserved for internal use to support DOE's NEPA decision making process. While justification for excluding a cost-benefit analysis for these other actions remains questionable, because of the high cost associated with the Reactor Burn Alternative, there is a clear and obvious need to

[9] See U.S. Department of Energy, 1995. Technical Reference Report for Tritium Supply and Recycling, DOE/DP-0134, and U.S. Department of Energy, 1996, Analysis of Stockpile Management Alternatives, February 1996, Albuquerque Operations Office.

provide a general analysis of costs and benefits of the nine disposition alternatives presented in this Draft PEIS. 7/08.03.00 cont.

In a related matter, State officials do acknowledge that a decision to adopt the plutonium burn option using any of the reactor alternatives will have certain national and international policy implications. On one hand, agreeing to participate in the "Plutonium Fuel Cycle" – albeit limited to defense related purposes – presents an obvious conflict with U.S. policies that support the non-proliferation of special nuclear materials.[10] Alternatively, by not choosing the plutonium burn-up option, the U.S. could undermine certain international objectives aimed at reducing the stockpile of weapons-grade plutonium held by Russia and other nuclear countries. In any event, while these national and international policy considerations cannot be ignored, neither can the selection of a plutonium disposition option that will "bust the budget," given other DOE program priorities that must compete in a time of no-growth budget cycles for the foreseeable future. 8/01.02.00

LOCAL ISSUES – NEVADA TEST SITE

On page S-20 of the PEIS, as well as in other sections of the document, it is stated that certain alternatives, such as consolidation of Highly-Enriched Uranium along with an estimated 38 tons of weapons-grade plutonium at the Nevada Test Site (NTS), would be *"inconsistent with the NTS withdrawal."* As you know, in comments on the NOI for this PEIS, we suggested that certain institutional constraints that 9/09.01.02

[10] Although reactor-based plutonium burn-up technologies will bind weapons-grade plutonium in a form that meets the Spent Fuel Standard, such technologies will not eliminate all of the plutonium isotopes, and a significant amount of plutonium will remain in a form that still requires final disposition.

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01 02 00 Comment Number 8

Comment noted. The purpose of the Proposed Action for Pu disposition is to convert the surplus weapons-usable Pu into a form that meets the Spent Fuel Standard. In the case of MOX fuel use for reactors, the fuel would be used in a once-through cycle without reprocessing. It is true that MOX fuel in reactors would not consume all the Pu. However, meeting the Spent Fuel Standard would make the residual Pu in the spent fuel as difficult to extract for weapons use as that in commercial spent fuel.

09 01 02 Comment Number 9

A review of the four Public Land Orders was conducted in 1983 by the Bureau of Land Management (BLM) in accordance with the *Federal Land Policy and Management Act* of 1976 (FLPMA). The BLM District Manager concurred with the conclusion of the review that NTS lands were still being used for the purpose for which they were withdrawn.

The Department of Energy is committed to ensuring that all future activities at NTS are conducted in compliance with FLPMA and Federal land withdrawal policies. DOE will consult with the Department of the Interior to ensure that the appropriate process is followed to enable DOE to fulfill this commitment.

STATE OF NEVADA, DEPARTMENT OF ADMINISTRATION, CARSON CITY, NV, JULIE BUTLER
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directly affect the Nevada Test Site should be analyzed if the NTS were to be considered for any major projects such as long-term storage and/or disposition of fissile materials. Specifically, we stated that "DOE must resolve certain administrative constraints that limit uses of the NTS [and that] such restraints are contained in the Public Land Orders that authorized the land withdrawal for the site." We are pleased that DOE has finally acknowledged that stipulated facility-use restrictions are contained in the Public Land Orders for the NTS withdrawal.

Because it appears that NTS will probably not be selected as a preferred alternative for either long-term storage or fissile materials disposition, we have purposely forgone a detailed review of the environmental impacts presented in the draft PEIS. However, if the final PEIS includes any proposed actions for the NTS, DOE must acknowledge that the Public Land Orders[11] for the NTS do in fact limit the use of the site to weapons testing and related research and development facilities only. When the Nevada Legislature ceded its jurisdiction to the public lands that now comprise the NTS, it did so on the basis of these stipulated uses. And, although many believe the lands comprising the NTS are federal lands, they are in fact public lands that have been withdrawn for a specific national defense purpose, and that purpose does not include long-term storage of fissile materials, nor development of any major disposition technologies such as plutonium immobilization and/or MOX fuel fabrication and reactor burn-up of fissile materials.

9/09.01.02 cont.

[11] Public Land Orders 805, 1662, 2568 and 3579. Bureau of Land Management (BLM), 1984. Continuation of Withdrawals, Department of Energy, Nevada Test Site 4310-84. (This file is located at the BLM State Office in Reno, Nevada.

If, in the unlikely event that DOE selects the NTS for one or more of these activities, then the Department must propose a path forward in the Final PEIS and Record of Decision that specifically addresses actions concerning altering the mission of the NTS. Formally altering that mission, moreover, must include a process for seeking approval from the Nevada Legislature to use the site for purposes other than nuclear testing. 10/08.03.00

CONCLUDING SUMMARY COMMENTS

As mentioned above, we are providing a list of specific summary comments that cover both national and local issues of concern. We would appreciate DOE's careful review of these comments and their consideration during preparation of the Final PEIS for storage and disposition of fissile materials.

- State officials in Nevada believe that DOE should link long-term fissile materials consolidation and storage with options for final materials disposition. This means that the proposed action presented in the Final PEIS should support a decision that co-locates long-term storage with one or more of the plutonium disposition/ treatment options. Linking long-term fissile materials storage and disposition will reduce risks and risk perception issues associated with the unnecessary transportation of fissile materials on public roads and highways throughout the country. 11/01.00.00

- A prolonged shipping campaign of plutonium-bearing materials along the nation's highways, especially through large urban areas, will cause significant adverse socioeconomic and cultural impacts even if no accidents occur. Hence, if a proposed action is put forth in the Final PEIS that results in prolonged shipments of fissile 2/10.00.00 cont. 4/15.00.00 cont.

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08 03 00 Comment Number 10

It is recognized that the decision to locate any of the alternatives at a site would require coordination with State and local officials on a variety of areas including the mission of the site.

01 00 00 Comment Number 11

Comment noted.

STATE OF NEVADA, DEPARTMENT OF ADMINISTRATION, CARSON CITY, NV, JULIE BUTLER
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materials, then DOE must address risk perceptions issues and their relationship to potential negative socioeconomic impacts as part of the environmental impact analysis process (i.e., as per CEQ 1502.1 and 1502.16). 4/15.00.00 cont.

- Decisions concerning fissile materials storage and disposition will play a significant role in determining potential cumulative environmental impacts and radiological human health risks at the federal sites selected for such activities. Accordingly, in presenting a proposed action in the Final PEIS for long-term storage of surplus plutonium, DOE must address the impacts of such a decision on other existing and pending department-wide programmatic NEPA decisions that pose similar risks at the selected site(s); we also contend that such an analysis must apply to those sites where it is obvious that a decision will be implemented for one or more of the technologies being considered for materials dispositions (i.e., immobilization and/or reactor burn). 6/11.00.08 cont.

- State officials strongly believe that a cost-benefits analysis must be developed to support a programmatic decision concerning which technology is eventually selected for plutonium disposition. Clearly, under the regulations of the National Environmental Policy Act (CEQ 1502.23), DOE is authorized, and we believe obligated, to present an informal, balanced assessment of costs and benefits for the competing plutonium disposition technologies. Moreover, because the Reactor Burn Alternative will have significantly higher costs and potentially more profound environmental impacts than the other disposition technologies, a cost benefits analysis is clearly warranted and should be included in the Final PEIS. 7/08.03.00 cont.

- If DOE selects the Nevada Test Site for either long-term storage of surplus plutonium or the development of any new facilities to support plutonium disposition (e.g., MOX Fuel Fabrication), State officials contend that the Department must propose a path forward in the Final PEIS and Record of Decision that specifically addresses the facility-use restrictions contained in the Public Land Orders for the NTS withdrawal.

10/08.03.00 cont.

Again, we appreciate the opportunity to provide comments on the Draft Storage and Disposition PEIS. If you have any questions about these comments, please contact me or Mr. John B. Walker, Nuclear Waste Project Office at 702-687-3744.

Sincerely,

Julie Butler

Julie Butler, Coordinator
State Clearinghouse, DOA/SPOC

JB\jbw
cc: Governor Bob Miller
Nevada Congressional Delegation
Perry Comeaux, Dept. of Administration
Robert R. Loux, NWPO
Harry Swainston, Deputy Attorney General
Lew Dodgion, Nevada Division of Environmental Protection
Affected State Agencies
Leo Penne, State of Nevada, Washington Office
John Thomasian, NGA
Terry Vaeth, Joseph Fiore, Don Elle, DOE/NV
Carol M. Borgstrom DOEHQ\NEPA
Ann Morgan, State Director, BLM

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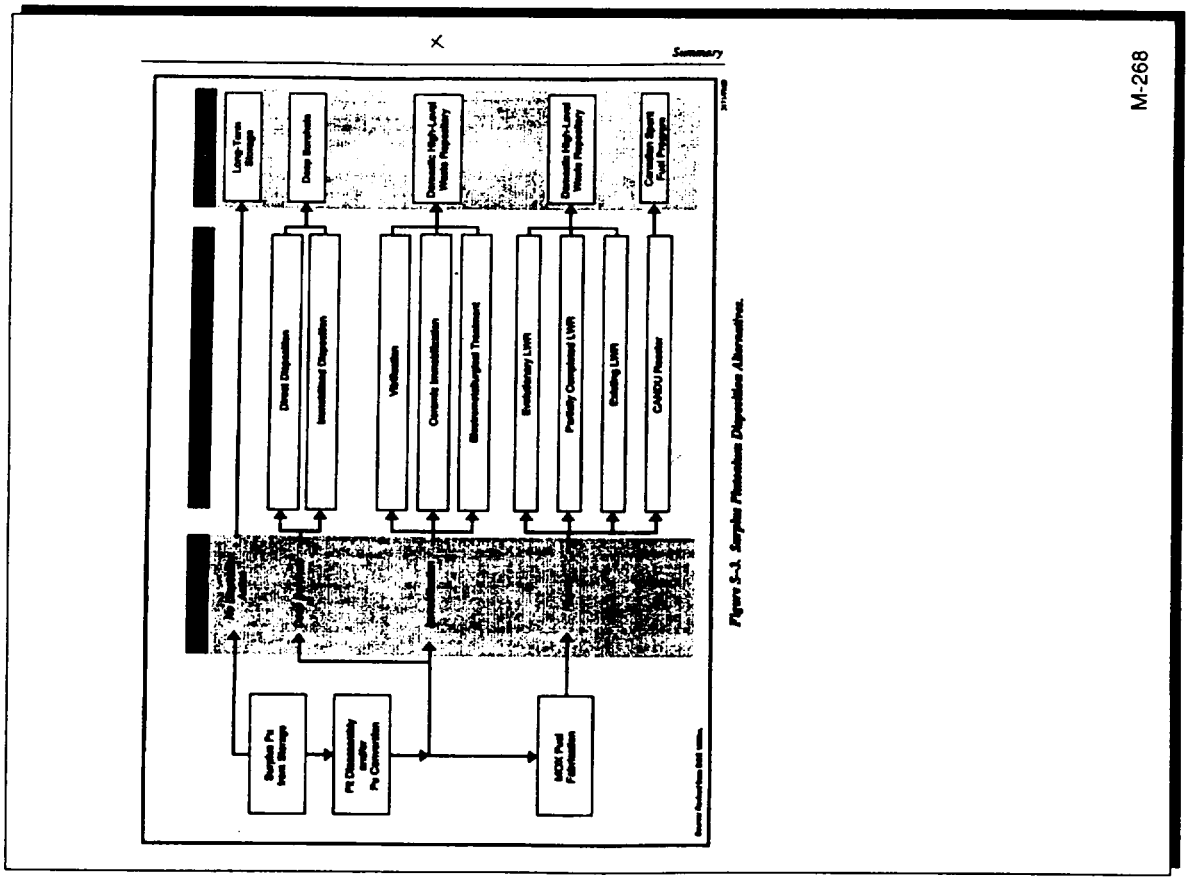

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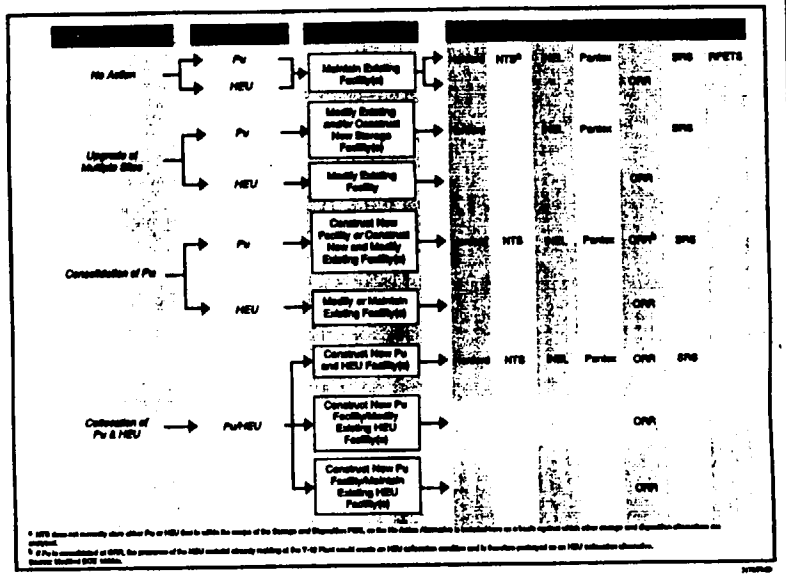

Figure S–2. Long-Term Storage Alternatives.

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STATE OF OREGON, DEPARTMENT OF ENERGY, SALEM, OR, JOHN SAVAGE
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Oregon

DEPARTMENT OF ENERGY

June 7, 1996

U.S. Department of Energy
Office of Fissile Materials Disposition
P.O. Box 23786
Washington, DC 20026-3786

The Oregon Department of Energy appreciates the opportunity to comment on the Storage and Disposition of Weapons-Usable Fissile Materials Draft Programmatic Environmental Impact Statement (DOE/EIS-0229-D). Our detailed comments on the draft are attached.

Oregon opposes the use of Hanford for any aspect of the plutonium disposition effort, that will result in creating more waste at Hanford, or will delay Hanford cleanup. We recommend that the Final EIS consider only Deep Borehole, CANDU reactor and vitrification with cesium alone or vitrification with high-level waste using the "can in can" process. Support for this recommendation is included in the attachment. 1/08.03.01 2/01.04.00

One other substantive issue was raised by a broad cross section of Oregonians. That issue is that each of the potential sites be treated equitably. Our citizens expressed strong opinions that with Hanford, the Idaho National Engineering Lab, and nerve gas storage at the Umatilla Army Depot, the Pacific Northwest has already borne more than its share of potential exposures to government owned hazards.

Storage Options

We believe neither the Fuels and Materials Examination Facility (FMEF) nor the Plutonium Finishing Plant (PFP) are suitable facilities for the purpose proposed.

FMEF is proposed as one possible facility for expanded storage of plutonium and processing of the plutonium for use in mixed oxide fuels. There are multiple problems with this approach. FMEF cannot hold the entire inventory of plutonium. FMEF is currently an uncontaminated facility close to Richland. Prior experience with fuels manufacturing, and plutonium processing indicates contamination of surrounding areas will occur. Most of the Hanford site is contaminated. It is unacceptable to consider contaminating more of the site. 1/08.03.01 cont.

John A. Kitzhaber
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08 03 01 Comment Number 1

The Department of Energy acknowledges the commentor's opposition to new missions at Hanford.

Funding for all alternatives under the Fissile Materials Disposition Program will be through the government budget process. This program will be funded independently of the Hanford cleanup activities. The Plutonium Finishing Plant (PFP) is only considered under the No Action Alternative in which Pu storage would continue at the current interim storage location in a stabilized form pursuant to DNFSB Recommendation 94-1 and the ROD for the *Plutonium Finishing Plant Stabilization Environmental Impact Statement* (PFP EIS) (DOE/EIS-0244-F).

The PFP EIS analysis concludes that PFP key facility buildings exceed the seismic design standards currently used at Hanford. Further, operation of systems and equipment with the PFP would not begin until a safety analysis has been completed.

01 04 00 Comment Number 2

Comment noted. Decisions will be based on the PEIS, among other things, which will include these comments from the Oregon DOE.

The Plutonium Finishing Plant (PFP) is also proposed for this mission. The existing structures at PFP are not designed to existing seismic criteria. The surrounding areas are extensively contaminated, and may never be adequately cleaned up to protect human health or the environment. Adding contamination to this already serious problem does not make sense. The unknown location of over one metric ton of plutonium which is unaccounted for at Hanford increases our concern that safety can be assured. 1/08.03.01 cont.

We believe the facilities at PFP do not meet industrial or nuclear safety standards for this process.

Disposal options

We considered several criteria for evaluating the merit of the various options:

1. The ability to permanently dispose of plutonium.
2. Speed of removal of the plutonium from potential reuse in weapons.
3. Cost.
4. Acceptability to other nations.
5. Security and degree of radiation protection.

In an ideal world, we would prefer complete destruction of the plutonium. None of the potential options will destroy most of the plutonium. 3/01.00.00

Deep Borehole emplacement could rapidly remove the plutonium from weapons usability. There are technical uncertainties with deep borehole which limit our ability to analyze potential consequences. The EIS makes no proposal for siting such a disposal facility. Finding an acceptable site will be difficult and time consuming. 4/04.03.00

The Canadians have expressed interest to act as an intermediary by using Canadian CANDU reactors to dispose both American and Russian plutonium. We believe this is a viable option which has merit. This option results in a net reduction in the amount of spent fuel created for disposal in the Canadian high level nuclear waste repository. This would represent a significant departure from the design basis for the CANDU reactors. The EIS does not provide sufficient analysis of the potential impacts to allow a definitive technical decision on this alternative. 5/06.05.08

We oppose completion of obsolete reactors. The control equipment design for these reactors is obsolete and will necessitate major redesign and upgrades. They will be costly to complete and will produce additional spent fuel requiring disposal. We oppose construction of new 6/08.03.01

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01 00 00 Comment Number 3

Comment noted.

04 03 00 Comment Number 4

Comment noted.

06 05 08 Comment Number 5

The PEIS does not intend to cover the entire range of issues to make definitive technical decisions on alternatives. A separate Technical Summary Report is available to describe the technical impacts of the CANDU Reactor Alternative more fully.

08 03 01 Comment Number 6

The Department of Energy acknowledges the commentor's concern about the disposition of Pu using the partially completed LWR (commercial). However, should this alternative be selected in the ROD, these reactors would be completed in accordance with current codes and standards with appropriate upgrades to equipment and systems. The analyses of the environmental impacts for completing these reactors and the fuel management (fresh MOX fuel and spent fuel) are included in this PEIS. Decisions on the disposition of weapons-usable fissile materials will be based on environmental analyses, technical and economic studies, national policy considerations, and public input.

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reactors. They will be costly to complete and will produce additional spent fuel requiring disposal. Use of other reactors designed for mixed oxide fuel is feasible, but both deep borehole disposal and vitrification have greater merit and less apparent adverse impacts. | 7/08.03.01

The EIS lacks information on costs and detailed impacts of the various options. Without this information, it is not possible to select a final remedy. This is a major flaw in that technical and public commenters are faced with a huge gap in the information needed to adequately judge the tradeoffs between alternatives. | 8/08.00.00

We oppose vitrification directly with high level waste. Vitrification of high level waste alone is already extremely complex. Adding plutonium to this mix could greatly raises the risk of failure for both the waste and plutonium disposal missions. | 9/08.03.01

Recent successful demonstration runs at Savannah River offer an immediate solution which uses a "can in can" approach to vitrifying the plutonium and embedding it in vitrified high level nuclear waste. Hanfords cesium could readily be added to the Savannah River waste feed stock to increase the radiation barrier. | 10/08.03.01

The available lands at Hanford which could be selected for such a mission fall primarily in critical shrub-steppe habitat. These lands are already compromised by the cleanup mission. | 11/09.06.01

Electrometallurgical treatment is unproven technology and should not be selected. | 12/08.03.01

Major Concerns about the EIS

Summary:

♦ ODOE is concerned the EIS does not identify the proposed action, as required by the National Environmental Policy Act. Instead it identifies a range of potential actions. This does not allow the public to adequately assess what USDOE proposes. | 13/08.03.00

♦ The Oregon Department of Energy, the Oregon Hanford Waste Board and the public were troubled to find no discussion of the costs for each option and cost comparisons between options in the EIS. These cost comparisons should be included in the final EIS. | 8/08.00.00 cont.

♦ The EIS fails to analyze the environmental impacts for Hanford. It does make repeated references to the "Hanford Site Development Plan", and to the impacts being negligible. | 14/09.01.01

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08 03 01 Comment Number 7

The Department of Energy acknowledges the commentor's support for the Borehole and Immobilization Alternatives. Decisions on disposition of weapons-usable fissile materials will be based upon environmental analyses, technical and economic studies, national policy considerations, and public input.

08 00 00 Comment Number 8

In the interest of openness and more informed decisionmaking, DOE released Technical Summary Reports to the public as soon as they became available. Cost data, along with technical and schedule data, were provided in Technical Summary Reports of both storage and disposition in the summer of 1996. Results of the nonproliferation analysis were made available in the fall of 1996. Each of these analyses, along with the environmental analysis, and public input will be integrated into DOE's decisionmaking process.

08 03 01 Comment Number 9

The Department of Energy acknowledges the commentor's opposition to the Vitrification Alternative. Decisions on disposition of weapons-usable fissile materials will be made based upon environmental analyses, technical and economic studies, national policy considerations, and public input.

08 03 01 Comment Number 10

The Department of Energy acknowledges the commentor's support for SRS. Decisions on storage and disposition of weapons-usable fissile materials will be based upon environmental analyses, technical and economic studies, national policy considerations, and public input.

09 06 01 Comment Number 11

The importance of shrub steppe habitat is acknowledged in the PEIS. The analysis identifies how much of this type of habitat may be lost, both in terms of acreage and as a percentage of the site. The cumulative loss of shrub steppe

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Neither the plan, nor the conclusion that impacts are negligible have been accepted by the stakeholders or local communities. | 14/09.01.01 cont.

♦ The shrub-steppe habitat at Hanford is critical to many species on site. This habitat has been designated as critical for protection by the State of Washington. Many of the species that depend on this habitat are listed or under consideration for listing as rare threatened or endangered by the State and Federal governments. This EIS must analyze in detail the potential impacts from proposed actions and the cumulative impacts from all other projects proposed or considered which may impact the same habitats. | 11/09.06.01 cont.

♦ The EIS uses the urgency of securing the plutonium to drive the urgency for plutonium disposition. We believe these need not be so tightly linked. The security issues are paramount and must proceed immediately. The storage problems must likewise be solved in the very near term to allow us to comply with international disarmament treaties. | 15/01.00.00

Plutonium disposition is important to ensure the permanency of disarmament here and in Russia. However, some technical options may be feasible with more time for analysis, like disposal in zircon or other mineral waste forms. | 16/14.00.00

Public Involvement

Enclosed is a copy of "*The Oregon Approach: A Grassroots Method to Achieve Meaningful Public Involvement*", February 1996. This is our report on what we learned about Oregonians concerns about plutonium disposition and how to communicate with citizens on such issues. We believe it could serve as a model for USDOE public involvement.

Attached is a more detailed discussion of the draft EIS. If you have any questions in this regard, please contact Mary Lou Blazek at (503)378-5544 or Dirk Dunning at (503)378-3187.

Sincerely,

John Savage, Administrator
Oregon Department of Energy

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habitat was also determined. This loss will be considered, as will all other environmental impacts, during the decisionmaking process prior to issuance of the ROD.

The PEIS will support a siting decision for long-term storage and a technology decision for the disposition of Pu. The only storage alternatives that would result in additional land disturbance at Hanford would be the Collocation and Consolidation Alternatives. Any adverse impacts to biological resources resulting from siting decisions would be mitigated and addressed in site-specific environmental documentation. Mitigation measures could include minimizing the area disturbed and developing and implementing a vegetation plan that would lead to the establishment of sagebrush habitat on disturbed land.

08 03 01 Comment Number 12

The Department of Energy acknowledges the commentor's opposition to the Electrometallurgical Treatment Alternative. Decisions on disposition of weapons-usable fissile materials will be based upon environmental analyses, technical and economic studies, national policy considerations, and public input.

08 03 00 Comment Number 13

As stated in Chapter 1 of the PEIS, the basic action proposed by DOE is to place surplus weapons-usable fissile materials into long-term storage until dispositioned. There are a variety of materials involved, in form and type, a variety of material locations, and a range of techniques that could be implemented to accomplish this purpose. Based upon this situation, DOE decided to prepare a PEIS so that the environmental impacts of a very complex situation could be considered in a systematic manner.

09 01 01 Comment Number 14

The *Hanford Site Development Plan* dated May 1993 (DOE/RL-93-19) is Hanford's current land-use planning document. The PEIS analyzes potential impacts to onsite land use against this document. All storage and disposition

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Attachment A

Oregon Department of Energy
Detailed comments on the
Storage and Disposition of Weapons-Usable Fissile Materials
Draft Programmatic Environmental Impact Statement

Summary

1. Page S-2, second bullet. The EIS assumes and asserts without support that the assertion that the spent fuel standard is adequate to assure that the plutonium from weapons will be inaccessible to terrorists and other nations for the time it will have to be secure. The implicit assumption is that providing any greater degree of protection is futile, as large quantities of spent commercial nuclear fuel which contains larger quantities of plutonium will be accessible to many nations. The EIS asserts that this radiation barrier is necessary. It does not assess whether this barrier is sufficient. The EIS should be expanded to include this assessment. — 17/01.04.00

2. Page S-4, second paragraph. The EIS scope requires that it assess the cumulative environmental impacts in accordance with the requirements of the National Environmental Policy Act. The EIS fails to examine the cumulative impacts to the Hanford environment and habitats. The final EIS should. — 14/09.01.01 cont.

3. Page S-5, last paragraph before DEVELOPMENT OF ALTERNATIVES section. The Department is required by the National Environmental Policy Act to consult with and obtain the comments of other agencies which have regulatory authority or special expertise in the area in question. NEPA requires this consultation to be early in the development of the EIS and throughout its formulation so as to reach good decisions. A copy of these comments is required to be transmitted along with the EIS and to be made available to the public. We request all other agency comments on this EIS. — 18/08.02.00

4. Page S-5, development of alternatives, second paragraph. USDOE's criteria for evaluation of the various options include cost-effectiveness. We request all cost data considered for the EIS to allow us to evaluate this information. — 8/08.00.00 cont.

5. Page S-6, fourth paragraph. USDOE summarily eliminated the Rocky Flats site based on proximity to a major city and plutonium vulnerabilities. The Hanford site is upriver from a large population of Oregonians and Washingtonians which may be adversely effected by actions at Hanford. USDOE should similarly eliminate Hanford from consideration. Either Hanford should also be summarily eliminated from consideration, or Rocky Flats should be included and a thorough analysis performed equal to other sites. Also, citizen input to the Plutonium Vulnerability Assessment at Hanford was NOT included. The site assessment team met with a limited number of stakeholders. They heard, but appeared to disregard, their concerns and comments. The final report states that the citizens concerns were addressed. We believe they — 19/01.04.00 — 20/08.02.00

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alternatives proposed for Hanford would be in conformance with the *Hanford Site Development Plan*; therefore, no impact to land use would occur. DOE is currently preparing the *Comprehensive Land Use Plan* (CLUP) in conjunction with the *Hanford Remedial Action Environmental Impact Statement* (HRA EIS). The CLUP/HRA EIS is being prepared with stakeholder, governmental, and tribal input. Coordination of these documents with the NEPA process will allow DOE to codify the land use recommendations in a ROD. However, the PEIS references the current *Site Development Plan* (1993) since adoption of the CLUP/HRA EIS will occur beyond the PEIS timeline.

An analysis of cumulative impacts at Hanford is addressed in Chapter 4 of the PEIS.

01 00 00 Comment Number 15

The Department of Energy currently provides adequate security for its Pu activities. The purpose of the Proposed Action is to implement the President's Nonproliferation Policy in a safe, reliable, cost-effective, technically feasible, and timely manner. The storage and disposition alternatives are linked in order to accomplish this purpose. Cost data, along with technical and schedule data, was provided in Technical Summary Reports of both storage and disposition in the summer 1996. Results of the nonproliferation analysis were made available in the fall of 1996.

14 00 00 Comment Number 16

During the screening of alternatives for inclusion in the PEIS, various immobilization forms were considered. The decision was made to include immobilization in ceramic and glass waste forms. The specific ceramic form was not identified. Research and development is both on-going and planned to support a disposition alternative(s), which would include pilot facilities for processes and materials (and could include zircon), as necessary.

were not. Several stakeholders believe that the assessment at the Plutonium Finishing Plant understated the magnitude of the risks and likelihood of their occurrence. No resolution of this issue is apparent. | 20/08.02.00 cont.

6. Page S-6, last paragraph. An additional alternative was raised by Los Alamos National Labs; immobilization in artificial zircon. Oregon specifically and formally requested this alternative be analyzed. We find no discussion in the EIS of this alternative. Additionally, information presented at the National Academy of Sciences Symposium on vitrification of high level nuclear waste showed that high borate content glasses may fail completely and release plutonium in less than ten thousand years. USDOE should perform a detailed assessment of the zircon alternative. | 16/14.00.00 cont.

7. Page S-12. No Hanford site locations are acceptable for plutonium storage or processing. The Fuels Manufacturing and Examination Facility (FMEF) facility is too close to the city of Richland and the Columbia river. FMEF is currently uncontaminated. Prior experience with plutonium facilities and fuel manufacturing facilities at Hanford shows a high likelihood that such a facility would result in contamination of the land and groundwater. Neither facility is acceptable. | 1/08.03.01 cont.

A new facility in the 200 Areas would result in the destruction of shrub-steppe habitat. Any such destruction directly impacts the cleanup of the Hanford site. There is little shrub-steppe habitat left at Hanford. Many species at Hanford which rely on the shrub-steppe are under consideration for listing as rare, threatened or endangered. On-going cleanup actions will require the siting of several large processing facilities. These will destroy significant amounts of shrub-steppe. Additional habitat destruction should not be an option. | 11/09.06.01 cont.

8. Page S-14, first paragraph, last line states "All immobilized Pu would be encased in stainless steel canisters and would remain in on-site vault-type storage until a final HLW disposal site is operational." Hanford is familiar with temporary - turned long term storage, for liquid waste, buried wastes and cesium and strontium capsules. Hanford must not be used for additional "temporary" nuclear waste storage. | 21/09.11.01

9. Page S-14, Electrometallurgical Alternative. Development of this alternative raises new security risks. This is the reverse of the process developed to separate plutonium and uranium from spent fuel in a single step. The development of this prior capability provides evidence to other nations that it can be done, done safely, done in a small facility and with fairly simple technology. This raises the prospect of reprocessing fuel by small nations using this or similar technologies, combined with simple | 12/08.03.01 cont.

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01 04 00 **Comment Number 17**

The Department of Energy, considering the Spent Fuel Standard, evaluated the adequacy of the Standard versus the greater degree of destruction achievable with other options such as the Deep Burn Reactor Option and the Accelerator Option. It was judged that the Spent Fuel Standard is adequate since it would convert the weapons Pu to a form making it as difficult to retrieve and reuse in weapons as the Pu contained in the much larger existing volume of spent fuel from commercial nuclear reactors.

The Department of Energy concluded that the shorter disposition time achievable with more mature technologies was more desirable than the greater Pu destruction that could only be achieved over a much longer time period through the use of Deep Burn Reactors and Accelerators. The NAS also adopted the Spent Fuel Standard as the most acceptable form for conversion of weapons Pu.

08 02 00 **Comment Number 18**

The only cooperating agency with the DOE on this PEIS is the EPA. The EPA had not provided DOE with any written comments as of the release of the Draft PEIS. After the release, EPA provided DOE with a written evaluation of the draft rating it EC-2. This means that EPA has environmental concerns because of insufficient information in a certain area. After receipt of the evaluation, DOE met with EPA and provided the information and/or explained the area of concern in more detail. Appropriate changes were made in the Final PEIS. Other Federal, State, and local agencies contacted are listed in Chapter 9 of the PEIS.

01 04 00 **Comment Number 19**

The selection process for candidate sites for storage, including the selection criteria and reasons for elimination, is described in Chapter 2 of the PEIS.

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chemical dissolution and separation of the plutonium. Electrometallurgical treatment should not be pursued and, work already done should remain classified. | 12/08.03.01 cont.

10. Page S-15, Reactor Category. Security concerns over the transport of weapons-usable fissile materials provide a strong argument that this operation should be conducted at the plutonium storage facility. | 22/06.06.08

11. Page S-15, Existing Light Water Reactors. The second paragraph states "A timely supply of MOX fuel would be needed for disposition of surplus Pu through use of existing LWRs. MOX fuel fabrication at an existing European facilities would be a viable option to meet the interim fuel needs of Existing LWR Alternative." No justification is provided for introduction of MOX fuel into U.S. LWRs earlier than would be available from a U.S. constructed MOX facility. | 23/06.01.08

12. Page S-15, Partially Completed Light Water Reactors. Completion of partly completed light water reactors poses several problems. First, the control systems and computers designed for these facilities are no longer manufactured. All of these systems will have to be replaced. The reactor systems may require extensive modification to meet MOX requirements. New reactors would generate additional spent nuclear fuel which would need to be disposed to a national high level waste repository. The first proposed repository at Yucca Mountain is over a decade late and may not have space for this material. All new reactor options should be discarded. | 24/08.03.01

13. Page S-16, Evolutionary Light Water Reactor Alternative. See comment 12.

14. Page S-16, Environmental Impact analysis. The environmental impact analysis excludes analysis of the environmental impacts associated with Tribal Treaty Reserved rights. If the lands are contaminated or destroyed, the Tribe is severely and permanently impacted. | 25/09.07.01

15. Page S-22, last paragraph (typical of each major alternative). Adverse environmental impacts at Hanford will likely also include severe impacts on cleanup of wastes and their resultant long term impacts on the site environment and the Columbia river. | 26/09.11.01

16. Page S-28, second paragraph (typical of the discussion of each of the options). This paragraph states "However, the annual radiological dose to on-site workers would be within radiological limits, and the dose to the population living within 80 km (50 mi) of the site would be within 100 person-rem per year." This exposure goal does not | 27/09.09.08

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08 02 00 **Comment Number 20**

The Department of Energy's *Plutonium Vulnerability Assessment* is not part of the PEIS. For this reason, this comment has been forwarded to the Office of Defense Programs who prepared the assessment, and EM who conducts actions to correct vulnerabilities.

09 11 01 **Comment Number 21**

Glass vitrification and ceramic immobilization are processes that put the weapons-usable fissile materials in a solid form that would not be readily dispersible into air or leachable into ground or surface water. The immobilized form would be stored at the glass vitrification facility or ceramic immobilization facility in compliance with all applicable Federal and State regulations and DOE Orders until availability of a mined geological repository. The NWPA enunciated the national policy that HLW be solidified and disposed of in a mined geologic repository.

06 06 08 **Comment Number 22**

The proliferation risks for transportation between facilities will be considered in selecting sites for pit disassembly, Pu conversion and MOX fuel fabrication. DOE has an impeccable history of monitoring security of special nuclear materials. This level of security would be expected to be retained throughout the disposition mission, including transportation.

06 01 08 **Comment Number 23**

The commentor is generally correct. However, as stated in the PEIS, the potential exists that MOX fuel may be needed earlier than could be supplied by a domestic MOX fuel fabrication facility.

08 03 01 **Comment Number 24**

The Department of Energy acknowledges the commentor's concern about the disposition of Pu using the partially completed LWR (commercial). Decisions on the disposition of weapons-usable fissile materials will be based on

meet the As Low As Reasonably Achievable (ALARA) regulatory approach to exposure control. | 27/09.09.08 cont.

17. Page S-46, Disposition Alternative, second paragraph states "Idaho National Environmental Laboratory, NTS and Hanford would be the least vulnerable to cumulative impacts form the disposition alternatives." We believe Hanford is the most vulnerable to cumulative impacts. The only way USDOE could conclude otherwise would be to assume that the problem is so big and so complex at Hanford and NTS that anything added by doing disposition there would not significantly change the damage. We believe USDOE has a clear obligation to cleanup Hanford and to protect the natural environment. | 28/09.00.08 | 29/01.00.00

18. Page S-48, fifth paragraph. For the upgrade alternative, Hanford would be heavily impacted. FMEF is unacceptable for use due to its proximity to the city of Richland and the Columbia river. The PFP does not meet seismic standards and is decrepit. A new facility adjacent to PFP would destroy shrub-steppe habitat. Any new facility at Hanford would lead to unacceptable additional contamination of lands. | 1/08.03.01 cont.

Volume I

The comments as noted for the Summary apply also to the various volumes as appropriate.

19. Page 3-22, section 3.2.1, first paragraph states "DOE intends to maintain active institutional control of the site in perpetuity." This is the subject of another EIS and is an open issue. Oregon opposes such control in perpetuity because it does not protect the public health, the environment or Tribal rights. Instead it leaves the problem to future generations to deal with. | 30/09.01.01

20. Page 3-22, section 3.2.1, fourth paragraph states "No prime farmlands exist onsite." Much of the site is potential prime farmland. This is not the highest and best use of the land, but it is arable. | 31/09.01.01

21. Page 3-26, last paragraph. The cleanout of PFP is the subject of another EIS. The proposed action here is duplicative of that EIS. The analysis in this EIS is inadequate to guide the cleanout actions at PFP. Also, PFP is not in acceptable condition to handle any waste from any other facility. It is processing its own waste only as a cleanout action. | 32/11.00.01

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environmental analyses, technical and economic studies, national policy considerations, and public input. However, should this alternative be selected in the ROD, these reactors would be completed in accordance with current codes and standards with appropriate upgrades to equipment and systems. The analyses of the environmental impacts for completing these reactors and fuel management (fresh MOX fuel and spent fuel) are included in this PEIS.

09 07 01 Comment Number 25

The Department of Energy recognizes that the Tribes consider traditional use areas to include the water, land, plants, and animals on Hanford, and that access to these resources is part of their reserved rights. Potential impacts to these resources are assessed in the cultural resources sections as well as land resources, water resources, geology and soils, and biological resources in Chapter 4 of this PEIS.

09 11 01 Comment Number 26

The conceptual designs for the storage and disposition facilities have, as part of their design, waste management facilities that would treat and package all waste generated into forms that enable long-term storage and/or disposal in accordance with RCRA and other applicable Federal and State statutes and DOE Orders. As noted in Section 4.1.10 of the PEIS, waste management activities that would support the long-term storage or disposition of weapons-usable fissile materials were assumed to be per current site practice. Thus, only LLW and possibly some solid nonhazardous waste was assumed to be disposed of onsite. Any future waste management facilities that may be required to support the long-term storage or disposition of weapons-usable material would be coordinated with any decisions in the waste-type-specific RODs resulting from the Waste Management PEIS and respective site-specific NEPA documentation. Therefore, no impacts are anticipated for Hanford or the Columbia River.

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22. Page 3-31, fifth paragraph. Fisheries is another primary use of the Columbia river. This use is now limiting dam operations, irrigation and potentially may limit river transport. | 33/09.04.01

23. Page 3-31, sixth paragraph. The flooding potential of the Hanford site has been extensively studied based on partial upstream dam failures. | 34/09.04.01

24. Page 3-34. The discussion of groundwater at the Hanford site does not begin to show the massive contamination of groundwater which already exists on the site. This contamination may get much worse over the next ten thousand years depending on "waste management" (sic) decisions. The map on the next page should also show the massive groundwater contamination plumes. Also, the map on page 3-35 does not show that groundwater flow from the northern half of the 200 west area flows northward to the Columbia river. | 35/09.04.01 | 36/09.04.01

25. Page 3-37, sixth paragraph. Hanford is in a seismic zone 2B, not seismic zone 2. Also, Uniform Building Code construction requirements require the use of a 1.5 safety factor for extremely hazardous facilities. The seismic risk throughout this region may be greatly understated. There is a band of low seismic activity which runs from Puget Sound to the area of the INEL site. Many surface features on and near the Hanford site coincide with this band of activity. A recent earthquake on a previously unknown blind thrust fault in the Seattle area demonstrates the risk of underestimation. No site in a seismic zone 2, 3 or 4 should be considered for any of the plutonium disposition activities. | 37/09.05.01

Volume II

26. Page 4-24, third paragraph, land use. The *Hanford Site Development Plan* is the subject of ongoing site discussions. It has not been agreed to by stakeholders or the regulators. Future land use is constrained by many other documents, the Tri-Party Agreement, Tribal Treaty reserved rights and federal law. | 38/09.01.01

27. Page 4-47 and 4-48. Constructing a new Pu storage facility in or between the 200 areas would have major impacts to shrub-steppe habitat or would occur on highly contaminated soil within the PFP perimeter. Both are unacceptable. Impacts would not be minimal as stated in the EIS. The impacts would lead to direct competition for land with other facilities required to cleanup Hanford. No land is available on the central plateau for such a facility. | 1/08.03.01 cont.

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09 09 08 **Comment Number 27**

Proposed 10 CFR part 834 (see 58 FR 16268) would require an ALARA program and would generally limit the potential annual population dose to 100 person-rem/yr from all pathways combined for DOE activities. The radiation exposure to the public is limited by the maximum individual dose of 100 mrem/yr.

The Federal radiation exposure limit for an individual worker is set forth in the Federal Code (10 CFR 835) 5,000 mrem/yr. This is the basis for limiting the radiation exposure to workers on DOE sites. Furthermore, DOE has also established an administrative exposure level of 2,000 mrem/yr (DOE/EH-0256-T) for the workers. DOE requires all sites to maintain worker radiation exposure levels ALARA preferably below this administrative level.

09 00 08 **Comment Number 28**

Based on comments received, the language in the cumulative impacts section of the Summary has been revised to better reflect the impact analysis in Section 4.7 of the Final PEIS.

01 00 00 **Comment Number 29**

Comment noted.

09 01 01 **Comment Number 30**

The Department of Energy is currently preparing the HRA EIS to evaluate potential land-use scenarios and to select a Preferred Alternative for site cleanup.The CLUP is being prepared in conjunction with the HRA EIS. Together, these documents will identify long-term land use recommendations for Hanford. The identification of land to be transferred from Federal ownership is beyond the scope of the CLUP and HRA EISs.

Reference to DOE maintaining active institutional control of Hanford in perpetuity has been deleted from Section 3.2.1 of the Final PEIS.

28. Page 4-461 and remainder of this section. The fifth paragraph states "According to the *Hanford Site Development Plan*, 200 Area's land use identified as waste operations, which includes radioactive material management, processing, and storage (HF DOE 1993c:13,14). Therefore, direct impacts to land use would be negligible." This land is shrub-steppe habitat which is precious and rare. To state that a plan not approved by the stakeholders or regulators selected the land for waste management, and therefore there is no impact is inappropriate. The remaining shrub-steppe habitat must be protected. | 14/09.01.01 cont.

29. Page 4-525, page 4-569 and page 4-630 reiterate the same errors noted in the previous three comments.

30. Page 4-705 indicates that LLW would be shipped to a USDOE site for burial. Hanford is not acceptable for any of this waste. The Hanford site cleanup mission must take first priority. Any inputs of waste from other locations will likely directly conflict with and interfere with the site cleanup mission. | 1/08.03.01 cont.

31. Section 4.4.1, page 4-771. The draft PEIS states that "the health impacts from the transport of materials were estimated using a homogeneous population." Since the analysis is not route specific, the potential impacts cannot be accurately predicted. | 39/10.00.00

32. Section 4.4.2.1, page 4-772. The draft PEIS attempts to downplay the potential impact of the transportation of plutonium by comparing it to the number of hazardous material shipments now on the road. The draft PEIS estimates a maximum of 603 shipments per year of radioactive material would be generated for any alternative in this PEIS. For these types of shipments -- this is a significant increase. | 40/10.00.00

33. Section 4.4.3, page 4-777 and elsewhere. The draft PEIS states that transportation assessment is contained in a classified appendix. How are we to judge the potential impacts if the analysis is not disclosed? | 41/10.03.00

34. Section 4.4.3.3, page 4-781. The draft PEIS says up to 12 BUSS shipments of cesium capsules each year would be needed from Hanford to the immobilization site. Only one BUSS cask exists. If the transport is to occur cross-country, logistics may make one shipment per month impossible. | 42/10.00.00

35. Section 4.4.3.3, page 4-781. The draft PEIS again refers to the classified appendix. It mentions that the potential radiological and non-radiological health effects from transporting Cs-137 from Hanford to each of the immobilization sites analyzed is | 43/10.03.00

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09 01 01 **Comment Number 31**

The U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS) of Benton and Franklin Counties does not identify prime farmland at Hanford. However, the NRCS believes that some soil units onsite have the potential to be prime farmland soils if irrigated. Section 3.2.1 of the Final PEIS was revised to reflect this condition.

11 00 01 **Comment Number 32**

This paragraph describes the existing storage at the PFP. The PFP is not a candidate facility for the storage of weapons-usable fissile materials other than under the No Action Alternative, as described in this PEIS.

09 04 01 **Comment Number 33**

Section 3.2.4 of the Final PEIS was modified to indicate that fisheries is another primary use of the Columbia River.

09 04 01 **Comment Number 34**

The issue of partial dam failures is not addressed since all proposed locations for the alternatives analyzed in the PEIS are well above any areas potentially affected by any type of flooding of the Columbia River. The largest magnitude floods are introduced as a potential "worst-case" scenario.

09 04 01 **Comment Number 35**

The discussion of existing groundwater contamination mentions the various contaminants which have been detected at the site, including the tritium and nitrate plumes in the unconfined aquifer which is sufficient detail for a PEIS. The tritium and nitrate plumes in the unconfined aquifer is added to Figure 3.2.4–2 of the Final PEIS.

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contained in this classified appendix. USDOE is not justified to place this information in a classified appendix. Cesium is not a fissile material and this analysis should not be contained in a classified document. Cesium-137 capsules have been transported in considerable numbers in recent years. The most recent shipments were preceded by an Environmental Assessment. That information was not classified. | 43/10.03.00 cont.

36. General -- The Draft PEIS makes no mention of working with route states or Native American tribes to coordinate any of the transportation activities. DOE must work with the states and Native American tribes along the routes to ensure that local responders are aware of the shipments and the potential risks they present. It is critical that responders be appropriately trained and equipped to conduct an effective response to an accident involving any of these shipments. The ability of these response agencies to effectively respond to a transport accident directly impacts the potential consequences of an accident and therefore must be considered in the PEIS. | 44/08.03.00 | 45/10.01.00

Volume III

37. Page E-15 fifth paragraph. The SST wastes are scheduled under the Tri-Party Agreement to be retrieved and vitrified in the same manner as the DST wastes. As written, the paragraph might lead a reader to assume the tanks will be closed with the waste in-place in the tanks. Also, tank closure is now excluded from the Tank Waste Remediation System EIS and will be the subject of a separate EIS at a future date. This future EIS will also address leaked tank waste. | 46/09.11.01

38. Page E-15, bottom of page states "the low-level fraction will be vitrified for disposal onsite." This is incorrect. The low-level fraction will be vitrified and placed in retrievable storage on-site. | 47/09.11.01

39. Page M-7. The cancer risk assumed for radiation exposure relies on BIER V recommendations which is in turn based in large part on the study of the survivors of Hiroshima and Nagasaki. BIER V adjusts the slope factor for low dose exposure downward by an arbitrary factor of two based on a belief that cellular repair mechanisms are more effective at low doses, and that the linear slope factor extrapolated from the existing databases over estimates the actual risk. This has not been demonstrated in controlled studies. Lacking better information, the risk slope factors should be returned to their full values. (e.g. multiply the reported cancer risks throughout the report by a factor of two.) In addition, the factors used do not include multi-generational effects. An additional factor is needed to account for this risk. | 48/09.09.08

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09 04 01 Comment Number 36

The purpose of this map is to show the generalized, overall groundwater flow directions across the site. The northward flow component at the 200-West Area is stated in Section 3.2.4 of the PEIS.

09 05 01 Comment Number 37

According to the 1994 Uniform Building Code (UBC), Hanford is in Seismic Zone 2B. However for this PEIS, UBC Seismic Zones 2A and 2B were consolidated into Seismic Zone 2. Seismic Zones 2A and 2B differ only in that Zone 2B has the potential for slightly more damage than Seismic Zone 2A corresponding to an earthquake intensity VII on the Modified Mercalli Intensity (MMI) scale. Based on historical and recent seismic data, the seismic risk in eastern Washington appears to be properly classified as Seismic Zone 2B.

Hanford is located in the Columbia Plateau, a term used informally to designate the area within the Columbia Intermontane physiographic province that is covered by the Columbia River Basalt Group. Seismicity of the Columbia Plateau, as determined by the rate of earthquakes per area and the historical magnitude of these events, is relatively low when compared with other regions of the Pacific Northwest, the Puget Sound area, and western Montana/eastern Idaho (areas where several large earthquakes, Richter magnitude greater than 7, have occurred). Between 1870 and 1980, only five earthquakes occurred in the Columbia Plateau region that had MMI of VI or greater, and all these events occurred prior to 1937.

The largest known earthquake in the Columbia Plateau (magnitude 5.75 and maximum MMI of VII) occurred in 1936 around Milton-Freewater, Oregon, approximately 100 km (62 mi) southeast of Hanford. In the central portion of the Columbia Plateau, the largest earthquakes near Hanford occurred in 1918 and 1973. Each had an approximate magnitude of 4.5 and MMI V, and located north of Hanford.

Most of the earthquakes in the central Columbia Plateau occur north or northeast of the Columbia River as "earthquake swarms," which are clusters of low intensity earthquakes (MMI < V) occurring over a short period of time.

40. Page M-22, figure M.2.4-1 shows a source in the 600 Areas on the slopes of Rattlesnake Mountain. Table M.2.4.1-1 on page M-29 indicates this source is currently in existence at this location and is composed of plutonium 239,240 and strontium 90. Senior Hanford site personnel deny any knowledge of such a source on Rattlesnake Mountain. We have no knowledge of a source on Rattlesnake Mountain. What is this source? 49/09.09.01

41. Page M-234, Table M.5.2.1.2-1. The table is clearly in error. It indicates that the dose to a worker at 1,000 meters for a nuclear criticality would be 0.010 rem. This apparently assumes direct radiation exposure only and that a criticality would not lead to a release of radioactive materials from containment. Also, a criticality accident would lead to much greater consequences to nearby workers. The accident frequencies reported in table M.5.2.2.1-2 deviate greatly from USDOE experience. The fires at Rocky Flats and Los Alamos should be a clear indication that these are frequent and credible events, not incredible events. Similarly, their have been a large number of uncontrolled and unplanned criticalities at USDOE facilities. The consequences are understated and the potential range of complications and human factors are ignored. The accident risk assessments should be reevaluated. 50/09.09.01

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Regarding the comment "No site in a Seismic Zones 2, 3, or 4 should be considered for any of the Pu disposition activities," DOE's decision on surplus Pu disposition includes the impacts of earthquakes in the area as well as the impacts of other resources such as threatened and endangered species, Native American resources, and health effects on workers and the public. All of these impacts, including the seismic zone, will be considered in the decisionmaking process.

09 01 01 Comment Number 38

The *Hanford Site Development Plan* dated May 1993 (DOE/RL-93-19) is Hanford's current land-use planning document. The PEIS analyzes potential impacts to onsite land-use against this document. All storage and disposition alternatives proposed for Hanford would be in conformance with the *Hanford Site Development Plan*; therefore, no impact to land-use would occur. DOE is currently preparing the CLUP in conjunction with the HRA EIS. The CLUP/HRA EIS is being prepared with stakeholder, governmental, and tribal input. Coordination of these documents with the NEPA process will allow DOE to codify the land-use recommendations in a ROD. However, the PEIS references the current *Site Development Plan* (1993) since adoption of the CLUP/HRA EIS will occur beyond the PEIS timeline.

10 00 00 Comment Number 39

The transportation analysis is not route specific, but used a homogeneous population mix along the representative routes between the sites. This homogeneous population mix was 84 percent rural, 15 percent suburban, and 1 percent urban.

10 00 00 Comment Number 40

The human health risks of material transportations associated with the proposed Pu storage and disposition alternatives are evaluated and presented in Section 4.4 of this PEIS. The more detailed description of the methodology and supporting data for the analysis is presented in the Appendix G. Transportation of radioactive materials between sites includes health risks for both normal operations and accident conditions to the public and workers.

Attachment B

Oregon Department of Energy
Discussion of public comments we received on the
Storage and Disposition of Weapons-Usable Fissile Materials
Draft Programmatic Environmental Impact Statement

We met with over eight hundred Oregonians in person in twelve cities. We reached many more by video conference, cable television and mailings. During our public involvement effort with Oregonians, we gained new insights into plutonium disposition problems.

Oregonians were uniformly thoughtful in their discussions with us. They often expressed concerns early in the meetings about knowing or learning enough in a short time to make informed comment on USDOE's plans for fissile materials disposition. Within a short time, the participants in our focus groups and public meetings were comfortably involved in the technical aspects of plutonium disposition. By the end of the meetings, the public expressed gratitude for having access to such an important decision process. The illusion they could not make informed comment was shattered.

Conclusions

This public process was extremely valuable. It gave us insights into the conflicting tradeoffs involved and the public view of these tradeoffs. Oregonians were considerate and passionate in their discussions about the issues. Many of the public comments were in depth technical comments. We found it valuable and important for our technical staff to be directly involved in the discussion. However, we confirmed that technical staff must be able to speak in common language and be able to explain complex ides in simple terms. This process not only changed our conclusions, it changed the way we think about the problems.

Oregonians came away from the meetings with a deeper understanding of the tradeoffs involved in plutonium disposition. Many were excited to be involved in this way and expressed a desire that we keep them involved. Some used our discussions as a spring board in their own communities to continue the discussions.

Oregonians views:

1. Broad opposition for storage, processing or disposal at Hanford.
2. Broad opposition to any reactor option.
3. Limited support for vitrification.

1/08.03.01 cont.
24/08.03.01 cont.
7/08.03.01 cont.

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10 03 00 **Comment Number 41**

Specific risks analyses and potential routes for each of these alternatives are contained in the Classified Appendix. The total potential impacts for comparison are given in Section 4.4 and Appendix G for each of the storage and disposition alternatives.

10 00 00 **Comment Number 42**

Logistical planning is an important facet regarding all potential transportation options pursuant to the alternatives in this PEIS. During the final decisionmaking stage, if it is deemed that 12 BUSS shipments each year are required, then appropriate action will be taken to facilitate this action.

10 03 00 **Comment Number 43**

The quantity of Cs per package, quantity per year, number of shipments, and other information can be found in Table 4.4.2.2–1 of the Draft PEIS. All risk calculations are contained in the Classified Appendix because some data used for the calculations are classified. However, the total potential fatalities for alternatives requiring the transport of Cs are presented in Section 4.4.3.3 and Table 4.4.3.3–1.

08 03 00 **Comment Number 44**

Transportation of special nuclear materials would occur through DOE's SST transportation system. This system involves coordination with State and local municipalities along the transportation routes to ensure proper response as required. The actual shipment times and routes vary and are classified for security reasons.

4. Early opposition to borehole disposal, with limited support in the last focus group. | 51/08.03.01

These are some of the concerns we heard from Oregonians.

Themes from the public comments:

Reactors

A few people spoke and argued in favor of the reactor options. A greater number argued against any reactor option based on the operational history of reactors worldwide. Many commented that continued operation of civilian nuclear reactors would add to an already huge problem and make it worse. Many made little distinction between civilian and military uses of nuclear power. | 24/08.03.01 cont.

Many people raised concerns about the potential for development of a plutonium economy if any reactor option were selected. Most Oregonians viewed this as a security risk for the development of nuclear weapons by other nations. | 52/13.00.00

Deep Borehole

Deep Borehole was opposed by most Oregonians, but did receive some limited support in the discussion phase of the final focus group meeting in Portland. | 51/08.03.01 cont.

Vitrification

Vitrification was generally looked upon positively, but many were concerned about how well it might work. Many people expressed concerns that mixing plutonium with high-level waste was over complicating the process and that it could lead to failure of the glass. | 7/08.03.01 cont.

General

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10 01 00 **Comment Number 45**

Logistical planning and meteorological surveillance are standard concerns which normally receive a great deal of attention during transportation operations such as this; transfer of materials to Hanford will hold no exceptions. Emergency preparedness personnel (that is, Emergency Response Teams) will be supplied with the necessary equipment and training commensurate with DOT, DOE, and NRC regulations. Sufficient funding for these concerns will be available to satisfactorily ensure that potential contingencies be dealt with in an effective and timely manner. DOE provides liaison with appropriate agencies for special nuclear material shipments; however, due to their classified nature, specific information on times and dates cannot be provided.

09 11 01 **Comment Number 46**

Text highlighted by the commentor (Section E.2.1) has been expanded to clarify how the wastes in the single-shell tanks are planned to be managed per the *Tri-Party Agreement*, as amended.

09 11 01 **Comment Number 47**

According to the Draft EIS for the Tank Waste Remediation System (DOE/EIS-0189-D), DOE and the State of Washington, Department of Ecology, have identified a Phased Implementation Alternative as the Preferred Alternative for managing and disposing of tank waste. In this alternative low-activity waste "would be disposed of onsite in near-surface retrievable disposal vaults" covered with a thick earthen barrier following evaporation and vitrification. This is also the strategy reflected in the current *Tri-Party Agreement*. The text referred to by the commentor in Section E.2.1 was revised in the Final PEIS to reflect the use of "retrievable" disposal vaults.

09 09 08 **Comment Number 48**

The human health effects response to low-level radiation exposure is still disputed in the scientific community. The ICRP and NCRP, two widely respected and accepted scientific organizations, support using the linear-non-threshold approach for estimating human health risks for low-level radiation

STATE OF OREGON, DEPARTMENT OF ENERGY, SALEM, OR, JOHN SAVAGE
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The EIS examines the near term issues involved in plutonium disposition, but it does not address longer term issues. In particular, the EIS accepts the proposal by the National Academy of Sciences for reliance on the "spent fuel standard" as the acceptable benchmark for performance. The spent fuel standard is specified as placing the plutonium into a final form that is at least as radioactive as spent nuclear fuel. This is intended to provide a barrier to keep terrorists and even some nations from recovering the plutonium for use in weapons. USDOE estimates that within sixty years of leaving a reactor, spent nuclear fuel no longer meets this standard. 17/01.04.00 cont.

Our citizens questioned the adequacy of the protection provided by the "spent fuel standard" proposed by the National Academy of Sciences. Many felt the plutonium should be more highly protected than this, and that in a separate analysis, spent fuel should also be more highly protected. They were equally concerned that civilian plutonium might be converted to weapons use in other nations. This drove a largely supported position that nuclear power was dangerous because of its future risks to global security.

Most pubic commenters noted that nuclear power was not foremost in their minds, but in general the public opposed it for a wide variety of reasons. A small minority of technical commenters viewed nuclear in a positive light. Support for any reactor options was very weak, except for the technical commenters.

People in general expressed concerns over the accumulative harm they and their children and grand-children may suffer as a result of the decisions already made, and which may be made as the result of this EIS. They also spoke about concerns over the conditions at other USDOE sites and the need for all sites and people near them to be treated fairly.

A few commenters lamented the exclusion of the space disposal option. Many extolled the folly of the space disposal option. 53/01.05.00

Many people discussed the problems inherent in handling plutonium metal and the potential for fires.

Many people spoke or expressed concerns about Native American impacts.

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exposure. Some suggest that this estimation is too conservative while others believe that radiation effects would be greater at low-level radiation exposures. However, the ICRP and NCRP approach is the most widely used method to estimate the radiation health risk and has long been employed by regulatory agencies in the United States. It is appropriate to use this method in the PEIS.

09 09 01 Comment Number 49

The emissions data related to Hanford were taken from the latest available report, *Hanford Site Environmental Report for Calendar Year 1993*. This data was collected and reported by Hanford personnel.

09 09 01 Comment Number 50

The analysis considers a release of radioactive materials from containment for all of the accidents given in Table M.5.2.1.2–1. The dose to the noninvolved worker is correct. Updated doses, based on the most recent information, are presented in the Final PEIS. As stated on page 4–65 of the Draft PEIS, "Certain accidents such as fires, explosions, and criticality could cause fatalities to workers close to the accident. Prior to construction of a new facility or modification of an existing facility, DOE Orders require detailed safety analyses to assure that facility designs and operating procedures limit the number of workers in hazardous areas and minimize risk of injury or fatality in the event of an accident." Chapter 3, which describes the affected environment, contains a review of accident history as it pertains to health and safety considerations at each of the sites of interest. The incidents occurring previously should not be confused with the beyond evaluation basis accidents in Table M.5.2.2.1–2. The accident frequencies and corresponding releases in the table are based on "sequences of events and models of effects that have not occurred. Significant changes exist between storage and disposition facilities and the current facilities design criteria and safety standards, which will reduce total risk to the public." (page M–226 of the Draft PEIS).

Most Oregonians expressed concern that Russia may be unable ability to secure its plutonium. Oregonians believe we should do everything possible to acquire Russian plutonium. Many people expressed concerns about trusting the Russians to carry through with weapons dismantlement and disposal of the plutonium. | 54/01.03.00

A majority of people wanted detailed information about the costs of the various options. Discussions showed that the cheapest option was not the top priority. Instead, Oregonians expressed a desire that the options considered be reasonably weighed between costs and benefits, and that the costs and benefits include non-financial costs and benefits, such as quality of the environment. | 8/08.00.00 cont.

Uniformly, Oregonians rejected the use of Hanford for any aspect of plutonium disposition, that would delay cleanup, or add waste to the site. The tally of our opinion gathering showed only vitrification to have any significant support, but not at Hanford. Many viewed vitrification with cesium as much more desirable than vitrification with high level waste. | 1/08.03.01 cont. 7/08.03.01 cont.

Many people expressed gratitude for having access to this decision process. A few were moved to tears that a government agency would actually discuss such an issue with them in such a forthright manner. | 55/08.02.00

Many people expressed concerns that we do not know enough collectively as a society to make this decision. They went on to clearly separate the security issues from the disposition issues. They recognized that we have a potential window of opportunity in which to remove large numbers of weapons permanently from the worlds arsenals. But, they also recognized that none of the proposed solutions can be fully implemented in less than a decade. They stated that as a consequence, this window is not so large or permanent as we imagine, and that though we should proceed, we should also continue to examine other potential solutions looking for better answers.

Several stated strongly that the scientists should make the decisions. A roughly equal number stated equally strongly that the scientists should not be allowed to make the decisions. Most agreed that politicians should not make the decision.

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08 03 01 **Comment Number 51**

The Department of Energy recognizes the commentor's concern with the Borehole Alternatives. Decisions on the disposition alternatives will be based upon environmental analyses, technical and economic studies, national policy considerations, and public input.

13 00 00 **Comment Number 52**

While the Pu is in the MOX fuel form, it is owned by the U.S. Government and would be subject to high standards of safeguards and security. Consistent with the President's Nonproliferation Policy, the surplus Pu would be inspectable by IAEA, as appropriate.

01 05 00 **Comment Number 53**

Comment noted.

01 03 00 **Comment Number 54**

Comment noted. DOE is encouraging the Russians to pursue timely Pu disposition by offering technical assistance, conducting joint assessments of the various disposition technologies, and planning joint demonstrations of some of the technologies to remove uncertainties in their viability.

08 02 00 **Comment Number 55**

Comment noted.

STATE OF OREGON, DEPARTMENT OF ENERGY, SALEM, OR,
JOHN SAVAGE

The Oregon Approach:

A Grassroots Method to Achieve Meaningful Public Involvement

Final Report

Oregon Department of Energy

and

Oregon Hanford Waste Board

February 1996

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Oregon

DEPARTMENT OF ENERGY

April 18, 1996

J. David Nulton
Director, NEPA Compliance & Outreach
Office of Fissile Materials Disposition
U.S. Department of Energy
Forrestal Building, MD-4
1000 Independence Avenue SW
Washington, D.C. 20585

Dear Mr. Nulton:

As promised, enclosed is a list of comments, statements, and concerns that we recorded on the flip charts at the Portland focus group meeting on plutonium disposition. Please take these comments into consideration as the U.S. Department of Energy continues its process to decide the ultimate fate of surplus weapons plutonium.

These comments will be included as an attachment to Oregon's formal comments on the Fissile Materials Draft Environmental Impact Statement.

If you have any questions, please call me at (503) 378-5544.

Sincerely,

Mary Lou Blazek

Mary Lou Blazek, Administrator
Nuclear Safety Division

John A. Kitzhaber
Governor

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Salem, OR 97310
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Plutonium Disposition

Portland Focus Group Comments - April 10, 1996

Concern that the decisions will be politicized. While the EIS process allows for public input -- there's concern expressed that other federal agencies such as departments of Defense and State and Congress may influence the decisions made outside of the public forum.	1/08.03.00
Concern about the cost involved -- consolidating the plutonium to one location vs. leaving the material at multiple sites.	2/07.02.00
Concern that the transportation of plutonium has not been factored into the costs.	3/07.00.00
Concern that Hanford may have to take surplus plutonium from Rocky Flats since Rocky Flats is not being considered for plutonium disposition activities.	4/01.02.00
Concern that if plutonium from Rocky Flats or some other facility goes to Hanford, Hanford cleanup will be negatively impacted.	
Concern about the safety measures and security of the material if the plutonium is consolidated to one site.	5/09.00.08
Question whether there was a formula to determine what percentage of material at each site was declared surplus, or whether it was assessed separately at each site.	6/01.00.00
Statement that declaring only 38 percent of the United State's plutonium inventory surplus is not enough.	
Concern that the draft Environmental Impact Statement fails to address in detail transportation issues like risk analysis, potential routes, and emergency preparedness and response plans in the event of an accident.	7/10.00.00
Concern about the form of the plutonium and the type of container or packaging the material will be transported in.	8/10.00.00
Concern that the technology for immobilization is not yet proven and may not work.	9/05.00.08
Statement that issues of this magnitude, USDOE needs to conduct more than just one meeting in each region.	10/08.02.00
Concern that the amount of plutonium destroyed in the reactor option (30 percent) is not worth the amount of high level radioactive waste it creates as a result of running that reactor.	11/08.03.01

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08 03 00 **Comment Number 1**

Comment noted.

07 02 00 **Comment Number 2**

Cost data, along with technical and schedule data, were provided in Technical Summary Reports of both storage and disposition in late July 1996.

07 00 00 **Comment Number 3**

Transportation costs were included in the cost evaluations for each storage and disposition alternative in the Technical Summary Reports issued by DOE beginning in late July 1996.

01 02 00 **Comment Number 4**

Comment noted. DOE acknowledges the concern about the potential effects that the selection of Hanford for new missions could have on the site's clean-up program. Decisions on storage and disposition of weapons-usable fissile materials will be based on environmental analyses, technical and economic studies, national policy considerations, and public input. The decision process will also give consideration to existing agreements between DOE, the State of Washington, and the EPA.

09 00 08 **Comment Number 5**

Potential impacts and risk to public and occupational health and safety from Pu consolidation are described in Chapter 4 of the Draft PEIS (Sections 4.2.1.9 and 4.2.2.9 to 4.2.6.9). Intersite transportation risks are presented in Section 4.4.3.2. The Pu Consolidation Alternative is considered a reasonable alternative since, during the screening process, it was rated high in resistance to theft or diversions to reflect the advantages in reducing the number of sites involved. The Pu Consolidation Alternative is also high in technical viability due to consolidation in a state-of-the-art storage facility where there would be little doubt that the facility would remain viable for the potential duration of long-term storage.

Concern that fabricating MOX fuel would still be more costly than uranium fuel.	12/08.03.01
Concern that Canadian reactors (CANDU) wouldn't burn MOX fuel any more effectively than U.S. reactors.	13/08.03.01
Concern that if a MOX fabrication facility is used, the facility could become privatized and create a commercial market for plutonium fuel.	14/01.00.00
Concern about the capacity of Yucca Mountain to store spent fuel generated from the reactor option.	15/12.00.00
Statement that since we already have problems with disposing of current high-level waste, we should oppose any option that would generate more high-level waste.	11/08.03.01 cont.
Concern that MOX fuel fabrication would create new waste streams.	16/06.01.09
Concern that using existing reactors would extend the operating life beyond the time these reactors could run safely.	17/06.00.09
Statement that the reactor alternative is totally unacceptable, because how the U.S. deals with surplus plutonium sets a standard for the rest of the world. The U.S. needs to declare this plutonium waste and not find a use for it.	18/01.00.00
Concern that the U.S. has the same problem as the Russians in that we continue to call the plutonium an asset, not waste.	
Questions about the status of Canada's, Germany's, France's, and Sweden's repository programs.	19/11.00.08
Concern about the possibility of a nuclear reaction or catastrophe with the borehole option.	20/09.09.08
Concern about borehole disposal in a region with volcanic activity.	21/09.05.08
Statement that the borehole option is a proven technology and the plutonium would be disposed of permanently.	22/08.03.01
Statement about the difficulty of predicting impacts far into the future.	23/01.00.00
Statement that public information efforts have not been adequate.	24/08.02.00
Concern that there is no financial table that compares all the costs of the different options included in this EIS. Concern that this draft cost report will not include long term costs into the next several hundreds of years.	25/07.02.00
Concern that USDOE's many EIS's are not all integrated.	26/01.00.00

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01 00 00 Comment Number 6

The declaration of surplus weapons-usable fissile materials is made by the President in response to recommendations from the Nuclear Weapons Council, composed of representatives from DOE, DoD, and the Joint Chiefs of Staff.

10 00 00 Comment Number 7

The human health risks of radioactive material transportations associated with the Proposed Pu storage and disposition alternatives are evaluated and presented in Section 4.4 of this PEIS. The categories of calculated risk include nonradiological accident impacts to the public and workers, nonradiological normal operation impacts to the public (air pollution), radiological accidents to the public, and radiological normal operation impacts to the public and workers. Specific risks analyses and potential routes for each of these alternatives are contained in the Classified Appendix. A description of the emergency response for each of the sites is included in Chapter 3 of the PEIS.

10 00 00 Comment Number 8

Transportation of materials will be performed as required by all Federal, State, and local regulations. Packaging will meet all applicable DOT and NRC requirements.

05 00 08 Comment Number 9

The immobilization technology was considered viable to the point that it was considered an alternative. DOE is currently in the process of demonstrating a number of these immobilization technologies at various sites.

08 02 00 Comment Number 10

To obtain public comments on the Draft PEIS, DOE held meetings near each of the potentially affected sites and a national meeting in Washington, DC. DOE also participated in meetings, open to the public, sponsored by different organizations at which the sponsor collected public comments which were

STATE OF OREGON, DEPARTMENT OF ENERGY, SALEM, OR, MARY LOU BLAZEK
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Concern that USDOE does not currently have the technological capability of doing MOX fuel.	27/06.01.08
Concern that certain sites are implied by the selection of certain options and that these are not clearly explained in the EIS.	28/01.04.00
Concern that options like reactor or immobilization would implicate Hanford where as other options like deep borehole may not.	29/01.02.00

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forwarded to DOE. DOE created and advertised a number of methods for submitting comments for members of the public who could not attend a public meeting. These methods included fax, oral comments using a toll-free telephone number, mail, and the Internet.

08 03 01 **Comment Number 11**

The Department of Energy acknowledges the commentor's opposition to the Reactor Alternatives. However, NEPA requires that DOE look at all reasonable alternatives and, therefore, reactor burning must be considered. Decisions on the disposition of weapons-usable fissile materials will be based upon environmental analyses, technical and economic studies, national policy considerations, and public input.

08 03 01 **Comment Number 12**

The Department of Energy acknowledges the commentor's opposition to the Reactor Alternative using MOX fuel. Decisions on disposition of weapons-usable fissile materials will be made based upon environmental analyses, technical and economic studies, national policy considerations, and public input.

08 03 01 **Comment Number 13**

The Department of Energy acknowledges the commentor's opposition to the use of the CANDU Reactor Alternative for the disposition of Pu. Decisions on disposition of weapons-usable fissile materials will be based upon environmental analyses, technical and economic studies, national policy considerations, and public input. This will include an appropriate level of analysis by Canada before any decision on burning Pu in a CANDU is implemented.

01 00 00 **Comment Number 14**

The Department of Energy is the owner of the MOX fuel containing surplus weapons Pu and would not create a commercial market for its use.

12 00 00 **Comment Number 15**

The PEIS does not assume the use of Yucca Mountain as a HLW repository for disposal of MOX spent nuclear fuel and/or immobilized materials. However, since Congress directed Yucca Mountain to be the only site considered for evaluation (site characterization) for the disposition of commercial spent nuclear fuel and HLW, data developed to date at this site have been used to evaluate the potential for disposing of Pu wastes.

06 01 09 **Comment Number 16**

The environmental impact of the MOX fuel waste streams is presented in Chapter 4 and Appendix H of this PEIS.

06 00 09 **Comment Number 17**

In relation to the existing reactors, all reactors are, and will continue to be, in compliance with all applicable NRC regulations. It is the position of DOE that the licenses for reactors not be extended solely for the Pu disposition mission. However, if the reactor owner chooses to seek plant life extension for his reactor, he may pursue this action under regulations promulgated by the NRC, irrespective of the Pu disposition mission.

01 00 00 **Comment Number 18**

In accordance with NEPA, the PEIS evaluates a range of reasonable alternatives for the disposition of weapons-usable Pu. The use of Pu in nuclear reactors as MOX fuel is a reasonable alternative under NEPA, and is therefore, considered in the PEIS.

11 00 08 **Comment Number 19**

Comment noted.

09 09 08 **Comment Number 20**

The human health impacts from potential accidents are presented in this PEIS for all of the proposed facilities including the facilities in the Borehole Option. For each of the anticipated accidents, the impacts analyzed include the cancer risk to workers and the MEI, as well as the potential cancer fatalities for the regional population up to 80 km (50 mi). The anticipated accidents analyzed cover a wide spectrum of the potential accidents including those that have large consequences but low probability, such as criticality accident (a nuclear reaction) and earthquake (catastrophe). The anticipated accidents include an analysis of the initiating events, materials at risk, source terms, probabilities, and consequences.

09 05 08 **Comment Number 21**

The deep borehole complex is not defined for a specific or representative site. Therefore, a limited assessment of the environmental impacts was done for the geological resources and other resources. Should either of the Deep Borehole Alternatives be selected, a siting study would be conducted in coordination with a site-specific discussion of environmental (including geological) conditions and impacts. The identification and acceptance of a site location would require extensive site characterization to ensure that the primary objective of the deep borehole complex, hydrologic isolation from the biosphere, would be met.

08 03 01 **Comment Number 22**

The Department of Energy acknowledges the commentor's support for the Borehole Alternatives. Decision on disposition of weapons-usable fissile materials will be based upon environmental analyses, technical and economic studies, national policy considerations, and public input.

01 00 00 **Comment Number 23**

The Department of Energy agrees that there are uncertainties in the long-term. Every effort is being made to assess environmental impacts in the foreseeable future and decisions will be based on the best available

information. Implementation of decisions will be carried out consistently with applicable environmental safety and health, security, and environmental standards and requirements. Changes to storage and disposition activities will be made, as required, to ensure that these requirements and the overall mission of DOE is being met.

08 02 00 **Comment Number 24**

Comment noted.

07 02 00 **Comment Number 25**

Cost data, along with technical and schedule data, was provided in Technical Summary Reports of both storage and disposition in late July 1996. Cost data for the next hundreds of years would be highly speculative and is beyond the scope of this program.

01 00 00 **Comment Number 26**

The relationship of the Storage and Disposition PEIS with other EISs is described in Chapter 1 of the PEIS. Furthermore, DOE has an ongoing effort in program integration, including the internal review and concurrence of NEPA documents by all public organizations.

06 01 08 **Comment Number 27**

Fabrication and use of MOX fuel using reactor-grade Pu is a mature, industrial scale technology in Europe with at least three vendors actively fabricating MOX fuel. There are some differences introduced by the use of weapons-grade Pu, which DOE is addressing as part of an ongoing weapons-grade MOX fuel development program.

01 04 00 **Comment Number 28**

Some of the storage and disposition alternatives addressed in the PEIS involve existing facilities at DOE sites. To the extent that these alternatives and sites are included in the ROD, they will involve the use of an existing site

if the ROD includes the use of commercial reactors. However, in cases where new facility construction is required for either storage or disposition, the PEIS analyses and results are not intended to imply a preference for any particular site.

01 02 00 **Comment Number 29**

Comment noted.

STATE OF SOUTH CAROLINA, DEPARTMENT OF PARKS, RECREATION AND TOURISM, COLUMBIA, SC, JAMES E. NEWMAN

PAGE 1 OF 1

South Carolina
Department of Parks, Recreation & Tourism
Engineering and Planning Office

May 6, 1996

Mr. J. David Nulton
Director, NEPA Compliance & Outreach
Office of Fissile Materials Disposition
United States Department of Energy
1000 Independence Avenue, SW
Washington, DC 20585

Re: DOE/EIS-0229-D
Storage and Disposition of Weapons-Usable Fissile Materials
Draft Programmatic Environmental Impact Statement

Dear Mr. Nulton

We have briefly reviewed the above referenced subject and offer the following comments for consideration:

1. The Final Programmatic Environmental Impact Statement should include a cost/benefit analysis of the various alternatives. All revenues, processing expenses, research & development costs and design/ construction costs from activities should be included for each alternative in terms of present value. — 1/08.00.00

2. The preferred alternative should weigh the costs of the alternatives with the associated risks of latent cancer fatalities and environmental impacts. — 2/08.03.00

3. The design life of repositories (permanent storage) should be consistent with the radioactive emission life of the waste placed in the repository. — 3/12.00.00

4. Radioactive and hazardous waste that will not be used in the foreseeable future should be placed in repositories for permanent disposition.

The South Carolina Department of Parks, Recreation and Tourism appreciates the opportunity to comment on this project and any other projects that could possibly affect tourism and existing and/or planned recreational facilities. Please call me at 734-0482 should you have any questions about these comments.

Sincerely,

James E. Newman, III
State Parks Engineer

cc: Beth McClure, David Simms, Amy Duffy, Marion Edmonds, Charles Harrison, Bob Liming, Rodney Grizzle (Office of the Governor-Grant Services)

1205 Pendleton Street, Columbia, South Carolina 29201, USA (803) 734-0122, FAX (803) 734-1042

M-237

08 00 00 **Comment Number 1**

In the interest of openness and more informed decisionmaking, DOE released Technical Summary Reports to the public as soon as they became available. Cost data, along with technical and schedule data, was provided in Technical Summary Reports of both storage and disposition in the summer of 1996. Results of the nonproliferation analysis were made available in the fall of 1996. Each of these analyses, along with the environmental analysis and public input, will be integrated into DOE's decisionmaking process.

08 03 00 **Comment Number 2**

The financial cost of implementing all alternatives, for storage and disposition, have been included in separate Technical Summary Reports that were made available to the public in late July 1996. The environmental impacts of each of the alternatives have been analyzed in the PEIS.

12 00 00 **Comment Number 3**

Comment noted.

STATE OF SOUTH CAROLINA, OFFICE OF THE GOVERNOR, COLUMBIA, SC, RODNEY P. GRIZZLE
PAGE 1 OF 5

State of South Carolina
Office of the Governor

April 12, 1996

Mr. J. David Nulton
Director, NEPA Compliance & Outreach
Office of Fissile Materials Disposition
U. S. Department Energy
1000 Independence Ave., SW
Washington, D.C. 20585

Project Name: Storage and Disposition of Weapons-Usable Fissile Materials Draft Programmatic Environmental Impact Statement DOE/EIS-0229-D

Project Number: EIS-960309-009

Dear Mr. Nulton,

The Grant Services Unit, Office of the Governor, has conducted an intergovernmental review on the above referenced activity as provided by Presidential Executive Order 12372. All comments received as a result of the review are enclosed for your use.

The State Application Identifier number indicated above should be used in any future correspondence with this office. If you have any questions call me at (803) 734-0485.

Sincerely,

Rodney P. Grizzle
Grants Services Supervisor

M-243

Office of the Governor • Grant Services
South Carolina Project Notification and Review
1205 Pendleton Street
Room 477
Columbia, SC 29201

State Application Identifier
EIS-960309-009
Suspense Date
4/14/96

James Hugh Ryan
S. C. Forestry Commission

MAR 2 2 1996

ıe Grant Services Unit, Office of the Governor is authorized to operate the South arolina Project Notification and Review System (SCPNRS). Through the system e appropriate state and local officials are given the opportunity to review, mment, and be involved in efforts to obtain and use federal assistance, and to ess the relationship of proposals to their plans and programs.

ease review the attached information, mindful of the impact it may have on your ency's goals and objectives. Document the results of your review in the space ovided. Return your response to us by the suspense date indicated above. Your mments will be reviewed and utilized in making the official state recommendation ncerning the project. The recommendation will be forwarded to the cognizant deral agency.

ıould you have no comment, please return the form signed and dated.

you have any questions, call me at (803) 734-0495. Rodney Grizzle

- 1996
GRANT SERVICES

☐ Project is consistent with our goals and objectives.

☐ Request a conference to discuss comments.

☐ Please discontinue sending projects with this CFDA# to our office for review.

☐ Comments on proposed Application is as follows:

No Comment

Signature: Joe M. Rabbony Date: 3-27-96

Title: Division Director-Administration Phone: 896-8800

M-243

STATE OF SOUTH CAROLINA, OFFICE OF THE GOVERNOR, COLUMBIA, SC, RODNEY P. GRIZZLE
PAGE 3 OF 5

Office of the Governor • Grant Services
South Carolina Project Notification and Review
1205 Pendleton Street
Room 477
Columbia, SC 29201

State Application Identifier
EIS-960309-009
Suspense Date
4/14/96

Charles Kerekes
S.C. Jobs-Economic Development Authority

ıe Grant Services Unit, Office of the Governor is authorized to operate the South ırolina Project Notification and Review System (SCPNRS). Through the system e appropriate state and local officials are given the opportunity to review, mment, and be involved in efforts to obtain and use federal assistance, and to ess the relationship of proposals to their plans and programs.

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ıould you have no comment, please return the form signed and dated.

you have any questions, call me at (803) 734-0495.

RECEIVED
Rodney Grizzle
MAR 26 1996
GRANT SERVICES

- ☐ Project is consistent with our goals and objectives.
- ☐ Request a conference to discuss comments.
- ☒ Please discontinue sending projects with this CFDA# to our office for review.
- ☐ Comments on proposed Application is as follows:

Signature: Charles P. Kerekes Date: 3/25/96

Title: Executive Vice President and Chief Operating Officer Phone:

M-243

Office of the Governor • Grant Services
South Carolina Project Notification and Review

1205 Pendleton Street
Room 477
Columbia, SC 29201

State Application Identifier
EIS-960309-009
Suspense Date
4/14/96

Bruce E. Rippeteau
South Carolina Archaeologist

ıe Grant Services Unit, Office of the Governor is authorized to operate the South arolina Project Notification and Review System (SCPNRS). Through the system e appropriate state and local officials are given the opportunity to review, mment, and be involved in efforts to obtain and use federal assistance, and to sess the relationship of proposals to their plans and programs.

ease review the attached information, mindful of the impact it may have on your ency's goals and objectives. Document the results of your review in the space ovided. Return your response to us by the suspense date indicated above. Your mments will be reviewed and utilized in making the official state recommendation ncerning the project. The recommendation will be forwarded to the cognizant deral agency.

RECEIVED
Rodney Grizzle
GRANT SERVICES

ıould you have no comment, please return the form signed and dated.

you have any questions, call me at (803) 734-0495.

- ☐ Project is consistent with our goals and objectives.
- ☐ Request a conference to discuss comments.
- ☐ Please discontinue sending projects with this CFDA# to our office for review.
- ☐ Comments on proposed Application is as follows:

Signature: [signature] Date: 3/26/96

Title: Underwater archeologist, received comments Phone: 803-777-8170

M-243

STATE OF SOUTH CAROLINA, OFFICE OF THE GOVERNOR, COLUMBIA, SC, RODNEY P. GRIZZLE
PAGE 5 OF 5

Office of the Governor • Grant Services
South Carolina Project Notification and Review
1205 Pendleton Street
Room 477
Columbia, SC 29201

State Application Identifier
EIS-960309-009

Suspense Date
4/14/96

Robert E. David
South Carolina Employment Security Commission

...e Grant Services Unit, Office of the Governor is authorized to operate the South ...arolina Project Notification and Review System (SCPNRS). Through the system ...e appropriate state and local officials are given the opportunity to review, ...mment, and be involved in efforts to obtain and use federal assistance, and to ...sess the relationship of proposals to their plans and programs.

...ease review the attached information, mindful of the impact it may have on your ...ency's goals and objectives. Document the results of your review in the space ...vided. Return your response to us by the suspense date indicated above. Your ...mments will be reviewed and utilized in making the official state recommendation ...ncerning the project. The recommendation will be forwarded to the cognizant ...deral agency.

...ould you have no comment, please return the form signed and dated.

...you have any questions, call me at (803) 734-0495.

RECEIVED
Rodney Grizzle
5 1996
GRANT SERVICES

1/08.00.00

- [x] Project is consistent with our goals and objectives.
- [ ] Request a conference to discuss comments.
- [ ] Please discontinue sending projects with this CFDA# to our office for review.
- [ ] Comments on proposed Application is as follows:

Signature: Robert E David Date: April 12, 1996

Title: Robert E. David, Executive Director Phone: (803) 737-2617

M-243

08 00 00 **Comment Number 1**

Comment noted.

STATE OF TENNESSEE, DEPARTMENT OF ENVIRONMENT AND CONSERVATION, OAK RIDGE, TN, JUSTIN WILSON
PAGE 1 OF 8

STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION

May 6, 1996

US Department of Energy
Office of Fissile Materials Disposition
PO Box 23786
Washington, D.C. 20026-3786

To Whom It May Concern:

As the Governor's Lead Contact for National Environmental Policy Act (NEPA) state reviews, I am responding on behalf of the State of Tennessee to the *Draft Programmatic Environmental Impact Statement (DPEIS) for Storage and Disposition of Weapons-Usable Fissile Materials; No. DOE/EIS-0229-D; February 1996.* Enclosed are comments from the TN DOE Oversight Division that now serve as state policy concerning the alternatives addressed in the above referenced PEIS.

Long standing policy dictates that the State of Tennessee does not support large scale waste storage facilities such as described in the "Consolidation of Pu" and "Colocation of Pu and HEU" alternatives. Attached is a letter from Governor Don Sundquist articulating this policy as it relates to similar concerns addressed in Draft PEIS for Waste Management. Given the connectivity of the "PEIS for Storage and Disposition . . ." and the "Draft PEIS for Waste Management", we expect the enclosed comments to be addressed in both documents. 1/01.01.00

Additional comments concerning other alternatives addressed in the "PEIS for Storage and Disposition . . ." are enclosed. If you have any questions please contact our NEPA staff coordinator at (615) 532-8545. Your consideration of our interests is greatly appreciated.

Sincerely,

Justin Wilson
Commissioner

Enclosures

c: Ken Bunting, Administrator (for WKS)
Earl Leming, DOE-Oversight
Dodd Galbreath (NEPA coordination file)
Jim Hall, Manager, DOE ORR

LET-NW1.DOC

M-177

01 01 00 **Comment Number 1**

The Department of Energy notes the commentor's opposition to the Consolidation and Collocation Alternative at ORR. Although the surplus and nonsurplus weapons-usable fissile materials that would not be stored under these alternatives are not wastes. DOE considered the alternative, because, under NEPA, all the alternatives must be analyzed. DOE will base its storage decision on public comments, environmental analyses, cost analyses, nonproliferation analyses, and policy considerations.

STATE OF TENNESSEE, DEPARTMENT OF ENVIRONMENT AND CONSERVATION, OAK RIDGE, TN, JUSTIN WILSON PAGE 2 OF 8

STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DOE OVERSIGHT DIVISION
761 EMORY VALLEY ROAD
OAK RIDGE, TENNESSEE 37830-7972

April 25, 1996

Mr. Justin Wilson, Commissioner
Tennessee Department of Environment and Conservation
c/o Tennessee Environmental Policy Office
14th Floor L&C Tower
401 Church Street
Nashville, Tennessee 37243 - 1553

Dear Commissioner Wilson

Document NEPA Review -- Draft Programmatic Environmental Impact Statement: Storage and Disposition of Weapons-Usable Fissile Materials, DOE/EIS-0229-D, February 1996

The Tennessee Department of Environment and Conservation, DOE Oversight Division has reviewed the above document for your concurrence and transmittal to the following DOE office:

U.S. Department of Energy
Office of Fissile Materials Disposition
P.O. Box 23786
Washington, D.C. 20026-3786

The Division's review was conducted in accordance with the requirements of the National Environmental Policy Act (NEPA) and associative implementing regulations 40 CFR 1500 - 1508 and 10 CFR 1021.

The State has agreed to a maximum interim storage of 500 metric tons of HEU and 6 metric tons of low enriched uranium (LEU), as listed in the FONSI for "Proposed Interim Storage of Enriched Uranium Above the Maximum Historical Level at the Y-12 Plant." Accordingly, the Division supports the storage alternative of "Upgrade at Multiple Sites," continuing to store highly enriched uranium (HEU) at the Y-12 facility. 2/08.03.01

M-177

08 03 01 Comment Number 2

The Department of Energy acknowledges the commentor's support for new missions at the ORR. Decisions on storage and disposition of weapons-usable fissile materials will be based on environmental analyses, technical and economic studies, national policy considerations, and public input.

STATE OF TENNESSEE, DEPARTMENT OF ENVIRONMENT AND CONSERVATION, OAK RIDGE, TN, JUSTIN WILSON
PAGE 3 OF 8

Justin Wilson, Commissioner
April 25, 1996
Page Two

The data provided in Attachment A, page S-117 "Summary Comparison of Environmental Impacts for the No Action and Long-Term Storage Alternatives" for "Collocation of Pu [plutonium] with HEU Storage Facilities Upgrade and/or New Facility", indicates that the Oak Ridge Reservation would have the highest "population cancer fatalities" among the six sites considered for this alternative. The sitting of large scale Pu storage facilities along with HEU storage at the Oak Ridge Reservation would result in a greater exposure risk to the off-site populations. For these and other reasons mentioned in the attached comments, the Division does not support the "Consolidation of Pu" at the Oak Ridge Reservation, which would create a collocation condition with HEU. In addition, the Division does not support the "Collocation of Pu and HEU" alternative at the Oak Ridge Reservation. | 3/08.03.01

The Division supports the Mixed Oxide Fuel (MOX fuel) disposition alternative. It makes no economic sense to vitrify or place the material mixed with highly radioactive waste into deep bore holes, rendering the material irretrievable or useless. The European community uses MOX fuel in their commercial reactors and there are commercial nuclear utilities here in the United States interested in obtaining the plutonium for this purpose. | 4/08.03.01

The Division is concerned with the overburden of numerous NEPA documents released for review at one time on local stakeholders. Within the window for review and comment on this document, the Division also has reviewed five other NEPA documents. | 5/08.01.00

Also, we request the attached comments on the above document be given full consideration in the preparation of the Final Programmatic Environmental Impact Statement for Storage and Disposition of Weapons-Usable Fissile Materials.

If you have any questions, please contact Dale Rector at (423) 481-0995 or Steve Nisley at (423) 481-0163.

Sincerely

Earl Leming, Director

Attachment

cl219.99

M-177

08 03 01 **Comment Number 3**

The Department of Energy acknowledges the commentor's opposition to the Collocation Alternative. Decisions on storage of fissile materials will be based upon environmental analyses, technical and economic studies, national policy considerations, and public input.

08 03 01 **Comment Number 4**

The Department of Energy acknowledges the commentor's support for the Reactor Alternative using MOX fuel. Decisions on disposition of weapons-usable fissile materials will be based on environmental analyses, technical and economic studies, national policy considerations, and public input.

08 01 00 **Comment Number 5**

Comment noted.

STATE OF TENNESSEE, DEPARTMENT OF ENVIRONMENT AND CONSERVATION, OAK RIDGE, TN, JUSTIN WILSON
PAGE 4 OF 8

Tennessee Department of Environment and Conservation/DOE Oversight Division

Comments on Draft Programmatic Environmental Impact Statement, DOE/EIS-0229-D, February 1996, Storage and Disposition of Weapons-Usable Fissile Materials

GENERAL COMMENTS

During the public meeting, a DOE representative made a statement that new construction for some of the facilities needed would be done on "greenfields." Existing facilities on "brownfields" must be considered before DOE contaminates any new sites. DOE has demonstrated the cleanup process ranges from slow to nonexistent in dealing with legacy waste sites. Absolutely no greenfield should be considered for any project until brownfields are fully utilized.	6/01.04.00
During the same public meeting, stakeholders were concerned with the amount of information presented for both the Weapons Usable Fissile Material and the Stockpile Stewardship Management projects. The DOE representative stated that each alternative site has no more than a hundred or so pages to review and the stakeholders should only be concerned with their specific site. If stakeholders are to gain a clear view to make rational decisions, the entire document should be reviewed. These two projects are directly linked to several other projects and the review time limit is not adequate for either.	7/08.01.00
Throughout the Weapons-Usable Fissile Materials document, several references have been made to the Draft Waste Management Programmatic Environmental Impact Statement (PEIS), issued in September 1995. The Waste Management PEIS document is controversial because of the inaccuracies and it is doubtful the final document will be completed as expected later in 1996. References in the Weapons-Usable Fissile Material PEIS weigh heavily on information based on the draft Waste Management PEIS. Until the problems with the Waste Management PEIS are resolved, applicable information cannot be accepted as presented in the Fissile Material PEIS.	8/11.01.08
Several references have also been made to the surplus and nonsurplus Highly Enriched Uranium (HEU) materials located at ORR. It should be clearly stated in the final PEIS that there is a maximum limit of 500 metric tons of HEU and six metric tons of Low Enriched Uranium (LEU) for interim storage as described in the FONSI for the proposed storage of enriched uranium above the maximum historical storage level at the Y-12 Plant.	9/11.01.05
DOE has already committed to the upgrade of HEU storage facilities under other documents. These costs should not be included in the analysis for Weapons Usable Fissile Materials unless those buildings, such as Building 9995, are a first time consideration.	10/11.00.08

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01 04 00 **Comment Number 6**

The Department of Energy recognizes the need to utilize as much of its existing infrastructure as possible in dealing with materials storage and disposition. In this regard, the greenfield sites discussed in the PEIS include both existing DOE sites and new non-DOE sites (for a limited number of alternatives). Accordingly, the PEIS evaluates six DOE sites for storage and disposition. Under NEPA, DOE must consider all reasonable alternatives that include greenfield sites.

08 01 00 **Comment Number 7**

At the request of several organizations and individuals, the public comment period was extended to a total of 92 days.

11 01 08 **Comment Number 8**

As discussed in Chapter 1 of the PEIS, the waste volumes generated as a result of the long-term storage alternatives are not expected to raise significant waste management concerns. However, on a site-by-site basis, the selection of certain Pu disposition technologies may produce waste streams that could be difficult to manage at certain sites. Should any chosen alternatives result in waste generation not addressed in the Waste Management PEIS, DOE would prepare supplemental or project-specific NEPA documents tiered from the Waste Management PEIS.

11 01 05 **Comment Number 9**

Comment noted. Section 1.4 of the Final PEIS has been modified to include the maximum limit of 506 t (556.6 tons) of enriched uranium.

11 00 08 **Comment Number 10**

The upgrades referenced in the comment are not to support the alternative for the PEIS. As noted, these costs would not be included for storage alternatives.

STATE OF TENNESSEE, DEPARTMENT OF ENVIRONMENT AND CONSERVATION, OAK RIDGE, TN, JUSTIN WILSON
PAGE 5 OF 8

This document appears to be leaning towards borehole technology for storage/disposal as the preferred alternative. The borehole technology is not proven and will cost billions of dollars to properly site and place the canisters of plutonium. Also, as with the Waste Isolation Pilot Plant (WIPP) and the Nevada Test Site (NTS), the chosen site may not be ready for intended action for a long time to come. This is because groundwater will have to be monitored extensively prior to any emplacement to ensure background levels of radioactivity. In the 1970s, borehole technology was studied and discarded by DOE as a project with unattainable goals. | 11/04.04.00

Plutonium in its weapons-usable fissile form has a high cost factor associated with it. It should not be considered for immobilization alternatives and rendered practically useless or too expensive to be liberated at a later point. The material should be retrievably stored so it could be accessible in the event of an energy shortage, whether for power generation or weapons production. In this regard, part of it could be converted into for reactor fuel for sale. | 12/08.03.01

SPECIFIC COMMENTS

1. Volume I, Section 2.1.2 "Screening Evaluation Process," Page 2-1
The screening committee evaluated each option against "fatal flaws" in one or more of the screening criteria. The inability to meet standards, such as the Spent Fuel Standard, disqualified an option. These options ultimately will depend upon the disposal criteria in the unapproved Waste Management PEIS. Provide information showing why the use of an unapproved document as a basis for disposal is not considered a "fatal flaw." | 13/01.05.00

2. Volume I, Section 2.1.4 Reasonable Alternatives for the Disposition of Surplus Plutonium, Page 2-8
Please define the term "representative site" as used in the Electrometallurgical Treatment Alternative. | 14/05.03.08

3. Volume I, Oak Ridge Reservation, Page 2-49
"Under the Upgrade Alternative, nonsurplus HEU would be retained in long-term storage." Facilities on the ORR have been evaluated for interim storage. Please provide information on the evaluation process used for buildings slated for long-term storage. As stated in the environmental assessment for Y-12 (interim storage of enriched uranium above historical levels), several buildings did not meet DOE orders for interim HEU storage. Provide information for those buildings under the Weapons-Usable Fissile Materials draft PEIS that do not meet DOE orders for long-term storage of HEU. | 15/02.00.05

4. Volume I, Figure 2.3.1-9, Page 2-52
Provide information on Building 9995 considered for HEU storage upgrade. This building was not listed for HEU interim storage in Y-12's previous environmental assessments.

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04 04 00 **Comment Number 11**

Comment noted.

08 03 01 **Comment Number 12**

The Department of Energy acknowledges the commentor's opposition to the Immobilization Alternatives. Decisions on disposition alternatives will be based upon environmental analyses, technical and economic studies, national policy considerations, and public input.

01 05 00 **Comment Number 13**

All of the alternatives evaluated in the PEIS have associated waste forms and quantities identified. These wastes are being coordinated with DOE's Waste Management Program and will be included in the total waste volumes identified in the Final Waste Management PEIS. A ROD on the Waste Management PEIS is expected before any low-level, TRU, and mixed wastes will be produced from Pu disposition alternatives.

The Waste Management PEIS ROD will not decide "disposition criteria" for spent fuel or HLW; this will be part of the HLW program and will be included in the associated environmental analysis pursuant to the NWPA.

05 03 08 **Comment Number 14**

The term "representative site" refers to a site analyzed as an example of how a technology might be deployed at an existing site.

02 00 05 **Comment Number 15**

The Y–12 EA states that there are "eight facilities at the Y–12 Plant currently used to store enriched uranium or process it for storage. These facilities would be used for interim storage of enriched uranium above the historical maximum storage level." These eight buildings include 9204-2, 9204-2E, 9204-4, 9206, 9212, 9215, 9720-5, and 9998. The PEIS includes long-term storage of HEU material after the interim storage of materials consistent with

STATE OF TENNESSEE, DEPARTMENT OF ENVIRONMENT AND CONSERVATION, OAK RIDGE, TN, JUSTIN WILSON
PAGE 6 OF 8

5. Volume I, 3.6 Oak Ridge Reservation, Page 3-185
It should be clearly stated that the buildings slated for interim storage of HEU did not meet DOE orders and require upgrade. It should also be clearly stated that there is a maximum interim storage capacity of 500 metric tons of HEU and six metric tons of LEU. | 16/11.01.05

6. Volume I, 3.6 Oak Ridge Reservation, Page 3-185
"These returned materials and components, as well as those currently located at Y-12, are safely and securely placed in short-term or long-term storage." Assuming the materials and components are made from HEU, the State of Tennessee has not agreed to host long-term storage of weapons grade fissile material. The State agreed to interim storage of 500 metric tons of HEU and six metric tons of LEU. Provide information on the decisions made for material currently in long-term storage, including the amount of material (kg), its form, and the storage buildings. | 17/01.06.00

7. Volume I, 3.6.2 Site Infrastructure, Page 3-190
The facilities at Y-12 should clearly state which buildings do not meet DOE orders for storage, as well as the costs involved in the upgrade. | 16/11.01.05 cont. 18/07.00.00

8. Volume II, 4.2.5.10 Waste Management, Page 4-273
Information presented on the High-Flux Isotope Reactor (HFIR) is erroneous. Utilizing the current spent fuel storage racks, the facility is now at full capacity for storage-not 40%. The total reracking project will increase the capacity of the spent fuel storage pool to 140 fuel elements. This will allow HFIR operation until the year 2004 to 2006. Please incorporate the correct information into the final PEIS. | 19/09.11.05

M-177

the Y–12 EA. The Upgrade at Multiple Sites Alternative utilizes the long-term storage of HEU in some of these buildings. By then, the Y–12 storage facilities will have undergone the capital improvements required to ensure that all long-term HEU storage criteria are met. Existing facilities of the Y–12 Plant that will be used for the long-term HEU storage mission include 9204-2, 9204-2E, 9212, 9215, and 9998. Once ongoing expansions to Y–12 HEU storage areas have been completed, these five facilities will provide more drum storage capacity than the long-term storage mission will require. Other Y–12 facilities that currently store HEU are not planned for use in the long-term storage mission under the Upgrade Alternative. The storage of HEU remaining under IAEA safeguards will be in Building 9270-5 to provide safe and secure storage of HEU requiring international inspection. HEU chemical and isotopic analyses will be performed in the Plant Laboratory in Building 9995. Building 9995 will not be used for long-term storage of HEU (under any of the alternatives), but as a support facility for the mission.

A summary of the structural analyses, including Building 9995, is contained in Appendix G of the Y–12 EA. Building Complex 9212 consists of four different buildings, one of which is Building 9995. The description of the structural analysis needed for Building 9995 is contained under the Building 9212 Complex.

11 01 05 **Comment Number 16**

Comment noted. Information has been added to the Final PEIS to describe the results of the Y–12 EA, including the maximum storage capacity (Section 1.4) and structural upgrade requirements (Section 2.3.1).

01 06 00 **Comment Number 17**

Comment noted. Detailed information regarding DOE's decision will be provided in the ROD which is expected to be published in the *Federal Register* late this year.

COPY

STATE OF TENNESSEE

DON SUNDQUIST
GOVERNOR

December 14, 1995

Secretary Hazel O'Leary
United States Department of Energy
1000 Independence Avenue , S.W.
Room 7A-257
Washington, D.C. 20585

Dear Secretary O'Leary:

Recently, agencies of the State of Tennessee submitted comments in accordance with the requirements of the National Environmental Policy Act (NEPA) for the ***Draft Waste Management Programmatic Environmental Impact Statement (D-PEIS) for Managing Treatment, Storage, and Disposal of Radioactive and Hazardous Waste, DOE/EIS-0200 D, August 1995.*** I have elected to communicate with you directly to insure that the State of Tennessee's policy interests concerning this important D-PEIS are clearly communicated.

My administration strongly opposes and will continue to oppose any attempt by DOE to "site" large waste deposition activities in Oak Ridge, Tennessee. It is disappointing to me that the United States Department of Energy (DOE) continues to seriously consider another short sighted option in a tiring string of waste deposition assessments for Oak Ridge. My administration views all of the alternatives in the current "Waste Management" D-PEIS that consider disposal of low level mixed waste and low level waste on the Oak Ridge Reservation as technically unsound.

It is commonly known, and widely supported inside and outside of Tennessee that Oak Ridge is one of several sites in the DOE complex that does not possess the appropriate geologic or hydrologic character for such large scale waste deposition activities as currently proposed in your D-PEIS. The National Governor's Association/DOE Disposal Working Group specifically recommended that the Oak Ridge complex be considered only for disposal of a very restrictive list of radionuclides due to an emphasis on protection of human health and the environment.

Your own agency's data summary for waste management sites in the current D-PEIS indicates that the Oak Ridge Reservation currently produces the highest "population dose" among the 54 DOE sites around the nation. We believe that a large scale low level mixed waste and low level waste disposal facility at Oak Ridge would add additional risk to an already unacceptable situation.

State Capitol, Nashville, Tennessee 37243-0001
Telephone No. (615) 741-2001

M-177

07 00 00 **Comment Number 18**

A brief summary of the Y–12 EA is provided in Section 1.4 of the PEIS, which includes the results of that analysis, identifying the need for structural upgrades to certain buildings.

09 11 05 **Comment Number 19**

According to the *Oak Ridge Reservation Waste Management Plan* issued January 1996, the High Flux Isotope Reactor pool in Building 7900 has 67 storage positions, of which 62 are presently occupied. The reracking of the storage will increase the number of storage positions to 143. The appropriate section was revised in the Final PEIS to reflect this information.

STATE OF TENNESSEE, DEPARTMENT OF ENVIRONMENT AND CONSERVATION, OAK RIDGE, TN, JUSTIN WILSON
PAGE 8 OF 8

Page Two
Secretary Hazel O'Leary
December 14, 1995

Despite our concerns, the State of Tennessee recognizes and appreciates the historic role Oak Ridge, Tennessee has played for the nation and the economic contributions DOE has made to the Oak Ridge community and Tennessee over the past 50 years. We will continue to promote and will accept our responsibility to the nation as a potential site for one or several of the complex suite of activities that DOE must perform. However, I believe that DOE's continued consideration of the most technically unsuitable disposal site in the DOE complex for large scale waste deposition is truly a waste of precious national and state resources. I urged you to invest your agency's energies in alternatives that better meet both the short and long term interests of waste storage.

Sincerely,

Don Sundquist

c: United States Representative Zach Wamp
United States Senator Fred Thompson
United States Senator Bill Frist
Commissioner Don Dills, Tennessee Department of Environment and Conservation
US DOE Headquarters PA Office
Mr. Greg Rudy, Acting Director, Office of Fissile Materials Disposition
NEPA File

M-177

Texas Department of Health

David R. Smith, M.D.
Commissioner

1100 West 49th Street
Austin, Texas 78756-3189
(512) 458-7111

Radiation Control
(512) 834-6688

Carol S. Daniels
Deputy Commissioner for Programs

Ray L. Hogan
Deputy Commissioner for Administration

May 6, 1996

Mr. J. David Nulton
Department of Energy
Office of Fissile Materials Disposition
P. O. Box 23786
Washington, D.C. 20026-3786

Dear Mr. Nulton:

Enclosed are comments on the Storage and Disposition of Weapons-Usable Fissile Materials Draft Programmatic Environmental Impact Statement. Under the Atomic Energy Act, the Department of Energy is not subject to external regulation of use and handling of Special Nuclear Materials. The Secretary of Energy has committed to determining the feasibility of external regulation by the Nuclear Regulatory Commission (NRC), the Defense Nuclear Facilities Safety Board and/or NRC Agreement States. We believe that some form of external oversight of DOE activities in the Long-Term Storage phase of this project is in the best interest of the Department and stakeholders, and encourage the Department to move ahead with this initiative without delay. 1/15.00.00

Any change in the mission or operations at Pantex resulting from this PEIS must be undertaken with maximum consideration given to full compliance with published standards for protection of the public and environment against the effects of radiation. Future management of Pantex is crucial to the future of the Texas Panhandle, not only in near term socioeconomic terms, but also in fulfilling responsible stewardship of the environment for our successors. Decisions made in this process should be made giving full consideration to the needs of local citizens as well as the nation. 2/01.00.00

We appreciate having been given the opportunity to participate in this process and sincerely hope that our efforts contribute to overall success in resolving the difficult issues.

Sincerely,

Joseph A. Martillotti
Pantex Special Project Coordinator
Division of Compliance and Inspection
Bureau of Radiation Control

F-022

15 00 00 **Comment Number 1**

The Department of Energy is considering the possible external regulation of its activities at this time; however, decisions on these issues are beyond the scope of this PEIS.

01 00 00 **Comment Number 2**

The Department of Energy is committed to operating its facilities in full compliance with applicable regulatory requirements.

STATE OF TEXAS, DEPARTMENT OF HEALTH, AUSTIN, TX, JOSEPH A. MARTILLOTTI PAGE 2 OF 3

Storage and Disposition
DRAFT PEIS Comments

Summary, Page S-46 - Long-Term Storage Alternatives - The statements concerning land use appear to conflict with Volume II, Pages 4-175 and 4-191 text.	3/09.01.04
Summary, Page S-48 - Comparison of Sites Within Alternatives - The statements concerning environmental impacts do not appear to be supported by the text and appear to be in conflict with Volume II, Pages 4-175 and 4-191 text.	
Summary, Page S-67 - Facility Accidents - The statements do not provide any information or discussion upon which decisions might be based. A discussion of accident assessments previously documented would provide clarification. Volume I, Chapter 1.1.1, Page 1-2 "Materials Covered in This PEIS" describes the base condition and storage configuration from which decisions will be made. Discussion of the Plutonium Working Group findings, Defense Nuclear Facility Safety Board recommendations and the DOE standard for long-term storage of the fissile materials appears to be absent from the text. Provision of a general summary of the identified vulnerabilities or upgrades to storage conditions would be a useful addition to this table.	4/09.00.04
Summary, Page S-78 - Upgrade Existing Facility for Continued Storage - The "estimated impacts from a set of accidents that propagate radioactive releases" data appear to be a replica of Table 2.5.1, Volume I, Page 2-180. This is identical to "Beyond design basis earthquake" data contained in Table 4.2.3.9-4, Volume II, Page 4-160. Table M.5.2.5.2-1, Volume III, Page M-269, presents "Upgrade of Pantex Interim Storage" "Evaluation of a Composite Set of Accidents" impacts which are similar (within order of magnitude) but not totally consistent with the above information.	
Summary, Page S-96 - Consolidate all Pu Material at One Site - The "impacts from a set of accidents that propagate radioactive releases" data appear to be a replica of Table 4.2.4.9-6, Volume II, Page 4-218, "Beyond design basis earthquake" scenario. The Table on Page S-96 replicates Table 2.5.1, Volume I, Page 2-199. However, Table 5.2.1.2-4, Volume III, Page M-242 contains a summary entitled "Evaluation of Composite Set of Accidents" which presents conflicting information.	5/09.09.04
Summary, Page S-117 - Collocation of Pu with HEU Storage Upgrade and/or New Facility - The headers of data columns indicate that the projections reflect a "set of accidents that propagate radioactive releases." The data presented, with the exception of MEI statistics, match exactly with Table 4.2.4.9-7, Volume II, Page 4-222. The table on S-117 replicates Table 2.5-1, Volume I, Page 2-219. Table 5.2.2.2-4, Volume III, Page M-251 "Collocation Alternative" contains a summary entitled "Evaluation of Composite Set of Accidents" which presents conflicting information.	
Summary, Pages 149 and 150 appear to be out of order.	6/16.00.00

F-022

09 01 04 Comment Number 3

The Summary has been revised and is now consistent with the land-use impact analysis in Chapter 4 of the Final PEIS (page 4–175 of the Draft PEIS). Volume II, page 4–191 of the Draft PEIS addresses water resources, not land use.

09 00 04 Comment Number 4

Based on comments received, the Summary was revised. The bar charts providing the comparison of impacts for both storage and disposition were deleted from the Summary. The related text was revised to clarify the comparison of impacts and to delete references to "adverse" impacts.

09 09 04 Comment Number 5

In the Draft PEIS Summary tables (Attachments A and B) and Chapter 2 tables (Tables 2.5–1 and 2.5–2) of the Draft PEIS, the impacts from facility accidents are based on those scenarios that were estimated to have maximum impacts from the facility accidents analyzed for each respective alternative. For example, the number of cancer fatalities for the general population and the probability of the facility accident for Upgrade Alternative at Pantex presented in Attachment A (page S–78) of the Summary of Draft PEIS correspond to the "beyond design basis earthquake" which has the highest cancer fatalities among the accidents analyzed for this storage alternative. On the other hand, the "composite set of accidents" presented in the Section M.5 of the Draft PEIS is the weighted-average of all accidents analyzed for this alternative. To avoid confusion and in response to public comments the "composite set of accidents" has been deleted from Appendix M.

For the MEI, the probability of cancer risk from potential accident during 50 years storage facility operation and the cancer risk from the accident, pages S–78 and 2–181 of the Draft PEIS should correspond to the respective values for the beyond design basis earthquake in Chapter 4 and Section M.5.

The risk from potential accidents is the magnitude of the accident consequence (fatal cancer risk for MEI and non-involved worker and fatal cancers for population) multiplied by the probability that the accident will

occur. The summary tables in Section 2.5 of the Final PEIS present the accident impacts from the accident with highest risk (the product of the accident consequence and the accident frequency) within a storage or disposition alternative.

16 00 00 **Comment Number 6**

Pages are in correct order.

STATE OF TEXAS, OFFICE OF THE ATTORNEY GENERAL, AUSTIN, TX, ATTORNEY GENERAL DAN MORALES PAGE 1 OF 2

Office of the Attorney General
State of Texas

DAN MORALES
ATTORNEY GENERAL

May 13, 1996

The Honorable Hazel R. O'Leary
Secretary of Energy
7A257 Forrestal Bldg.
1000 Independence Ave., S.W.
Washington, D.C. 20585

Re: COMMENTS REGARDING FUTURE ACTIVITIES AT PANTEX

Dear Secretary O'Leary:

Upon review of the three interrelated environmental impact statements ("EISs") regarding the reconfiguration and future of the Department of Energy's nuclear weapons complex,[1] I am becoming increasingly concerned that the Department of Energy ("DoE") may soon decide to process plutonium pits at the Pantex facility. I am furthermore concerned--once again--that the Texas Panhandle will become the *de facto* permanent dump for the nation's surplus plutonium supply. Given the 24,000 year half-life of plutonium and the distinct possibility that the environmental, political, and social issues surrounding any other permanent disposition of plutonium will not be resolved in the foreseeable future, this is an ominous development for Texas.

I have attached previous correspondence between DoE and my office dating back to 1991. As is readily apparent from that correspondence, I have long been firmly opposed to both propositions. Unfortunately, it now appears that we are moving closer to decisions by DoE that will unfairly burden Texans during the coming decades and needlessly impose risks on the farmers and ranchers who depend upon the Ogalalla Aquifer underlying Pantex.

A decision by DoE to begin plutonium reprocessing, with its attendant problems and risks for residents throughout the Panhandle, or a decision to store surplus plutonium (*i.e.*, nuclear waste) on a medium- or long-term basis, is unacceptable to this office. Accordingly, I have instructed my staff to renew its efforts to develop all available legal options to prevent DoE from turning the Texas Panhandle into a *de facto* nuclear waste dump, or another Rocky Flats. 1/01.06.00

I realize that you and your office have made great strides in incorporating the concerns of all stakeholders in your decision-making process. For that, you deserve much credit. Unfortunately, I do not believe that the

[1] The three EISs are: (a) the PEIS on Storage and Disposition of Weapons-Usable Fissile Materials (which discusses, *inter alia*, the mixed-oxide fuel option in the most detail and discusses the alternatives, including a facility to cut the pits in two and process them into metal or oxide; to process other types of plutonium; and to mix plutonium with uranium to make mixed oxide fuel (MOX) to be used in nuclear power plants); (b) the Site Wide EIS for Pantex (which discusses the Pit Reuse facilty in lesser detail); and (c) the PEIS on Stockpile Stewardship and Management.

512/463-2100 P.O. BOX 12548 AUSTIN, TEXAS 78711-2548

M-199

01 06 00 **Comment Number 1**

The Department of Energy acknowledges the commentor's opposition to new missions at Pantex. The utilization of MOX fuel for Pu disposition is not considered reprocessing and is consistent with the President's Nonproliferation Policy. Decisions on storage and disposition of weapons-usable fissile materials will be based upon environmental analyses, technical and economical studies, national policy considerations, and public input.

solutions that DOE appears to be adopting solve the environmental and bureaucratic problems associated with storing and/or disposing of plutonium for decades, centuries, and even millennia.

Sincerely,

Dan Morales

Dan Morales
Attorney General

Enclosure

c: DOE-Office of Fissile Materials Disposition
c/o SAIC-PEIS
P.O. Box 23788
Washington, DC 20026-3786

Ms. Nanette Founds
U.S. Department of Energy
Albuquerque Operations Office
P.O. Box 5400
Albuquerque, NM 87185-5400

Jay Rose
Office of Reconfiguration
1000 Independence Avenue, S.W.
Washington, D.C. 20585

STATE OF TEXAS, OFFICE OF THE GOVERNOR, AUSTIN, TX,
GOVERNOR GEORGE W. BUSH
PAGE 1 OF 1

STATE OF TEXAS
OFFICE OF THE GOVERNOR

GEORGE W. BUSH
GOVERNOR

May 6, 1996

The Honorable Hazel O'Leary
The Secretary of Energy
U.S. Department of Energy
Washington, D.C. 20585

Re: Comments on Stockpile Stewardship and Management and Storage and Disposition of Weapons-Usable Fissile Materials Draft Programmatic Environmental Impact Statements.

Dear Madam Secretary:

The Pantex Nuclear Weapons Plant has been a key component in our nation's ability to achieve and maintain a strong national defense. The success at Pantex is a result of several factors, including good managers and dedicated, skilled, hard-working, efficient, and safety-conscious employees.

This nation continues to face an uncertain future with many risks. An effective strategy for diminishing those risks is to retain our core of expertise at the Pantex Plant. The Programmatic Environmental Impact Statements now being reviewed demonstrate that such a strategy is the best option for our nation's taxpayers.

1/08.03.01

The Pantex Plant enjoys broad community support because it has successfully demonstrated it can safely carry out its mission of assembling and disassembling nuclear weapons. That history of safety, success, and efficiency is the foundation for the future of the Pantex Plant.

The State of Texas is prepared to continue to assist Pantex with the significant role it plays in keeping the United States the defender of the free world.

Sincerely,

GEORGE W. BUSH

F-024

08 03 01 Comment Number 1

The Department of Energy acknowledges the commentor's support of Pantex. Decisions related to future missions at Pantex will be based upon environmental analyses, technical and economic studies, national policy considerations, and public input.

STATE OF TEXAS, OFFICE OF THE GOVERNOR, AUSTIN, TX,
ROGER MULDER
PAGE 1 OF 12

STATE OF TEXAS
OFFICE OF THE GOVERNOR

GEORGE W. BUSH
GOVERNOR

May 6, 1996

The Honorable Hazel O'Leary
Secretary of Energy
U.S. Department of Energy
Washington, D.C.

Dear Madam Secretary:

Enclosed are the comments from those individuals tasked by the State of Texas under the Agreement in Principle to evaluate the Draft Programmatic Environmental Impact Statements regarding Stockpile Stewardship and Management, and Storage and Disposition of Weapons-Usable Fissile Materials.

Pending before you is a request, from the Pantex Plant Citizens' Advisory Board and the Governor's Office, to extend the commenting period on the two documents to July 12, 1996. As was noted in that request, there is simply too much material to adequately review in such a short period of time. 1/08.01.00

Should the May 7, 1996 deadline be extended, the enclosed comments will be amended to include a more detailed and thorough analysis.

Sincerely,

Roger Mulder

ROGER MULDER
Director, Pantex

F-025

08 01 00 **Comment Number 1**

At the request of several organizations and individuals, the public comment period was extended to a total of 92 days.

STATE OF TEXAS, OFFICE OF THE GOVERNOR, AUSTIN, TX, ROGER MULDER
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STATE OF TEXAS
OFFICE OF THE GOVERNOR

GEORGE W. BUSH
GOVERNOR

May 6, 1996

U.S. Department of Energy
Office of Reconfiguration
P.O. Box 3417
Alexandria, Virginia 22302

U.S. Department of Energy
Office of Fissile Materials
P.O. Box 23786
Washington, D.C. 20026

Re: Comments on Stockpile Stewardship and Management (SSM) and Storage and Disposition (S&D) of Weapons-Usable Fissile Materials Draft Programmatic Environmental Impact Statements (PEISs).

On behalf of the State of Texas, the Office of the Governor would like to thank you for the opportunity to comment on the U.S. Department of Energy's PEISs on Stockpile Stewardship and Management, and Storage and Disposition of Weapons-Usable Fissile Materials. Because those issues are so closely intertwined with the Pantex Site-Wide EIS, some of my comments may address that document as well.

First and foremost, the State of Texas would like to re-emphasize our insistence that all current and future missions at Pantex be conducted in a safe and environmentally sound manner. Pantex has a long history of being a good neighbor, and one of the primary reasons is because it believes in protecting human health and safety, and the environment.

Based upon a review of all of the PEIS volumes, and statements made during the public hearings in Amarillo by DOE officials on April 22 and 23, 1996, our conclusions were confirmed that all actions considered for Pantex will have no significant impact on the health of workers nor any significant adverse impacts on the environment in the Amarillo area.

Post Office Box 12428 Austin, Texas 78711 (512) 463-2000 (Voice/TDD) (512) 475-3140 (FAX)

F-025

STATE OF TEXAS, OFFICE OF THE GOVERNOR, AUSTIN, TX,
ROGER MULDER
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DOE PEIS Comments
May 6, 1996
Page Two

However, as stated numerous times in the public hearings, there is concern that this statement of no significant impact is not clear in the summary document of the Storage and Disposition PEIS.

Instead, what is stated numerous times is: "Adverse impacts to water resources at Pantex would result from the continued local draw down of the Ogallala Aquifer, but Pantex's contribution to this draw down is expected to continue to decrease due to a decrease in other DOE activities at Pantex. Neither surface or ground water resources at other DOE sites would be affected."

2/09.04.04

The State of Texas believes this statement inaccurately and incorrectly singles out Pantex as an unacceptable site for its existing mission, as well as for any future missions. We ask that this be corrected immediately.

In reference to the statements regarding adverse impacts, the Amarillo community was told by DOE officials during the public hearings that there were no significant impacts on the environment, safety, or health from current or future missions proposed at Pantex. Therefore, the inaccurate perception of adverse affects, noted in the summary S&D document, should be corrected in the final document.

Toward that end, the State of Texas requests that in the S&D PEIS summary document, a clear statement should be added that no significant environmental impact would result from any considered alternatives at Pantex. In addition, the ranking of sites based upon these insignificant impacts (found in the sections Long-Term Storage Alternatives (page S-46), Disposition Alternatives (page S-46), and Comparison of Sites Within Alternatives (page S-48)) should be removed from the final report.

3/09.00.08

If the DOE insists upon using the word *adverse* in the final document to denote any deviation from the "natural state" of the environment, it should be applied equitably among all sites and quantified with the level of significance, since any action that disturbs nature could be considered adverse and every site considered would have adverse impacts for all alternatives.

4/09.00.08

The State of Texas is pleased that DOE selected Pantex as the preferred alternative for assembly/disassembly, thereby abandoning earlier plans to transfer those functions to the Nevada Test Site.

F-025

09 04 04 **Comment Number 2**

Although Pantex is contributing to the depletion of the Ogallala Aquifer, additional groundwater drawdowns from the Proposed Actions for the various long-term storage alternatives are expected to be very small. The Summary was revised to emphasize that, under the No Action Alternative, Pantex's water use from the Ogallala Aquifer is expected to decrease significantly by the year 2005, and that additional withdrawals attributed to the Preferred Alternative are still expected to be less than what is currently being withdrawn.

09 00 08 **Comment Number 3**

The Department of Energy did not intend to give the perception that the sites were ranked. Based on comments received, the Summary of the Draft PEIS was revised. All revisions made to the PEIS text appear in the Summary of the Final PEIS.

09 00 08 **Comment Number 4**

Based on comments received, the Summary was revised. The related text was revised to clarify the comparison of impacts and to delete reference to "adverse" impacts.

STATE OF TEXAS, OFFICE OF THE GOVERNOR, AUSTIN, TX, ROGER MULDER
PAGE 4 OF 12

DOE PEIS Comments
May 6, 1996
Page Three

The same factors that lead DOE to make the correct decision in assembly/disassembly activities, should be applied to the issue of moving the High Explosives production operations from Pantex. DOE's own estimate that such a move would cost at least $40-$50 million should make Pantex the only choice for those activities.

Another factor is the risk involved in transporting the material from Pantex. And finally, there is a significant technology risk, should the High Explosives production program leave Pantex, while the highly skilled, experienced workers choose to remain in the Amarillo area.

If the statement is made that there simply is not enough work to keep workers busy in both the New Mexico labs and Pantex, the obvious choice is to keep the work at Pantex and allow the lab personnel the opportunity to maintain their proficiency by visiting Pantex.

Since that work is done at Pantex today, how are the lab personnel currently maintaining the desired level of proficiency?

STORAGE OPTIONS

Pantex has a proven history of safely storing nuclear weapons over the past 40 years.

Pantex could continue to store plutonium which is already at the site and upgrade facilities for the storage options being considered by DOE with minimal cost and difficulty. Pantex currently safely houses more than 8,000 surplus pits. It makes little sense to re-create storage facilities at another site and then unnecessarily transport large amounts of plutonium across the country from Pantex. 5/08.03.01

Pantex has the necessary safety, security, and surveillance capabilities to accommodate an expanded role with minimal costs and it is the production site closest to Los Alamos, the planned pit fabrication site.

F-025

08 03 01 Comment Number 5

The Department of Energy acknowledges the commentor's support for the Upgrade Storage Alternative. Decisions on storage of weapons-usable fissile materials will be based upon environmental analyses, technical and economic studies, national policy considerations, and public input.

We believe any future missions at Pantex related to plutonium can be successfully carried out, provided the following three criteria are met:

1. Continued Local Support
2. Proven Technology
3. Independent Oversight

OFF-LINE ISSUES

During the public hearings in Amarillo, a number of comments were made from the audience requiring clarification from the DOE presenters.

Unfortunately, on more than one occasion, the response from the DOE official was that he and the questioner should "discuss that issue off-line."

Because the State of Texas believes that to be a totally inappropriate and unacceptable response to make, especially at a public hearing called for the sole purpose of discussing the issues contained in the PEISs, I attempted to capture as many of those questions in writing as possible.

STORAGE AND DISPOSITION OF WEAPONS-USABLE FISSILE MATERIALS PEIS ISSUES

Comment:

Section 1502.1 of 40 CFR Parts 1500-1508, the regulations implementing the National Environmental Policy Act, states:

F-025

STATE OF TEXAS, OFFICE OF THE GOVERNOR, AUSTIN, TX, ROGER MULDER
PAGE 6 OF 12

DOE PEIS Comments
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Page Five

"The primary purpose of an environmental impact statement is to serve as an action-forcing device to ensure that the policies and goals defined in the Act are infused into the ongoing programs and actions of the Federal Government. It should provide full and fair discussion of significant environmental impacts and shall inform decision-makers and the public of the reasonable alternatives which would avoid or minimize adverse impacts or enhance the quality of the human environment. Agencies shall focus on significant environmental issues... Statements shall be concise, clear and to the point, and shall be supported by evidence that the agency has made the necessary environmental analyses." (Emphasis added)

Question

In light of these very clear and concise instructions based in law, how does DOE rationalize that Pantex is identified as having:

"the greatest potential to experience adverse cumulative impacts, particularly because of its relatively small, compact area. Water resources and biological resources would be vulnerable, and land resources . . . could be susceptible to adverse cumulative impacts " (p. S-46) (Emphasis added) 6/09.00.04

Comment

The Summary discusses three plutonium disposition categories (deep borehole, immobilization and reactor) consisting of nine alternatives, and ultimate high-level waste disposition.

Questions:

a. If the immobilization alternatives and reactor alternatives (except CANDU) result in the same ultimate disposition, i.e. a high-level waste repository, what is the cost/benefit of the reactor alternatives? 7/07.02.00

b. Are the references to a high-level waste repository referring to DOE's Yucca Mountain project in Nevada? 8/12.01.00

c. What would constitute ultimate disposition in the case of the CANDU reactor alternative? Would the Canadians be allowed to send the resultant high-level nuclear waste back to the U.S.? 9/06.05.08

F-025

09 00 04 **Comment Number 6**

Based on comments received, the Summary of the Draft PEIS was revised. There was no intention to portray Pantex, the Pantex region, or the Texas Panhandle region in a negative fashion. Each DOE site was analyzed and studied in the same manner and presented in the Draft PEIS per these analyses and studies. All revisions made to the PEIS text are reflected in the Summary of the Final PEIS.

07 02 00 **Comment Number 7**

Cost data, along with technical and schedule data, were provided in a Technical Summary Report for disposition beginning in late July 1996.

12 01 00 **Comment Number 8**

The Draft PEIS does not assume the use of Yucca Mountain as a HLW repository for disposal of MOX spent nuclear fuel and/or immobilized materials. However, since Congress directed Yucca Mountain to be the only site considered for evaluation (site characterization) for the disposition of spent nuclear fuel and HLW, data developed to date at this site has been used to evaluate the potential for disposing of surplus weapons-usable Pu.

06 05 08 **Comment Number 9**

No. The spent fuel would be retained within the Canadian spent fuel program.

DOE PEIS Comments
May 6, 1996
Page Six

Comment

The oft-repeated phrase appears in the Summary:

"Potential adverse intersite transportation impacts related to all DOE sites could occur because of the increased risk of traffic accident fatalities." | 10/10.00.00

Question:

Does any other site, except Pantex, have the capability to avoid the problem of having to ship the 21.8 metric tons of plutonium declared surplus by the President, since the material is already at Pantex? | 11/10.00.00

Is there no risk to human health associated with intersite transportation of radioactive materials? Has a dose risk assessment been made? | 10/10.00.00 cont.

Comment

In the Storage and Disposition Summary it is stated (page S-20) that "Potential adverse impacts to waste management would occur at Pantex, ORR (all three options), and SRS, because the construction of sanitary, utility, and process waste water treatment systems to treat non hazardous liquid wastes may be required." | 12/09.11.08

Question

How can the construction of facilities and systems to treat waste have the potential to adversely impact the *management* of waste? Is this a significant environmental impact as intended by Section 1502.1 of the NEPA regulations?

F-025

10 00 00 **Comment Number 10**

The human health risks of material transportations associated with the proposed Pu storage and disposition alternatives are evaluated and presented in Section 4.4 of this PEIS. The more detailed description of the methodology and supporting data for the analysis is presented in Appendix G. Transportation of radioactive materials between sites includes health risks for both normal operations and accident conditions to the public and workers.

10 00 00 **Comment Number 11**

The Pu material at Pantex, as well as Pu and HEU at the other five sites, was assumed to be present for the transportation analysis. For the storage alternatives, Table 4.4.3.2–2 of the PEIS indicates Pantex would have the lowest number of potential fatalities. For disposition, almost all surplus pits were assumed to be at Pantex. This is indicated by Pantex having the lowest number of potential fatalities for pit disassembly in Table 4.4.3.3–1 of this PEIS.

09 11 08 **Comment Number 12**

The conceptual design for the consolidated and collocated storage facilities and the disposition facilities have, as part of their design, waste management facilities that would treat and package all waste generated into forms that would enable long-term storage and/or disposal in accordance with RCRA and other applicable Federal and State statutes and DOE Orders. The impacts of having to construct the waste management facilities are captured in other resource areas such as land use and air quality. The text referring to "potential adverse impacts" to waste management has been deleted.

STATE OF TEXAS, OFFICE OF THE GOVERNOR, AUSTIN, TX, ROGER MULDER
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DOE PEIS Comments
May 6, 1996
Page Seven

Comment

In Volume III of the Storage and Disposition PEIS (pp. M-131 through M-155), the chemicals used are as follows:

Hanford reports 3 chemicals, none with slope factors
NTS reports NO chemicals
INEL reports 28 chemicals, 12 with slope factors
Pantex reports 25 chemicals, 6 with slope factors
ORR reports 10 chemicals, none with slope factors
SRS reports 15 chemicals, 5 with slope factors
Rocky Flats reports 10 chemicals, 3 with slope factors. 13/09.10.08

These reported chemical usages present an erroneous comparison, as all sites under consideration will use similar chemicals. For example, benzene is a combustion product of both diesel fuel and gasoline, and would be common to all sites.

Question:

Was the manner by which the information was requested not specific enough to ensure accurate reporting or are the records at some sites incomplete? Please correct.

Comment

In the Summary (p. S-46), it is stated that "When the other DOE programs previously identified in this section are considered, the rank order of DOE sites in terms of their descending potential for cumulative impacts changes to SRS, INEL, Pantex, NTS, Hanford and ORR." A similar statement appears on p. S-47. 14/09.00.08

Question

What does this statement mean? It is obscure and demands an explanation that is concise, clear, and supported by evidence.

F-025

09 10 08 Comment Number 13

The data calls sent to each site contained the same information and requests. Under the No Action Alternative, the emissions data is from existing site facilities. Since each site has different existing facilities and operations, the chemicals emitted from these facilities are expected to be different. The cancer risk slope factors purely depend on the nature of the chemicals. For proposed new actions, the emissions data would be very similar among the sites. For detailed information on the emission data on each site, please refer to the respective data reports cited in the PEIS.

09 00 08 Comment Number 14

The Department of Energy did not intend to give the perception that the sites were ranked. Based on comments received, the Summary of the Draft PEIS was revised. All revisions made to the PEIS text appear in the Summary of the Final PEIS.

DOE PEIS Comments
May 6, 1996
Page Eight

STOCKPILE STEWARDSHIP AND MANAGEMENT PEIS ISSUES

Comment

Separation of the explosive fabrication and assembly/disassembly missions would require that explosives be transported over long distances in order to be mated with the physics packages. In the case of LLNL, the extensive winter fogs of the San Joaquin Valley that create near zero visibility, sometimes for weeks-on-end, should be considered in any safety analysis.

Question:

a. Has an analysis been made of the additional hazards of transportation of HE from either of the national laboratories to where it would be used?

b. What would be the increased costs of intersite transportation?

15/15.00.00

Comment:

NTS workers and their families associated with the 2,253 new jobs (SSM Summary p. S-32) would likely reside in Las Vegas, NV, which is one of the fastest growing areas in the country.

Question:

Has an analysis been made of the impact of these additional residents on the Las Vegas municipal water supply?

Comment:

The preferred alternative for the location of explosives development has not yet been determined. Moving HE production from Pantex to one of the laboratories is under consideration. Note that there have been attempts to develop the land right next to LLNL's Site 300 fence for new housing.

F-025

15 00 00 **Comment Number 15**

These comments were forwarded to the Stockpile Stewardship and Management Program for consideration in the Stockpile Stewardship and Management PEIS.

STATE OF TEXAS, OFFICE OF THE GOVERNOR, AUSTIN, TX,
ROGER MULDER
PAGE 10 OF 12

DOE PEIS Comments
May 6, 1996
Page Nine

Question:

a. If the operation is moved to either LLNL or LANL, where would the building be placed and the testing be done?

b. What is the current and projected land use around LANL and LLNL (particularly, Site 300)?

15/15.00.00 cont.

A number of questions were also raised during the April 22-25 hearings in Amarillo that were addressed specifically to the Pantex Site-Wide EIS. Those questions will be included when the State issues its comments on that document.

If you have any questions or need additional information, please write or call me at 512/463-2198.

Sincerely,

Roger Mulder

ROGER MULDER
Director, Pantex

F-025

Support Material

The major impact areas covered by the S&D PEIS focus on water, air, and land resources. Pantex was named 3 times with air impacts, 4 times with land impacts, 6 times with waste impacts, and at least 11 times with ADVERSE water resource impacts. The statements about air and land impacts may be reasonable because at least one other site was mentioned with similar impacts (i.e. Pantex was not singled out to a large extreme. However a more accurate picture would result if DOE stated that these impacts are not significant). The most inaccurate representation in the summary is the discussion of adverse water resource impact, for which Pantex was incorrectly singled out at least 11 times above the other sites. Details are provided below.

Water Resources

- Water Availability:

All comparisons on water resources were made relative to the NO ACTION ALTERNATIVE for each site, with no absolute basis among sites, and always expressed as a percentage of the NO ACTION ALTERNATIVE. Without an absolute basis among sites to ascertain the "true impact on the environment", no rank ordering of sites or preferred alternatives based upon environmental impact can be justified. However, contrary to logic, this was done in the sections titled *Long-Term Storage Alternatives* (page S-45), *Disposition Alternatives* (page S-46), and *Comparison of Sites Within Alternatives* (page S-48).

To make this point clear, for a site that has worked to conserve water in the past, and which has a small water demand, the percentage increase due to any increase in construction or operation activity are disproportionately large relative to a site which has not applied water conservation techniques and which has a large water usage at the NO ACTION ALTERNATIVE (see Item #1 below). On the percentage basis used relative only to the NO ACTION ALTERNATIVE, sites which apply conservation techniques are unfairly singled out.

16/09.04.08

Second, relating everything to the NO ACTION ALTERNATIVE without an absolute basis, implies that the current water demand significantly impacts the available supply or is a significant part of the demand of the local community such that a large percentage increase in water demand detrimentally affects the amount of water available for the local community (i.e. farmers and ranchers). Contrary to that implication in the summary, the impact of any of these activities on the Amarillo area water consumption would be less than 1% (see Item #2 below).

F-025

09 04 08 Comment Number 16

The use of percentage increases is simply a tool to put the additional water requirements in perspective to the ongoing, or No Action, usage at the sites. The impacts are based on the ability of the local water supply to support the requirements of the site and the Proposed Action, regardless of how large the percentage increase is. If a site's water requirements would affect the local water supply, this would be clearly stated in the PEIS. For example, at Hanford, the Columbia River is a particularly abundant water supply. If Hanford increased its water usage by several thousand percent, the effect on the availability of Columbia River water would be minimal. This would be reflected in the PEIS analysis. Conversely, Pantex is the only DOE site under consideration in this PEIS where water availability is a concern. Pantex's contribution to the depletion of the Ogallala Aquifer must be analyzed; any contribution to this depletion does affect the water resources of the area. However, for the storage alternatives, the impact to water resources at Pantex is expected to be minimal. The Summary of the Final PEIS was revised to indicate that Pantex's No Action (year 2005) water usage is considerably less than what is currently being withdrawn, and that minor impacts to water resources are expected from the various storage alternatives and the Preferred Alternative.

In regard to water conservation techniques, sites that apply these measures are generally ones where water supply may be a limiting factor. Sites having an abundant water supply do not necessitate water conservation techniques.

STATE OF TEXAS, OFFICE OF THE GOVERNOR, AUSTIN, TX, ROGER MULDER
PAGE 12 OF 12

To put this issue in perspective, the baseline (NO ACTION ALTERNATIVE) water consumptions are summarized below taken from the Summary S&D PEIS in million liters per year (MLY) focused only on the ground water component:

NO ACTION ALTERNATIVE (MLY)

Hanford	NTS	INEL	Pantex	Oak Ridge	SRS	RFETS
13,511	2,400	7,570	249*	14,760	13,247	439

* note the water use at Pantex for 1994 was 836 MLY and is "expected" to decrease to 249 MLY by 2005 due to drawdown (a small baseline made smaller). Ref: Vol II, p 4-187.

Item #1: The PEIS quotes increases in ground water usage for Pantex for the various alternatives from 2.6% to 44.2% above the NO ACTION ALTERNATIVE (this percentage increase is based upon the projected baseline of 249 MLY for the year 2005, a decrease from the current use rate of 836 MLY). Taken out of context, these numbers seem extreme. Indeed, these percentages were incorrectly brought forward in the word summary using this statement repeatedly: *"Adverse impacts to water resources at Pantex would result from the continued local drawdown of the Ogallala Aquifer, but Pantex's contribution to this drawdown is expected to continue to decrease due to a decrease in other DOE activities at Pantex. Neither surface or ground water resources at other DOE sites would be affected."* This causes the inaccurate perception that the large projected percentage increase in water use would be detrimental to the welfare of the local community. This might have been true if indeed the absolute demand placed on the available resources was significant. But, the maximum estimated increase is less than 1% of the water use in the area and a 44% increase of 1% is only 0.4% absolute increase (and this was based upon the 2005 projection, relative to current operations it would be a 57% decrease in water usage).

Item #2 (Ref: Vol 1, p 3-159 to 3-162):

- A: In 1994 while Pantex was drawing 836 MLY (836 x 10^6 L), the city of Amarillo pumped 23.9 BLY (23.9 x 10^9 L), from the Carson County well field. Using the PEIS number of 249 MLY in 2005, this equates to about 1% of the Town's water use. If water pumped directly by agriculture (which does not go through the Amarillo's water plant) were included this figure the relative demand by Pantex on the water drawn from the Ogallala Aquifer would be well below 1%.
- B: The recoverable water volume in storage and available for use in the Ogallala Aquifer in the High Plains Aquifer system is estimated at 5.15 x 10^{14} L. At this rate, if Pantex were operated for 1000 years using the highest water demand of all alternatives (Collocation - 379 MLY), Pantex would use less than 7/100% of the available water.

In summary, the repeated statements of adverse impacts on groundwater resources for any and all alternatives is based upon an inaccurate reference point and the actual impact brought out in the draft summary has no basis. To satisfy the requirement to make comparisons of water usage against the no action alternative, we suggest that the no action alternative be place on a percentage basis of actual area water usage to allow for an equitable and objective comparison between sites. For any sites where this percentage increase is insignificant, the PEIS and its Summary should state that fact clearly.

16/09.04.08 cont.

F-025

STATE OF TEXAS, OFFICE OF THE LIEUTENANT GOVERNOR, AUSTIN, TX, LIEUTENANT GOVERNOR BOB BULLOCK
PAGE 1 OF 6

Bob Bullock
Lieutenant Governor of Texas

The Capitol
Austin, Texas 78711-2068
(512) 463-0001

President, Texas Senate

1-800-441-0575
(512) 475-3758 TDD

March 28, 1996

The Honorable Hazel O'Leary
Secretary of Energy
c/o Mr. Bruce G. Twining
U.S. Department of Energy
P.O. Box 5400
Albuquerque, New Mexico 87185-5400

Dear Madam Secretary:

It has come to my attention that you are scheduled to hold public hearings in Amarillo on April 22 and 23, regarding the future role of the Pantex facility located in Amarillo, Texas.

The people of Pantex and the Amarillo area have for decades made an invaluable contribution to the security of our nation. Texas and the communities in that area have long provided strong public and political support, as opposed to the hostile environment that faced other nuclear facilities in the past.

Even though the threat of war has lessened, we cannot afford to relax our defense policies. By maintaining our nuclear superiority, we can assure the safety of our country. Consequently, maintaining what has been achieved through the work and dedication of the people of Pantex is as important today, and for the future, as it was in recent decades.

1/08.03.01

While Pantex is important to the economy of Texas and the Amarillo area, the federal government also benefits from this arrangement. Economically, the existence of Pantex is in the best interest of the federal government and the taxpayers who support it. Pantex is already established as a first-rate facility and is willing and able to accommodate any new functions which may be assigned to it. Give us the task, and we will keep getting it done.

By any measure, Pantex is the best choice for the present and future nuclear needs of our country.

Sincerely,

BOB BULLOCK
Lieutenant Governor

BB:sde

cc: U.S. Department of Energy, Office of Reconfiguration
U.S. Department of Energy, Office of Fissile Materials

M-005

08 03 01 **Comment Number 1**

The Department of Energy acknowledges the commentor's support of Pantex. Decisions related to future missions at Pantex will be based upon environmental analyses, technical and economic studies, national policy considerations, and public input.

STATE OF TEXAS, OFFICE OF THE LIEUTENANT GOVERNOR, AUSTIN, TX, LIEUTENANT GOVERNOR BOB BULLOCK
PAGE 2 OF 6

LAW OFFICES OF RANDALL H. ERBEN
807 Brazos, Suite 402
Austin, Texas 78701
(512) 472-1682
FAX (512) 477-9029

RANDALL H. ERBEN

Tony - Governor Bullock wrote a similar letter last year (see enclosed) for a Sandia hearing. I'd be grateful if you'd consider doing something like his 4/7 & 8/95 letter, or this one. Thanks - call if you have questions.

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D), and is planning
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Pantex site-specific
es in the other EIS

these documents, and the hearing thereon, are critical for the future of Pantex. While the Draft of the SSM PEIS has abandoned DOE's plan to transfer all weapons-related functions *from* Pantex *to* the Nevada Test Site and the national laboratories, Pantex is expected to lose more than half its workforce beginning in 1998 under contemplated downsizing of the plant. This is possible in spite of the fact that Pantex is by far the most cost-effective site for these functions and makes the most sense from a national security perspective to maintain our nuclear deterrent.

The process which DOE is undergoing is akin to base closures. While we are playing a "less-than-zero-sum-game"; the pie is shrinking, and continued "phase-out" of Pantex and many of its 3,500 jobs is a still a *very realistic option* unless we position Pantex both to (1) retain as much of the stewardship and management activities as possible (e.g. high explosives fabrication) and (2) become the focal point of the transition from military applications to "civilian" stewardship of special nuclear materials, as well as other new missions. Also at stake is the new Amarillo National Resource Center for Plutonium (ANRCP), operated by The Texas A&M University System, Texas Tech University, and The University of Texas System, on behalf of the State of Texas.

The first step in defending Pantex from significant and unwarranted downsizing is participation at the April 22 and 23 public hearings. Therefore, I would request that you seriously consider presenting oral and/or written comments at the upcoming DOE hearings. On these dates, DOE will conduct joint meetings to receive public testimony

M-005

and comments at the Radisson Inn Amarillo Airport, 7909 I H 40 East at Lakeside, Amarillo 79104. The workshop format of this meeting (which is different from the more formal hearings used in the past by DOE) has the stated purpose of allowing the public to interact directly and exchange information with DOE representatives.

Because of this alteration from prior practice, formal oral testimony will probably not be accepted (though your attendance and participation in the discussions would be appreciated and DOE would certainly make any necessary arrangements to ensure you had an opportunity to make a statement). Accordingly, making the submission of formal written testimony is the best (and most time-efficient) avenue for expression of your views. Written testimony should be sent to:

For SSM: U.S. Department of Energy
Office of Reconfiguration
P.O. Box 3417
Alexandria, Virginia 22302

For S&D: U.S. Department of Energy
Office of Fissile Materials
P.O. Box 23786
Washington, DC 20026

Comments must be received prior to May 7, 1996.

For your convenience, I have enclosed some material to assist you in the preparation of your testimony. The enclosed text is appropriate for both environmental impact statements. Therefore, a convenient solution would be to draft a letter to both offices (using dual addresses) and mailing an identical letter to both. If you desire, you can forward me your letter and I would be happy to send it to both offices if that is more convenient. I am happy to assist in the submission of your comments and with further briefing materials to help in the drafting of any testimony.

Please call me if you have questions, desire assistance with arrangements to attend any of these events, or to testify or submit comments for the April 22nd and 23rd hearings. If you do plan to attend, I would be happy to also assist in making arrangements with DOE to ensure you are recognized for an oral statement at a time convenient to you. Thank you for your interest.

Best Regards,

Randall H. Erben

Enclosures

M-005

STATE OF TEXAS, OFFICE OF THE LIEUTENANT GOVERNOR, AUSTIN, TX, LIEUTENANT GOVERNOR BOB BULLOCK
PAGE 4 OF 6

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To Randy Erben	From Steve Brenner
Co.	Co.
Dept.	Phone #
Fax # 477-9029	Fax # 463-0039

Bob Bullock
Lieutenant Governor of Texas

The Capitol
Austin, Texas 78711-2068
(512) 463-0001

President, Texas Senate

1-800-441-0575
(512) 475-3758 TDD

August 8, 1995

The Honorable Hazel R. O'Leary
Secretary of Energy
c/o Mr. Stephen M. Schinki
U.S. Department of Energy
P.O. Box 3417
Alexandria, Virginia 22302

Dear Madam Secretary:

The Department of Energy is in the process of determining the future role of the Pantex facility located in Amarillo, Texas.

The people of Pantex and the Amarillo area have for decades made an invaluable contribution to the security of our nation. Texas and the communities in that area have long provided strong public and political support, as opposed to the hostile environment that faced other nuclear facilities in the past.

Pantex and its people did their jobs when achieving peace through strength and avoiding war on an unprecedented scale were the nation's top priorities. Maintaining what has been achieved through the work and dedication of the people of Pantex is every bit as important in this post-Cold War era as our defense objectives of recent decades.

It would be strange indeed if Pantex was to be abandoned when its mission is, so to speak, only half completed.

Yes, keeping Pantex is in the economic interest of Texas. But, keeping future nuclear weapons programs at Pantex is also in the best interest of the federal government and the taxpayers who support it. Others have and will argue the numbers supporting Pantex. I want to emphasize that the people of Texas and the Amarillo area are clearly focused on and accepting of the nation's need for Pantex and its continuing mission. Give us the task, and we will keep getting it done.

By any measure the wisest choice for the Department's Stockpile Stewardship and Management Program is Pantex.

Sincerely,

BOB BULLOCK
Lieutenant Governor

BB:ben

bcc: Mr. Randy Erben

M-005

DRAFT

April __, 1996

U.S. Department of Energy
Office of Reconfiguration
P.O. Box 3417
Alexandria, VA 22302

U.S. Department of Energy
Office of Fissile Materials
P.O. Box 23786
Washington, DC 20026

Re: Comment on Stockpile Stewardship and Management (SSM) and Storage and Disposition (S&D) of Weapons-Usable Fissile Materials Draft Programmatic Environmental Impact Statements (PEISs).

Thank you for the opportunity to comment on the U.S. Department of Energy's (DOE) Programmatic Environmental Impact Statements (PEISs) on Stockpile Stewardship and Management (SSM) and Storage and Disposition (S&D) of Weapons-Usable Fissile Materials. Please also consider this my comment on the Pantex Site-Wide Draft Environmental Impact Statement, since most of the issues addressed in these documents are identical.

First and foremost, I am adamant that any current and future functions at Pantex will be conducted in a safe and environmentally sound manner. Our first priority is to ensure any expansion at Pantex be implemented in a way that does not impair the health or safety of area residents or have an adverse affect on the environment. These goals serve as a prerequisite to any current or future activities at Pantex, including expansion.

I. Generally. I am pleased that DOE selected Pantex as the preferred alternative for assembly/disassembly, thereby abandoning earlier plans to transfer those functions to the Nevada Test Site (NTS) which would have been cost prohibitive and never been adequate to meet future needs. However, by failing to recognize Pantex as the preferred candidate site for new and/or consolidated stockpile management facilities, the DOE overlooks the best site for maintaining the integrity of the U.S. nuclear stockpile and attaining maximum efficiencies and cost savings.

II. SSM PEIS:

1. Pantex is the best place to site new construction/stewardship activities. Pantex is perhaps the most cost-effective alternative for any new construction of SSM facilities. First, labor costs, utility rates, and water and land availability at Pantex, as well as public and political support, are more amenable than those at any other Complex site. It is appropriate to consider Pantex as an alternative site for all future defense-related facilities to complement activities at the national labs (such as the planned Atlas Facility and plutonium pit fabrication site at Los Alamos National Laboratory [LANL]). DOE makes no mention of a strategic plutonium reserve that is necessary to meet future national security needs, even though the PEIS mentions that strategic storage should be co-located with disassembly. Pantex should be the preferred site for such a mission in coordination with its management functions. The location of additional defense-related

M-005

STATE OF TEXAS, OFFICE OF THE LIEUTENANT GOVERNOR, AUSTIN, TX, LIEUTENANT GOVERNOR BOB BULLOCK
PAGE 6 OF 6

activities at Pantex would ensure that core technical capabilities are preserved at a location that can secure them at the most efficient cost to the American people. In its deliberations, *DOE should insist that budgetary comparisons between Pantex and other sites are accurate, and include capital, transportation, training, remediation, and other costs.*

2. Pantex is the best site to continue High Explosives fabrication. Consistent with the strengths identified above for increased stewardship and management duties, the high explosives (HE) functions should also remain at Pantex. Because the production assembly/disassembly functions remain at Pantex, the HE fabrications duties should be present at the corresponding site. After all, the SSM Draft admits that Pantex must retain HE capabilities to process the inventories already on site from dismantling. Therefore, the least expensive alternative is to maintain HE functions at Pantex. I adamantly disagree with the statement in the draft PEIS that there are no advantages to siting high explosives at Pantex as opposed to the national labs. The capital outlay alone necessary for transfer is cost prohibitive. In addition, should future need arise for new weapons production, it will be critical to have the HE facilities at the weapons production/assembly site.

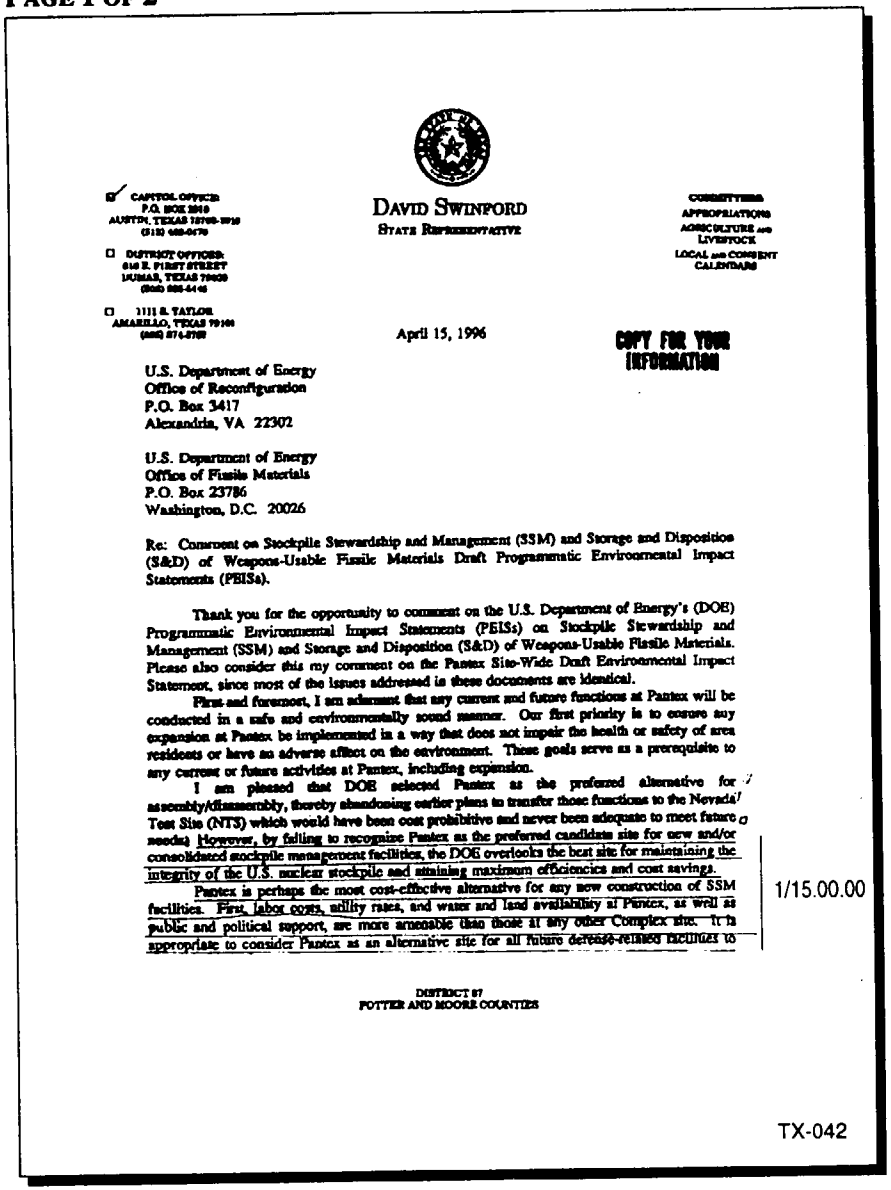
III. Fissile Materials (Plutonium) Storage and Disposition PEIS. As the sole DOE-authorized facility for assembly and disassembly of nuclear weapons, Pantex has historically handled these functions in a safe an efficient manner for more than 40 years. One of the challenges faced after dismantling a significant portion of the nuclear stockpile is processing or disposal with the materials that remain. The DOE is considering several options. Once again, acknowledging cost savings considerations, Pantex could continue to store plutonium which is already at the site and upgrade facilities for any and all storage options being considered by DOE with minimal cost and difficulty. Pantex currently safehouses more than 8,000 surplus pits and plans are being made to ship additional pits from Rocky Flats to Pantex. It makes little sense to re-create storage facilities at another site and then unnecessarily transport large amounts of plutonium across the country from Pantex. The budgetary and political costs for such a decision would be enormous. Because of these costs, Pantex also should be designated the preferred site for any disposition options and related functions. It makes budgetary and policy sense to site disposition where storage already exists. Furthermore, it makes no sense from any perspective, budget or otherwise, to site strategic storage at one site and surplus at another. Pantex should be selected for both storage functions. Pantex has the necessary safety, security, and surveillance capabilities to accommodate an expanded role with minimal costs and it is the production site closest to Los Alamos, the planned pit fabrication site.

IV. Conclusion. Based upon these reasons, I respectfully urge DOE to designate Pantex as the preferred alternative site for all existing and new stockpile management and stewardship functions as well as consolidation of all plutonium storage and disposition and any related functions. Thank you for the opportunity to comment on these documents.

Yours truly,

M-005

STATE OF TEXAS, STATE REPRESENTATIVE, AUSTIN, TX,
DAVID SWINFORD
PAGE 1 OF 2



CAPITOL OFFICE
P.O. BOX 2910
AUSTIN, TEXAS 78768-2910
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DISTRICT OFFICES:
510 E. FIRST STREET
DUMAS, TEXAS 79029
(806) 935-5141

1111 S. TAYLOR
AMARILLO, TEXAS 79101
(806) 374-9709

DAVID SWINFORD
STATE REPRESENTATIVE

COMMITTEES:
APPROPRIATIONS
AGRICULTURE AND LIVESTOCK
LOCAL AND CONSENT CALENDARS

April 15, 1996

COPY FOR YOUR INFORMATION

U.S. Department of Energy
Office of Reconfiguration
P.O. Box 3417
Alexandria, VA 22302

U.S. Department of Energy
Office of Fissile Materials
P.O. Box 23786
Washington, D.C. 20026

Re: Comment on Stockpile Stewardship and Management (SSM) and Storage and Disposition (S&D) of Weapons-Usable Fissile Materials Draft Programmatic Environmental Impact Statements (PEISs).

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First and foremost, I am adamant that any current and future functions at Pantex will be conducted in a safe and environmentally sound manner. Our first priority is to ensure any expansion at Pantex be implemented in a way that does not impair the health or safety of area residents or have an adverse affect on the environment. These goals serve as a prerequisite to any current or future activities at Pantex, including expansion.

I am pleased that DOE selected Pantex as the preferred alternative for assembly/disassembly, thereby abandoning earlier plans to transfer those functions to the Nevada Test Site (NTS) which would have been cost prohibitive and never been adequate to meet future needs. However, by failing to recognize Pantex as the preferred candidate site for new and/or consolidated stockpile management facilities, the DOE overlooks the best site for maintaining the integrity of the U.S. nuclear stockpile and attaining maximum efficiencies and cost savings.

Pantex is perhaps the most cost-effective alternative for any new construction of SSM facilities. First, labor costs, utility rates, and water and land availability at Pantex, as well as public and political support, are more amenable than those at any other Complex site. It is appropriate to consider Pantex as an alternative site for all future defense-related facilities to

1/15.00.00

DISTRICT 87
POTTER AND MOORE COUNTIES

TX-042

15 00 00 **Comment Number 1**

These comments were forwarded to the Stockpile Stewardship and Management Program for consideration in the Stockpile Stewardship and Management PEIS.

STATE OF TEXAS, STATE REPRESENTATIVE, AUSTIN, TX, DAVID SWINFORD
PAGE 2 OF 2

complement activities at the national labs (such as the planned Atlas Facility and plutonium pit fabrication site at Los Alamos National Laboratory. Doe makes no mention of a strategic plutonium reserve that is necessary to meet future national security needs, even though the PEIS mentions that strategic storage should be co-located with disassembly. Pantex should be the preferred site for such a mission in coordination with its management functions. The location of additional defense-related activities at Pantex would ensure that core technical capabilities are preserved at a location that can secure them at the most efficient cost to the American people. In its deliberations, DOE should insist that budgetary comparisons between Pantex and other site are accurate, and include capital, transportation, training, remediation and other costs.

Consistent with the strengths identified above for increased stewardship and management duties, the high explosives functions should also remain at Pantex. Because the production assembly/disassembly functions remain at Pantex, the high explosives fabrications duties should be present at the corresponding site. After all, the SSM Draft admits that Pantex must retain High explosives capabilities to process the inventories already on site from dismantling. Therefore, the least expensive alternative is to maintain these functions at Pantex. I adamantly disagree with the statement in the draft PEIS that there are no advantages to siting high explosives at Pantex as opposed to the national labs. The capital outlay alone necessary for transfer is cost prohibitive. In addition, should future need arise for new weapons production, it will be critical to have the high explosives facilities at the weapons production assembly/disassembly site.

As the sole DOE-authorized facility for assembly and disassembly of nuclear weapons, Pantex has historically handled these functions in a safe an efficient manner for more than 40 years. One of the challenges faced after dismantling a significant portion of the nuclear stockpile is processing or disposal with the materials that remain. The DOE is considering several options. Once again, acknowledging cost savings considerations, Pantex could continue to store plutonium which is already at the site and upgrade facilities for any and all storage options being considered by DOE with minimal cost and difficulty. Pantex currently safehouses more than 8,000 surplus pits and plans are being made to ship additional pits from Rocky Flats to Pantex. It makes little sense to re-create storage facilities at another site and then unnecessarily transport large amounts of plutonium across the country from Pantex. The budgetary and political costs for such a decision would be enormous. Because of these costs, Pantex also should be designated the preferred site for any disposition options and related functions. It makes budgetary and policy sense to site disposition where storage already exists. Furthermore, it makes no sense from any perspective, budget or otherwise, to site strategic storage at one site and surplus at another. Pantex should be selected for both storage functions. Pantex has the necessary safety, security, and surveillance capabilities to accommodate an expanded role with minimal costs and it is the production site closest to Los Alamos, the planned pit fabrication site.

Based upon these reasons, I respectfully urge DOE to designate Pantex as the preferred alternative site for all existing and new stockpile management and stewardship functions as well as consolidation of all plutonium storage and disposition and any related functions. Thank you for the opportunity to comment on these documents.

2/08.03.01

Sincerely,

COPY FOR YOUR INFORMATION

TX-042

08 03 01 **Comment Number 2**

The Department of Energy acknowledges the commentor's support of Pantex. Decisions related to future missions at Pantex will be based upon environmental analyses, technical and economic studies, national policy considerations, and public input.

STATE OF TEXAS, STATE REPRESENTATIVE, AUSTIN, TX, JOHN HIRSCHI
PAGE 1 OF 2

John Hirschi
State Representative
District 81

May 28, 1996

To the United States Department of Energy
Office of Fissile Materials Disposition
P.O. Box 23786
Washington, D.C. 20026-3786

As a concerned citizen as well as a Texas Legislator I am disturbed by the Programmatic Environmental Impact Statement prepared for the Department of Energy regarding Storage and Disposition of Weapons-Usable Fissile Materials.

While I recognize the need to assure safe, secure, long-term storage and disposition of the significant quantities of surplus fissile materials, which include plutonium (Pu) and highly enriched uranium (HEU), I believe this document fails to address very critical human issues.

In reviewing the alternative for the possible future of Pantex, it becomes very evident that all of the nation's weapons-usable plutonium not active warheads would be stored at Pantex - 20,000 pits, plus much of the plutonium now at Rocky Flats Plant, CO; Hanford, WA; Los Alamos, NM; Savannah River, SC; and the Idaho National Engineering Laboratory.

Before 1989, plutonium pits were never stored at Pantex. However, with the closing of Rocky Flats, Pantex is the interim storage site for at least 12,000 pits. Now this document proposes not only storing plutonium pits, but other more undesirable forms of plutonium.

Once stored at Pantex, this site is being considered for a plutonium pit disassembly/conversion facility to cut the pits and process them into metal or oxide; a plutonium conversion facility to process other types of Pu; a facility to mix plutonium with uranium to make mixed oxide fuel (MOX); nuclear power reactors to use the MOX fuel, plus storage of the spent fuel from the reactors, as well as storage of all the mixed waste generated from all these processes. It is processing of plutonium which has contributed to the national environmental degradation which saddles our nation with a $300 billion dollar cleanup problem.

1/09.08.04

This document states there would be few negative effects from doing any and all of those activities at Pantex. What the document fails to address is the impact on the good reputation of our agricultural products. Agriculture is the one industry which has consistently sustained the Panhandle for decades.

The food chain begins here in the prime agricultural farmland of the Texas Panhandle. The meat products and cereal grains produced here are shipped throughout the world; 25% of the Nation's beef is produced and processed here. The quality and wholesomeness of these products would be placed in jeopardy with the siting of these processes at Pantex. Without production agriculture

Austin Office:
P.O. Box 2910
Austin, Texas 78768-2910
512-463-0534

District Office:
3308 Kemp
Wichita Falls, Texas 76308
817-691-9160

M-249

09 08 04 **Comment Number 1**

The Proposed Alternatives for Pantex would be performed on existing DOE land and would not disturb any prime farmland. Furthermore, because the Proposed Alternatives would operate in full compliance with all Federal, State, and local environmental regulations, the operations would have no adverse impact on grain production. Thus, there would be no impact on the agricultural economy of the Panhandle/Amarillo area.

STATE OF TEXAS, STATE REPRESENTATIVE, AUSTIN, TX, JOHN HIRSCHI
PAGE 2 OF 2

this part of Texas would cease to exist. When one of every four people is employed in an agriculture related job, the loss to this High Plains trade area of those jobs would create untold problems. 1/09.08.04 cont.

A second issue the document fails to address is the location of Pantex above the Ogallala aquifer, the source of groundwater for the plains of Texas and seven other Midwestern food producing states. With high explosives, chemicals, solvents, and radionuclides, Pantex has contaminated the fine grained layer of water bearing sands above the Ogallala aquifer. With the downward migration of the recharging waters how long will it be before the Ogallala itself will be contaminated? 2/09.04.04

Water and agriculture are the real wealth of the Texas Panhandle. Without them there would be no "Texas Panhandle." We cannot stand by and allow these resources to be compromised in any way. Food is the most important commodity we have - it must be protected.

Not all alternatives for siting these processes at other sites were analyzed in this document. Before choosing a preferred alternative, other options need to be considered. The siting of these missions at Pantex seems shortsighted and ill-conceived. The environmental impact in conjunction with these processes has the potential to devastate this food producing region. 3/08.03.01 1/09.08.04 cont.

The Panhandle is too valuable to be used as a plutonium storage, processing and waste facility.

Sincerely,

John Hirschi

John Hirschi
State Representative

M-249

09 04 04 **Comment Number 2**

Current and future operations at Pantex are not expected to affect the water quality of the Ogallala Aquifer. However, since this aquifer is being depleted (that is, the current withdrawal is exceeding the current recharge), Pantex operations contribute to the depletion of the Ogallala Aquifer and are analyzed in the PEIS.

08 03 01 **Comment Number 3**

The Department of Energy acknowledges the commentor's opposition to new missions at Pantex. Decisions on storage and disposition of weapons-usable fissile materials will be based upon environmental analyses, technical and economic studies, national policy considerations, and public input.

STATE OF TEXAS, STATE SENATOR, AUSTIN, TX, SENATOR TOM HAYWOOD

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TOM HAYWOOD
STATE SENATOR
DISTRICT 31

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ECONOMIC DEVELOPMENT
EDUCATION
NATURAL RESOURCES
SUBCOMMITTEE ON AGRICULTURE

The Senate of
The State of Texas

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April 19, 1996

U.S. Department of Energy
Office of Reconfiguration
P.O. Box 3417
Alexandria, VA 22302

U.S. Department of Energy
Office of Fissile Materials
P.O. Box 23786
Washington, DC 20026

RE: Comment on Stockpile Stewardship and Management (SSM) and Storage and Disposition (S&D) of Weapons Useable Fissile Material Draft Programmatic Environmental Impact Statements (PEIS)

To Whom It May Concern:

As the Texas State Senator representing 36 Northern Texas Counties, including Carson County in which the Pantex facility is located, I want to thank you for the opportunity to provide comment on the United States Department of Energy's (DOE) Draft Programmatic Environmental Impact Statements (PEIS) on Stockpile Stewardship and Management (SSM) and Storage and Disposition (S&D) of Weapons Usable Fissile Materials. This letter will also serve as my comment on the Pantex Site-Wide Draft Environmental Impact Statement, as most of the issues addressed in that document are identical to the issues addressed in the SSM and S&D PEISs.

I want to stress my support for DOE's earlier decision to abandon plans to transfer assembly/disassembly function to the Nevada Test Site. Your decision to select Pantex as the preferred alternative for those functions recognizes that transfer to Nevada would have been cost prohibitive, and would not have provided adequate facilities to meet future needs. However, the failure to recognize Pantex as the preferred site for new and/or consolidated stockpile management facilities has overlooked the best site for maintaining the integrity of the United States nuclear stock-

M-046

STATE OF TEXAS, STATE SENATOR, AUSTIN, TX, SENATOR TOM HAYWOOD
PAGE 2 OF 4

pile and attaining maximum efficiencies and cost savings.

Before addressing the two Impact Statements individually, I want to stress that any current or future Department of Energy functions at Pantex must be conducted in a safe and environmentally sound manner. While I am confident that current procedures are more than adequate, I also am adamant that any expansion at Pantex be implemented in the same fashion. The residents of the Texas Panhandle have come to expect Pantex operations to be handled in a way that does not impair their health or safety, and future plans should recognize that necessity.

Stockpile Stewardship and Management PEIS

Pantex is the most cost effective alternative for any new construction of SSM facilities. Labor costs, utility rates, and water and land availability at Pantex, as well as public and political support in the surrounding community, are more amenable to DOE needs than at any other site.

Pantex should be considered as a site for all future defense related programs to complement activities at the national laboratories, including the planned Atlas Facility and the plutonium pit fabrication site at Los Alamos National Laboratory. The location of additional defense related programs at Pantex would ensure that core technical capabilities are preserved at a location that can secure them at the most efficient cost.

While the Department of Energy makes no mention of a strategic plutonium reserve to meet future national security needs, the PEIS mentions that strategic storage should be co-located with disassembly. Pantex should clearly be the preferred site for such a mission in coordination with its management functions.

The strengths identified above supporting increased stewardship and management for Pantex also support the continuation of High Explosives (HE) fabrication at that site. Just as strategic and surplus storage should remain with disassembly, HE functions should remain co-located with assembly. The DOE SSM draft indicates that Pantex should retain HE capabilities on site to process inventories accrued from dismantling; therefore the continuation of HE functions at Pantex is clearly the least expensive alternative available to DOE. I strongly disagree with the draft PEIS statement that siting HE activities at Pantex offers no advantages over the national labs. The cost of transferring such functions is cost prohibitive, and such plans ignore the possibility of future weapon production activities, which would require a full HE capability at Pantex, and ignore the admitted necessity of continued limited HE activity at Pantex.

M-046

I believe that many factors argue for the continued operation of HE activities at Pantex, in addition to an expansion of its existing stewardship and management activities. In all of the above cases, I want to stress that the Department of Energy should insist that budgetary comparisons between Pantex and other sites are accurate and include capital, transportation, training, remediation, and other costs.

Fissile Materials (Plutonium) Storage and Disposition PEIS

As the sole Department of Energy authorized facility for assembly and disassembly of nuclear weapons, Pantex has served our country for more than 40 years. It has handled these functions in a safe and efficient manner, and should continue to do so.

As our nation continues its program of dismantling a large portion of our nuclear deterrent, one of the challenges we face is processing, storing, or disposing the fissile materials that remain. Pantex clearly offers the best solution to this vexing problem.

Acknowledging the importance of cost savings, Pantex has the existing capability to store the plutonium already at the site, and could easily expand and upgrade existing facilities to meet any or all of the storage options being considered by DOE. For the reasons identified in the SSM PEIS, the Pantex facility could accomplish this with minimal cost and difficulty.

Pantex already houses more than 8,000 surplus pits, with more pits scheduled for transfer from the Rocky Flats facility. The re-creation of storage facilities at another site, and the costs and dangers associated with transporting large amounts of plutonium across the country, makes little sense budgetarily or politically. The common sense solution to this problem is to site strategic storage and surplus functions at the same place as disassembly. Since facilities for all three functions already exist at Pantex, this common sense solution is practical, reasonable, and unarguable.

All possible factors argue for Pantex's continued and expanded role in storage of disassembled fissile material. It has the necessary safety, security, and surveillance, it has the most cost efficient operations, it has existing structures and facilities, and it is the closest production site to Los Alamos, the planned pit fabrication site. 1/08.03.01

Based on the reasons outlined in the above two comments on the draft Programmatic Environmental Impact Statements, I urge the Department of Energy to designate Pantex as the preferred alternative site for all existing and new stockpile management and stewardship functions, as well as consolidation of all plutonium storage, disposition, and related functions.

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08 03 01 Comment Number 1

The Department of Energy acknowledges the commentor's support of Pantex. Decisions related to future missions at Pantex will be based upon environmental analyses, technical and economic studies, national policy considerations, and public input.

STATE OF TEXAS, STATE SENATOR, AUSTIN, TX,
SENATOR TOM HAYWOOD
PAGE 4 OF 4

Thank you for the opportunity to comment on these documents.

Sincerely,

Tom

Tom Haywood

TH/jal

M-046

STATE OF WASHINGTON, DEPARTMENT OF ECOLOGY, KENNEWICK, WA, MAX S. POWER
PAGE 1 OF 3

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
1315 W. 4th Avenue • Kennewick, Washington 99336-6018 • (509) 735-7581

Comments on Plutonium PEIS
April 11, 1996
Presented by Max S. Power
Nuclear Waste Program

My name is Max Power. I represent the Washington State Department of Ecology, and I am presenting the agency's comments.

I want to begin by stressing three basic points, based on positions taken by Governor Lowry at the time of scoping (August 1994) and the Plutonium Roundtable (October 1995):

- Nonproliferation: Action to convert weapons usable plutonium to form that discourage weapons use is urgent. The United States needs to be seen to be acting forcefully and with public support to assure that this material is not available for reuse in nuclear weapons. The consequences of *not* acting are immense.

- Equity. All the states and regions of the country benefited from the defense provided by nuclear weapons. Now all need to share in an equitable way in the overall costs and risks of closing the circle on production of nuclear weapons material. Washington State has borne more than its share of the costs and risks in the past. We have both expertise and facilities that can help deal with plutonium and radioactive wastes, but we are only willing to play a role if others assume their fair share of the burdens.

- Cleanup commitments. Washington will not accept additional burdens on Hanford that detract from or delay commitments to cleanup the legacy of past contamination.

Within this context, we offer these specific comments on the PEIS:

1. We appreciate the effort USDOE has made to provide public discussion on complex issues. As selection of disposition options proceeds, DOE should use information such as that developed in the draft PEIS to inform a broader national equity dialogue. Decisions about plutonium storage and disposal must be made in the broader context of such a dialogue, dealing with treatment storage and disposal of all surplus nuclear materials and wastes. 1/01.06.00

WA-020

01 06 00 **Comment Number 1**

Efforts are being coordinated within DOE to assure that decisions involving related programs and sites are made on an integrated basis. For example, decisions involving Pu storage and disposition, stockpile stewardship and management, environmental restoration, and specific activities at given sites are being coordinated. DOE has initiated a national dialogue that will involve State and local governments, Indian tribes, other interested groups, and the general public to provide a forum for these groups to give input on a continuing basis regarding Proposed Actions and decisions.

STATE OF WASHINGTON, DEPARTMENT OF ECOLOGY, KENNEWICK, WA, MAX S. POWER
PAGE 2 OF 3

2. We encourage DOE to take a conservative approach on storage options. It does not make sense to ship significant quantities of plutonium to a consolidated or collocated storage site, only to have to ship most of it again to yet another site for disposition. Near-term emphasis should be on selection of a disposition approach; long-term storage decisions can then be linked to the configuration of the disposition system. | 2/08.03.01 | 3/08.03.01

3. Ecology commends DOE for the level of analysis and documentation in the PEIS:
   - a good basis for assessing generic disposition alternatives
   - recognizes need for additional NEPA documentation to select disposition sites
   - sufficient analysis to evaluate storage options once disposition path selected

4. We also emphasize the need to identify the full extent of risks, costs, technology development needs, and further requirements for public decision-making. This should be an important document contributing to public awareness and national equity dialogue. | 4/08.00.00
   - The PEIS includes information that puts plutonium disposition in context of the legacy of weapons production. E.g. substantial information about wastes, storage facilities, etc. at candidate sites. | 5/01.00.00
   - The PEIS makes reasonable efforts to identify emissions and waste streams from proposed storage, treatment, and disposal facilities. DOE is to be commended for using appropriate site-specific data in the conceptual analysis of the disposition options.
   - However, we are concerned that some materials may not be covered in this PEIS or others | 5/01.00.00 cont.

5. Therefore, we ask DOE to clarify how--and how much of--Hanford plutonium stock is included.
   - Fig. 1.1.1-1 indicates 1.7 t. of Hanford Pu identified as "surplus" There is approximately another 2.1 t. in forms other than spent fuel. Some may be concentrated and become surplus; some may become waste. It is not clear that the latter category, which is explicitly beyond the scope of this PEIS, is included in other programmatic documents. | 6/01.00.00
   - The PEIS needs more explicit discussion about the implications of non-pit forms of plutonium for the configuration of storage, treatment, and disposal options. | 7/01.00.00

In conclusion, the disposal option , or combination of options, selected should:
- minimize overall risk to public and worker health, and to the environment;
- take account of equity among sites and regions;
- not divert resources from or delay cleanup of past contamination at nuclear weapons production sites; | 8/08.03.00
- have a clear and reasonable path forward to develop and implement the technology; and
- accommodate the plutonium metal scrap and other forms that could nonetheless be used in weapons.

WA-020

08 03 01 Comment Number 2

The Department of Energy acknowledges the commentor's support for the continued storage of surplus Pu (No Action Alternative). Decisions on disposition of weapons-usable fissile materials will be based upon environmental analyses, technical and economic studies, national policy considerations, and public input.

08 03 01 Comment Number 3

Comment noted.

08 00 00 Comment Number 4

In the interest of openness and more informed decisionmaking, DOE released Technical Summary Reports to the public as soon as they became available. Cost data, along with technical and schedule data, were provided in Technical Summary Reports of both storage and disposition in the summer of 1996. Results of the nonproliferation analysis were made available in the fall of 1996. Each of these analyses along with the environmental analysis and public input will be integrated into DOE's decisionmaking process.

01 00 00 Comment Number 5

A description of all DOE's environmental analyses for weapons-usable fissile materials to comply with NEPA is given in Chapter 1 of the Final PEIS.

01 00 00 Comment Number 6

The Draft PEIS used 4 t (4.4 tons) as a bounding number for Hanford to analyze the environmental impacts. Of the 4 t (4.4 tons), 1.7 t (1.9 tons) has been declared surplus, and the remainder is largely nuclear energy program materials that are considered weapons-usable.

Weapons-usable fissile materials are not wastes, as defined in the *Solid Waste Disposal Act*, Sections 1004 and 1006. Stabilization and concentration of the Pu residue materials at various sites would be covered under separate NEPA documents, if necessary, as part of the stabilization program under EM.

01 00 00 **Comment Number 7**

The non-pit materials containing Pu came mainly from chemical and thermal processes that were used to separate and purify Pu. As described in Chapter 1 of the PEIS, DOE has an ongoing program to stabilize these materials to meet the requirements of its *Plutonium Vulnerability Management Plan*. The NEPA coverage for stabilization of the weapons-usable fissile materials is beyond the scope of this PEIS. Since the PEIS addresses only separated materials, the management of materials stabilization activities including any NEPA analyses that might be required is being conducted under DOE's Environmental Management Program.

08 03 00 **Comment Number 8**

The Department of Energy acknowledges the commentor's suggestion regarding the criteria that should be used in determining the Preferred Alternative for the storage and disposition of weapons-usable fissile materials. This criteria, along with other input, provided through the public review process, will be presented to the decisionmaker to support the ROD.

STATE OF WASHINGTON, DEPARTMENT OF ECOLOGY, OLYMPIA, WA, MARK WALLACE
PAGE 1 OF 7

Date: Mon, 6 May 1996

Subject: FORUM Form - incoming

serial_no = 168
MailTitle = FORUM Form - incoming

name = Mark Wallace
title = Public Involvement Officer
company = Washington Dept. of Ecology
addr1 = P.O. Box 47600
addr2 =
city = Olympia
state = Washington
zip = 98504
phone = (360) 407-7121
fax = (360) 407-7151
email = MAWA461@ecy.wa.gov
ctype = public
subject =

** The following is the text of the Author's Comment.

Spoken comments on the

Storage and Disposition of Weapons-Usable Fissile Materials
Draft Programmatic Environmental Impacts Statement

Recorded during a public meeting
Co-sponsored by the Plutonium Roundtable at
The University of Washington Center for Urban Horticulture
3501 N.E. 41st Street
Tuesday, April 30, 1996.

Hearing officer: Patricia Boiko, Physicians for Social Responsibility:

First commentor:

My name is Tom Carpenter.
I am with the Government Accountability Project.
My address is:
1402 Third Avenue, Suite 1214
Seattle, Washington 98101
(206) 292-2850

E-006

TOM CARPENTER: Comment that I would like to give to the Department of Energy is that burning plutonium in the reactors as an option is not a good option, in my opinion, because it creates an additional waste stream. And it raises safety issues, and it sh ould be rejected as an option. That the tradeoff of destroying a small amount of the plutonium is not worth it, but creating a whole new waste stream and a additional safety hazard. 1/08.03.01

It appears from the information available that the immobilization technology is the preferred alternative. I have very, very strong concerns about the ability -- the technical ability and the managerial ability -- of the current structures to be able to h andle an undertaking of this sort, especially within the Department of Energy. And those are my key concerns about -- they l re technical in nature, and they l re managerial in nature, as well -- is that there l s, overall, a lack of oversight and a lack of reg ulatory integrity, I guess. And it is a concern that is, I think, kind of overlooked in the whole process. And there l s symptoms of that throughout the management, for instance, of the Hanford Site, or the Pantex Plant, where important safety issues are ov erlooked, or ignored, or buried. That concerns me greatly when it comes to an issue like plutonium disposition. So a larger look at this, a national dialogue of the type that Tim Takaro was suggesting tonight, I think is urgently needed. 2/05.00.08

There is way too much going on to make an intelligent decision without looking at the whole picture. I agree with the Physicians for Social Responsibility that it l s hard to follow all the EIS l s and PEIS's l s. As a professional activist, I don l t keep track of them all. I have no idea what l s going on with some of those. That, of course, concerns me greatly. So a national dialogue is greatly needed. And finally, I would like to agree that we need more information, more analysis about what, exactly, the im pacts would be from immobilization technologies. I feel that there is not enough information to go on to make an intelligent decision. And so I would like to see the Department of Energy step back, do a better job, do more stakeholder participation, so t hat the right decision is made, since the impacts are so far reaching and so potentially severe. 3/08.02.00

Second commentor:

My name is Rosemary E. Brodie
My address is 3842 N.E. 90th St.
(Seattle, WA 98115-3745)
I l m a co-chair of Seattle Women Act for Peace

ROSEMARY BRODIE: First of all, I would like to give a little background in

E-006

08 03 01 **Comment Number 1**

The Department of Energy acknowledges the commentor's opposition to the Reactor Alternatives. However, NEPA requires that DOE look at all reasonable alternatives and, therefore, reactor burning must be considered. Decisions on the disposition of weapons-usable fissile materials will be based upon environmental analyses, technical and economic studies, national policy considerations, and public input.

05 00 08 **Comment Number 2**

The Department of Energy is committed to safe and effective management of all of its Pu-related missions.

08 02 00 **Comment Number 3**

The Department of Energy acknowledges the commentor's support for coordination and increased understanding on the decisions to be made on the storage and disposition of weapons-usable fissile materials. However, the National Dialogue Project is beyond the scope of this PEIS.

STATE OF WASHINGTON, DEPARTMENT OF ECOLOGY, OLYMPIA, WA, MARK WALLACE
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terms of the Plutonium Disposition PEIS issues and concerns. The U.S. Department of Energy is conducting a programmatic environmental impact statement to determine what to do with the surplus plutonium taken from dismantled weapons. DOE is considering alternatives for the storage -- the storage alternatives are not addressed in this statement, here, but -- and disposition of plutonium and has agreed to take comment and discuss th e PEIS at the Plutonium Roundtable in Seattle on April 30th.

The good news is that plutonium is being removed from weapons. The process of disarmament has begun. The bad news is that keeping plutonium out of weapons and the environment is a formidable task. If we are going to meet our obligations under the NPT t reaty to work towards disarmament, the plutonium stockpile from dismantled weapons will grow, so we must analyze how to effectively deal with plutonium. Unfortunately, this PEIS so far, is an inadequate analysis that does not facilitate informed public p articipation and openness principles. DOE is also considering alternatives that exacerbate plutonium disposition problems. It is very important that everyone concerned about nuclear proliferation, Hanford, or the environment participate in this process. 4/08.02.00

The problems with MOX:
The use of plutonium in nuclear reactors is one of the disposition alternatives considered in the PEIS. First, the plutonium would be blended into a mixed plutonium dioxide and uranium dioxide, or MOX, and then reactors could use the MOX to generate ele ctricity. This alternative is strongly opposed by many people concerned with nuclear weapons material proliferation. Plutonium in MOX can still be diverted into nuclear weapons. The International Atomic Energy association consideration MOX to be of ¶di rect use¶ in nuclear weapons. This means that in the storage and transport and use in reactors, MOX must be secured and handled as a weapons material. Using MOX in reactors is against stated U.S. non-proliferation policy. President Clinton has stated t hat, ¶The United States does not encourage the civil use of plutonium, and accordingly, does not, itself, engage in plutonium reprocessing for either nuclear power, or nuclear explosive purposes.¶ This is September 1993. Developing MOX would drastic ally alt
er this policy and encourage other countries to further develop plutonium use in reactors. 5/01.06.00

The United States has no facility to develop a MOX fuel that could be run in a commercial reactor. A MOX fabrication facility would have to be built, or a current facility adapted. This could be done at Hanford at a cost as yet undisclosed. Potentially , plutonium from around the country would be brought to a Hanford MOX fabrication facility. Also, there is currently no U.S. MOX fabrication facility. The PEIS assumes that if an existing light water reactor in the United States were to use MOX fuel, th en a timely supply -- in quotes

E-006

08 02 00 **Comment Number 4**

Comment noted.

01 06 00 **Comment Number 5**

The President's Nonproliferation Policy says the United States will not recycle Pu. Burning weapons Pu in reactors does not utilize the recycling process because the Pu in the spent fuel from this will not be extracted for reuse. The Reactor Alternatives will utilize a once-through fuel cycle. Spent fuel will be disposed of with other commercial reactor spent fuel. This is not inconsistent with U.S. policy since no Pu is being recycled.

-- of MOX fuel would have to be sought, while a U.S. fabrication facility is developed. This means that the DOE would send United States1 plutonium to Europe, where MOX fuel would be developed, and then send it back to the United States1 reactors. Because MOX is a direct-use weapons grade fuel, it1s use in commercial reactors would turn many utility nuclear energy plants into de facto weapons facilities. Increased security to prevent diversion of plutonium would be
requi red

5/01.06.00 cont.

High level waste generated from MOX is likely to be a serious problem. Commercial spent fuel generated from MOX reactors is supposed to go to a waste repository. The development of a repository has been fraught with difficulty. There is no guarantee th at a suitable repository will exist for even more high level waste generated from MOX reactors. Simply stating that it will go to a repository which does not yet exist is not good enough. Hanford, as well as other sites in the nuclear weapons complex, m ay end up with this waste if a repository is not available. One alternative in the PEIS is to use Canadian CANDU reactors -- that1s an acronym. According to the PEIS, Canada would then be responsible for the waste generated from the reactors. This enco urages international commerce in plutonium, as does any alternative calling for plutonium, or MOX shipment, to and from Europe. It may also set a dangerous precedent for the United State to give up control of weapons material to other countries. An
d it bri
ngs up a question of fairness. Why should Canadian citizens take plutonium and waste that they did not develop?

Instead of MOX, plutonium should be declared a waste and immobilization alternatives developed. We should declare plutonium a waste and insure that it is not used in weapons, or in reactors. By doing this in the United States, we can also take a leaders hip role in preventing an international industry in commerce in plutonium that would be increasingly difficult to control. Immobilization technologies should be vigorously pursued because these technologies provide the greatest ability to isolate plutoni um from the environment and prevent the proliferation of weapons material. Immobilization technologies should be developed and shared with other countries. Meanwhile, storage of plutonium should maintain plutonium so as to prevent harm to the environmen t and diversion into weapons. This means that risks involved in transport should avoided.

6/08.03.01

7/08.03.01

Public participation and openness in the PEIS process:
The PEIS lacks credibility because DOE has not furthered informed public participation in the process, or adhered to basic principles of openness. DOE secretively solicited the nuclear industry in pursuit of MOX in December 1995.

8/08.02.00

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08 03 01 **Comment Number 6**

The Department of Energy acknowledges the commentor's support for the Immobilization Alternative. Decisions on disposition of weapons-usable fissile materials will be based upon environmental analyses, technical and economic studies, national policy considerations, and public input.

08 03 01 **Comment Number 7**

The Department of Energy acknowledges the commentor's support for the continued storage of surplus Pu (No Action Alternative). Decisions on disposition of weapons-usable fissile materials will be based upon environmental analyses, technical and economic studies, national policy considerations, and public input.

08 02 00 **Comment Number 8**

The Department of Energy's request for "Expressions of Interest" was announced in the *Commerce Business Daily* which is the normal public process in potential contractual matters. The meeting held to explain DOE's position was open to the public and attended by several public interest groups. This request for information from the commercial nuclear power utilities was based upon a need by DOE to determine if the Existing LWR Alternatives were chosen, would any utility be willing to do the work. This was of concern because of the traditional separation between the commercial utilities and nuclear contractor involved in national security work. This same situation is not true for the potential contractors who would be solicited to implement the Immobilization and Borehole Alternatives, if chosen.

STATE OF WASHINGTON, DEPARTMENT OF ECOLOGY, OLYMPIA, WA, MARK WALLACE
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DOE included a request for, excuse me, in December 1995, DOE included a request for expressions of interest for tritium production, a solicitation in pursuit of commercial reactors that would like to use MOX. This action, taken between the plutonium disposition PEIS scoping he arings and the draft PEIS was done without notice to the public, or incorporation into the PEIS. Not until March 29, 1996, were expressions of interest, known as EOIs, released. This solicitation indicates a substantial furtherance of MOX despite the fa ct that DOE has not chosen a preferred alternative. No EOI process has been followed for any of the other disposition alternatives. Among EOI responses from utilities interested in MOX was one from the Washington Public Power Systems, is it Supply
Syste m,
known as Whoops, to use MOX at the WNP 2 reactor sited at Hanford. — 8/08.02.00 cont.

DOE is not including cost studies and non-proliferation studies for public scrutiny along with the PEIS. Cost studies and non-proliferation studies are going on outside of this PEIS process. Since these studies will affect the outcome of the PEIS, they must be made public, publicly available so that citizens can make informed comments on the PEIS. Given that the need for action on plutonium disposition is based upon proliferation concerns, there is an appalling lack of consideration of proliferation im pacts throughout this PEIS. — 9/08.00.00

Also, a full cost analysis of MOX, including a cleanup, clean-up costs of a MOX fabrication facility and MOX reactor sites, and the costs of a suitable repository should be done and available public comment, as should cost est imates for all other alternatives. — 10/01.06.00

DOE should extend the comment period and hold hearings in additional locations. Additional time is needed for the public to fully consider the PEIS, especially with additional cost and non-proliferation informatio
n. H ear
ings ought to beld in additional locations. For example, actions at Hanford should require hearings throughout the Northwest, Seattle, Portland, Spokane, etc. Now that some of the potential reactor sites for MOX are known, hearings in those areas should be considered.
Thank you. — 9/08.00.00 cont.; 11/08.01.00; 12/08.02.00

Third commentor:

Barbara Zepeda
I live at: 1937 25th East
Seattle, 98112

BARBARA ZEPEDA: And I1m very interested in the fact that we are supposedly cooperating with IAEA at Hanford, but we aren1t even funding our UN obligations, so how can the International Atomic Energy Agency have the money to do the — 13/15.00.00

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08 00 00 Comment Number 9

In the interest of openness and more informed decisionmaking, DOE released Technical Summary Reports to the public as soon as they became available. Cost data, along with technical and schedule data, was provided in Technical Summary Reports of both storage and disposition in the summer of 1996. Results of the nonproliferation analysis were made available in the fall of 1996. Each of these analyses, along with the environmental analysis, and public input will be integrated into DOE's decisionmaking process.

01 06 00 Comment Number 10

The purpose of the Proposed Action is, in part, to establish the technical and program infrastructure that will enable the United States to take unilateral action or negotiate reciprocal actions with other nations for the disposition of surplus weapons-usable Pu. This PEIS addresses the environmental impacts of the reasonable alternatives for DOE's Proposed Action. Analyses of the cost, schedule, technical, and Nonproliferation Policy impacts are described in separate documents to support DOE's ROD. These documents were made available for public review beginning in late July 1996. DOE also conducted a series of public meetings, prior to the issuance of the Final PEIS, to discuss the analysis of the Nonproliferation Policy as it relates to the proposed action and alternatives.

08 01 00 Comment Number 11

At the request of several organizations and individuals, the public comment period was extended to a total of 92 days.

08 02 00 Comment Number 12

To obtain public comments on the Draft PEIS, DOE held meetings near each of the potentially affected sites and a national meeting in Washington, DC. DOE also participated in meetings, open to the public, sponsored by different organizations at which the sponsor collected public comments which were forwarded to DOE. DOE created and advertised a number of methods for submitting comments for members of the public who could not attend a

monitoring that it shoul d? We could set an example by full funding of the United Nations, and the IAEA should be an example of not the United States pushing international agencies around, but actually strengthening 4em. We have a history of private corporations making money at Hanford by making mistakes. We can1t afford this in the future. And the mere fact that they brought up the suggestion that private corporations would be able to take the fuel and use it for a fast breeder reactor to produce electricity is just outrageou s. Seems as those same corporations are refusing to pick up any obligation they have to the WPPSS1 bonds that are still outstanding and costing Seattle City Light hundreds of millions of dollars every year. I know the City of Seattle exists to unde
rwrit e n
uclear weapons, nuclear power and municipal bonds for the whole Northwest, but it1s an outrageous use of our taxing and our bonding authority, and it1s an outrageous betrayal of the people who built City Light to serve the people rather than the multi-nat ional corporations that make money by impoverishing the rest of the world. | 13/15.00.00 cont.

Mark Wallace, Washington Department of Ecology is now the hearing officer

Fourth commentor:

My name is: Sidney Stock S-T-O-C-K,
address: 6023 Hazelwood Lane South East
Bellevue, Washington 98006-2615

SIDNEY STOCK: And I think it1s unconscionable that the DOE would propose to limit the public response to May 7 when such a tiny, tiny fraction of the U.S. public has any knowledge, or information -- I, as a semi-informed person following this much more cl osely than the average person, but not highly informed, know next to nothing about this. I guess that will do it. | 11/08.01.00 cont.

Mark Wallace: Can I take that as an official request for an extension of the comment period?

Sidncy Stock: It sure is.

Fifth commentor:

My name is: Joshua Speiser, S-P- as in Paul -E-I-S-E-R
I live at: 4039 Ninth Avenue North East
Seattle, Washington 98105

JOSHUA SPEISER: And I1d simple like to say that I believe that the Programmatic Environmental Impact Statement, as written right now, is | 14/01.04.00

E-006

public meeting. These methods included fax, oral comments using a toll-free telephone number, mail, and the Internet.

15 00 00 **Comment Number 13**

Comment noted.

01 04 00 **Comment Number 14**

One of the screening criteria used for selection of reasonable alternatives to be analyzed in the PEIS is technical feasibility. To the extent possible, DOE will use existing and proven technologies for construction and operation of the storage and disposition facilities in the Proposed Action. Should new technologies be chosen for Pu disposition, DOE will demonstrate them prior to their implementation.

STATE OF WASHINGTON, DEPARTMENT OF ECOLOGY, OLYMPIA, WA, MARK WALLACE
PAGE 7 OF 7

incomplete, the time period should be extended, there should be much more research done on all the options. Further m ore, I would demand that the MOX option not be pursued. It l s a wasteful option, both economically; furthermore, it will create much more nuclear waste than we l re currently dealing with in many forms. Why complicate a problem, which is already complicate d. In addition, I would suggest when the Department (inaudible word) environmental safety and health issues that they try to look to those officials and scientists who do not have a vested interest, who are not working for industry, or with industry, so they can get a clearer point of view. 14/01.04.00 cont. 1/08.03.01 cont.

Thank you very much.

End of spoken comments

END comment

E-006

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
P.O. Box 47600 • Olympia, Washington 98504-7600
(360) 407-6000 • TDD Only (Hearing Impaired) (360) 407-6006

June 7, 1996

U.S. Department of Energy
Office of Fissile Materials Disposition
P.O. Box 23786
Washington, DC 20026-3786

Dear Sir or Madam:

Thank you for the opportunity to comment on the draft Programmatic Environmental Impact Statement (PEIS) for the Storage and Disposition of Weapons-Usable Fissile Materials (DOE/EIS-0229-D). We have reviewed the document and have the following comments. Our general comments are essentially the same as those presented at the Richland hearing, April 11, 1996, by Max Power, on behalf of Washington Department of Ecology (Ecology).

Governor Mike Lowry set forth five key points during scoping for the PEIS and in the Plutonium Roundtable Forum held in Seattle, October 6, 1995. The five key points were as follows:

- Nonproliferation - Action to convert weapons usable plutonium to forms that discourage weapons use is urgent. The United States needs to be seen as acting forcefully and with public support to assure that this material is not available for reuse in nuclear weapons. The consequences of *not* acting are immense.

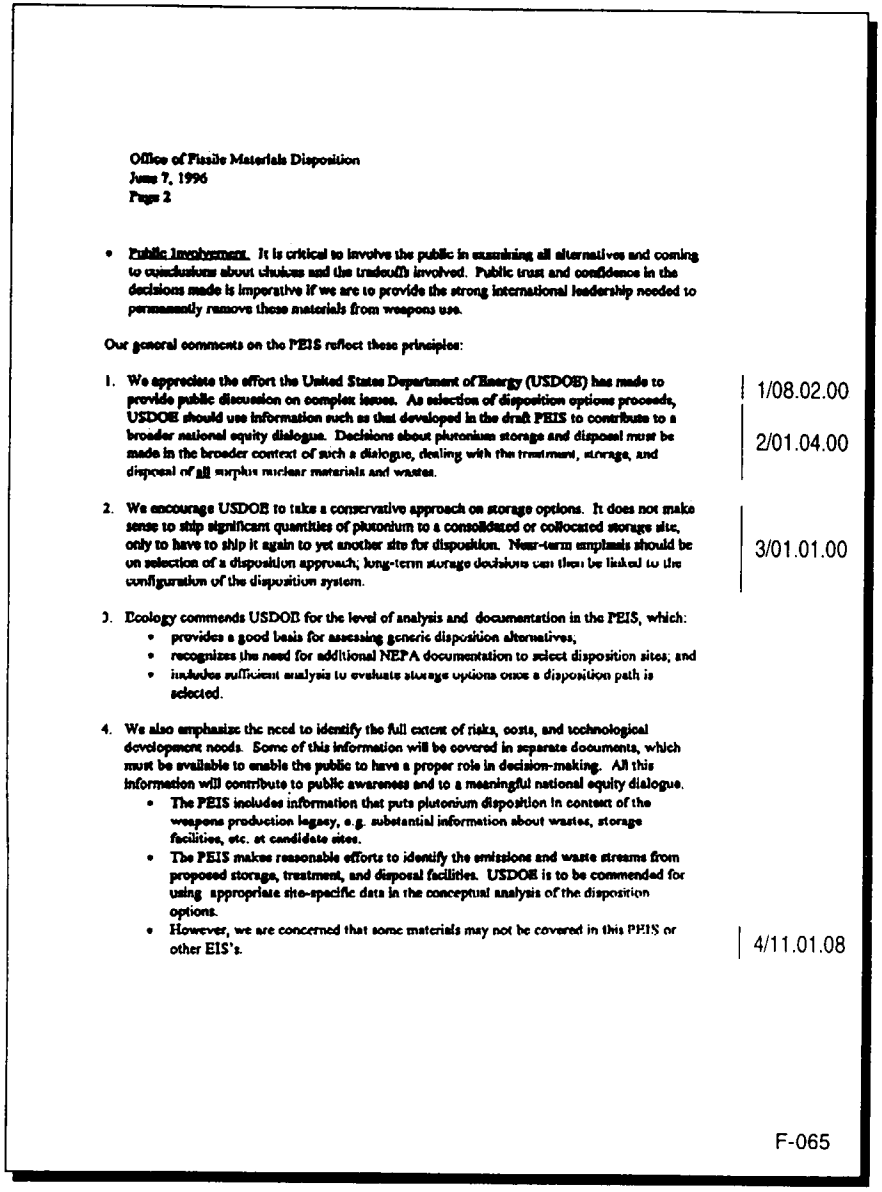
- Equity - All the states and regions of the country benefited from the defense provided by nuclear weapons. Now all need to take an equitable share in the overall costs and risks of closing the circle on production of nuclear weapons material. Washington State has borne more than its share of the costs and risks in the past. We have both expertise and facilities that can help deal with plutonium and radioactive wastes, but we are only willing to play a role if others assume their fair share of the burdens.

- Cleanup Commitments - Washington will not accept additional burdens on Hanford that detract from commitments made or delay the cleanup of the legacy of past contamination.

- Protection of Public Health and Safety - Any action to deal with plutonium must protect the peoples' safety and security as well as the environment, and must minimize risks to workers and the public.

F-065

STATE OF WASHINGTON, DEPARTMENT OF ECOLOGY, OLYMPIA, WA, MARY RIVELAND
PAGE 2 OF 4



Office of Fissile Materials Disposition
June 7, 1996
Page 2

- Public Involvement. It is critical to involve the public in examining all alternatives and coming to conclusions about choices and the tradeoffs involved. Public trust and confidence in the decisions made is imperative if we are to provide the strong international leadership needed to permanently remove these materials from weapons use.

Our general comments on the PEIS reflect these principles:

1. We appreciate the effort the United States Department of Energy (USDOE) has made to provide public discussion on complex issues. As selection of disposition options proceeds, USDOE should use information such as that developed in the draft PEIS to contribute to a broader national equity dialogue. Decisions about plutonium storage and disposal must be made in the broader context of such a dialogue, dealing with the treatment, storage, and disposal of all surplus nuclear materials and wastes. 1/08.02.00 2/01.04.00

2. We encourage USDOE to take a conservative approach on storage options. It does not make sense to ship significant quantities of plutonium to a consolidated or collocated storage site, only to have to ship it again to yet another site for disposition. Near-term emphasis should be on selection of a disposition approach; long-term storage decisions can then be linked to the configuration of the disposition system. 3/01.01.00

3. Ecology commends USDOE for the level of analysis and documentation in the PEIS, which:
   - provides a good basis for assessing generic disposition alternatives,
   - recognizes the need for additional NEPA documentation to select disposition sites; and
   - includes sufficient analysis to evaluate storage options once a disposition path is selected.

4. We also emphasize the need to identify the full extent of risks, costs, and technological development needs. Some of this information will be covered in separate documents, which must be available to enable the public to have a proper role in decision-making. All this information will contribute to public awareness and to a meaningful national equity dialogue.
   - The PEIS includes information that puts plutonium disposition in context of the weapons production legacy, e.g. substantial information about wastes, storage facilities, etc. at candidate sites.
   - The PEIS makes reasonable efforts to identify the emissions and waste streams from proposed storage, treatment, and disposal facilities. USDOE is to be commended for using appropriate site-specific data in the conceptual analysis of the disposition options.
   - However, we are concerned that some materials may not be covered in this PEIS or other EIS's. 4/11.01.08

F-065

08 02 00 **Comment Number 1**

Comment noted.

01 04 00 **Comment Number 2**

Efforts are being coordinated within DOE to ensure that decisions involving related programs and sites are made on an integrated basis. For example, decisions involving Pu storage and disposition, stockpile stewardship and management, environmental restoration and specific activities at given sites are being coordinated. DOE has initiated a national dialogue that will involve State and local governments, Indian tribes, other interest groups, and the general public to provide input on a continuing basis regarding proposed actions and decisions.

01 01 00 **Comment Number 3**

Comment noted. The PEIS analyzes the environmental impacts of various storage and disposition alternatives. Analyses of the cost, schedule, policy, and technology impacts are also being done to support DOE's ROD. DOE's decision will address the overall strategy and path forward for storage and disposition of the various weapons-usable fissile materials.

11 01 08 **Comment Number 4**

A description of DOE's environmental analyses for weapons-usable fissile materials to comply with NEPA is given in Chapter 1 of the PEIS.

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June 7, 1996
Page 3

5. Therefore, we ask USDOE to clarify how--and how much of--Hanford plutonium stock is included.
   - Fig. 1.1.1-1 indicates 1.7 metric tons of Hanford plutonium identified as "surplus." There is approximately another 2.1 metric tons in forms other than spent fuel. Some may be concentrated and become surplus; some may become waste. It is not clear if the latter category, which is explicitly beyond the scope of this PEIS, is included in other programmatic documents. 5/01.00.00
   - The PEIS also needs more explicit discussion about the implications of non-pit forms of plutonium for the configuration of storage, treatment, and disposal options.

In conclusion, the disposal option, or combination of options, selected should:
- minimize overall risk to public and worker health, and to the environment;
- take account of equity among sites and regions;
- not divert resources from or delay cleanup of past contamination at nuclear weapons production sites; 6/01.04.00
- have a clear and reasonable path forward for the development and implementation of technology; and
- accommodate the plutonium metal scrap and other forms that could nonetheless be used in weapons.

Our specific comments relate especially to points 4 and 5, above. There is considerable need for USDOE to clarify what materials are included in the scope of the PEIS, how these materials will be handled as they come into the "surplus" stock to be stored and disposed, and what regulatory regime will govern their transition.

Regulatory Applicability:

Washington State Department of Ecology has concluded that materials which contain Special Nuclear Material (SNM) may be regulated under the Washington Hazardous Waste Management Act (HWMA), under certain conditions. Ecology, therefore, requests further clarification as to the regulations that will govern surplus plutonium and plutonium residues, given that they are no longer needed for their original purposes and have no clearly identified future use.

1. Volume I, Section 1.1.1, and Volume III, Appendix J: USDOE is proposing to immobilize (thermally treat) plutonium (Pu) residues (less than 50% by weight) and transfer those residues to the Hanford Site Solid Waste Management Facilities. The PEIS does not describe the stabilization, concentration, treatment, and storage of Pu residues in sufficient detail to show how USDOE will comply with the state's HWMA. The PEIS should more fully describe USDOE's regulatory approach for Pu residues that are considered waste. 7/09.11.01

F-065

01 00 00 Comment Number 5

The Draft PEIS used 4 t (4.4 tons) as a bounding number for Hanford to analyze the environmental impacts. Of the 4 t (4.4 tons), 1.7 t (1.9 tons) has been declared surplus, and the remainder is largely nuclear energy program materials that are considered weapons-usable.

Weapons-usable fissile materials are not wastes, as defined in the *Solid Waste Disposal Act*, Sections 1004 and 1006. Stabilization and concentration of the Pu residue materials at various sites would be covered under separate NEPA documents, if necessary, as part of the stabilization program under EM.

01 04 00 Comment Number 6

Comment noted.

09 11 01 Comment Number 7

The stabilization of Pu residues is not within the scope of this PEIS. As noted in Section 1.1.1 of the Draft PEIS, the stabilization, concentration, and storage of Pu residues, as well as disposal of non-weapons-usable waste, is covered in other existing and future environmental documents, as appropriate. These include the *Interim Storage of Plutonium at the Rocky Flats Environmental Technology Site Environmental Impact Statement*, the *Interim Management of Nuclear Materials Environmental Impact Statement* (Savannah River Site), the *Plutonium Finishing Plant Stabilization Environmental Impact Statement* (Hanford), the *Solid Residues Treatment, Repackaging, and Storage at the Rocky Flats Environmental Technology Site Environmental Assessment*, and the *Waste Management Programmatic Environmental Impact Statement* (RFETS residues only).

STATE OF WASHINGTON, DEPARTMENT OF ECOLOGY, OLYMPIA, WA, MARY RIVELAND
PAGE 4 OF 4

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June 7, 1996
Page 4

2. Volume I, Section 2.2.1, Hanford Site: The PEIS should discuss the status of the standard being developed for materials that are less than 50% by weight. It is important to know whether USDOE intends to claim the Atomic Energy Act (AEA) exemptions for SNM to exempt this material from being designated as a mixed waste and therefore from external regulation. — 8/09.11.01

3. Volume I, Section 2.2.1, Hanford Site: Further discussion is needed of the Hanford criteria for stabilization of Pu residues and how it differs from the USDOE standard *Criteria for Safe Storage of Pu Metals and Oxides* (DOE-STD-3013-94). — 9/11.01.01

4. Volume I, Section 2.2.1, Hanford Site: No date is given for completion and review of the draft document for *Criteria For Interim Safe Storage of Pu-bearing Solid Materials* for materials with less than 50% by weight of Pu. — 10/11.01.01

Stabilization, Current Storage and Future Interim Storage of Pu Residues:

In the near term, the highest environmental and public/worker exposure risks related to this proposal would result from stabilizing unstable forms of plutonium bearing residues in various facilities throughout the USDOE complex.

1. It is not specifically clear in the PEIS as to how and when these risks are to be addressed under each option. Please provide upgrade costs and schedules for modifications of existing facilities. — 11/07.01.00

2. The Defense Nuclear Facilities Safety Board's (DNFSB) Recommendation 94-1, outlined an aggressive schedule to stabilize these materials in eight years throughout the USDOE complex. The PEIS should address the interaction of the costs and effort needed to prepare and upgrade existing facilities and infrastructure to meet DNFSB 94-1 and additional storage and disposition actions delineated in the PEIS.

3. The PEIS does not fully address the risks to the public, workers, and the environment resulting from the dangerous condition many existing facilities, such as the Plutonium Finishing Plant, are in. — 12/01.00.00

If you have any questions, please call Mr. Max Power with our Nuclear Waste Program at (360) 407-7118, or Mr. Tom Tobb at (509) 736-3020.

Sincerely,

Mary Riveland

Mary Riveland
Director

F-065

09 11 01 **Comment Number 8**

The Criteria for Interim Storage of material with less than 50-percent Pu was completed in November 1995. This is not a standard, like DOE-SOD-3013-94, which applies to material with greater than 50-percent Pu, but is a criteria for the containers to be used for interim storage. Since the material is not considered weapons-usable, it is not within the scope of this PEIS. It is not waste as it does not meet any of the radioactive waste definitions cited in Section E.1.1 of the Draft PEIS or in 40 CFR 261.4a(4) "Source, special nuclear or by-product material as defined by the AEA, as amended, 42 U.S.C. 2011 et. seq." is not solid waste. DOE/EM is currently conducting a number of trade studies to determine the best course of action for the material that does not fall within the scope of this PEIS and does not meet one of the radioactive waste definitions.

11 01 01 **Comment Number 9**

The stabilization of various nuclear materials at DOE sites is under DOE's Environmental Management Program and covered by separate NEPA documents.

11 01 01 **Comment Number 10**

The Criteria for Interim Storage was completed in November 1995 as an addendum to the *DOE Implementation Plan for DNFSB Recommendation 94-1*. Unlike the long-term storage standard, DOE-STD-3013-94, this is not a DOE standard, but criteria for the containers to be used for interim storage of Pu. The criteria applies to the interim storage of material both above and below 50-percent Pu.

07 01 00 **Comment Number 11**

Cost data, along with technical and schedule data, was provided in Technical Summary Reports of both storage and disposition beginning in late July 1996.

01 00 00 **Comment Number 12**

The PFP is included in the PEIS under the No Action Alternative for storage. Hanford has an on-going clean-up program for this facility under EM, and the activities are described in the PFP EIS.

Prepared Comments
Shirley Hankins
Washington State Representative
8th District
April 11, 1996
Richland, Washington

I'd like to thank the Department of Energy for providing this opportunity to deliver comments on the Programmatic Environmental Impact Statement for Storage and Disposition of Weapons-Usable Fissile Materials. Clearly, this is an issue of great magnitude for all citizens of the United States, and especially for residents of the Tri-Cities because of the potential we have for direct involvement with this program.

I'm pleased to be able to provide comments on the management of material that previously had one use, that of nuclear weapons and weapons capability. What a positive course of action for both the United States, the Russian, and other former Soviet Union governments to put this material to a productive use.

With respect to the three options the Department of Energy is analyzing for disposition of surplus plutonium, I would urge the Department to select in whole or part the Reactor Irradiation option.

- This option, which is heavily endorsed by the National Academy of Sciences, offers the most timely method for rendering this material non-usable to terrorist or other threatening countries or organizations.

- Disposal of the surplus plutonium, through the form of Mixed Oxide Fuel, is a proven technology, already used in many reactors throughout the world.

- The use of MOX fuel in U.S. nuclear reactors would allow for the generation of valuable electricity. Imagine, actually putting material once packaged into nuclear weapons to productive use for generating electricity. Government regulation of MOX fuel use would ensure the material is used in a way so that public health and safety are optimally protected.

- Through the DOE's Hanford Site, and the Washington Public Power Supply System, we have the needed infrastructure and capability to fabricate and consume MOX fuel right here, offering the Department of Energy a timely, comprehensive, and efficient manner in which to dispose of surplus plutonium.

I hope the Department of Energy will give serious thought to the reactor irradiation option, and when it comes time to deliver the Record of Decision, that this option will be selected.

Thank you.

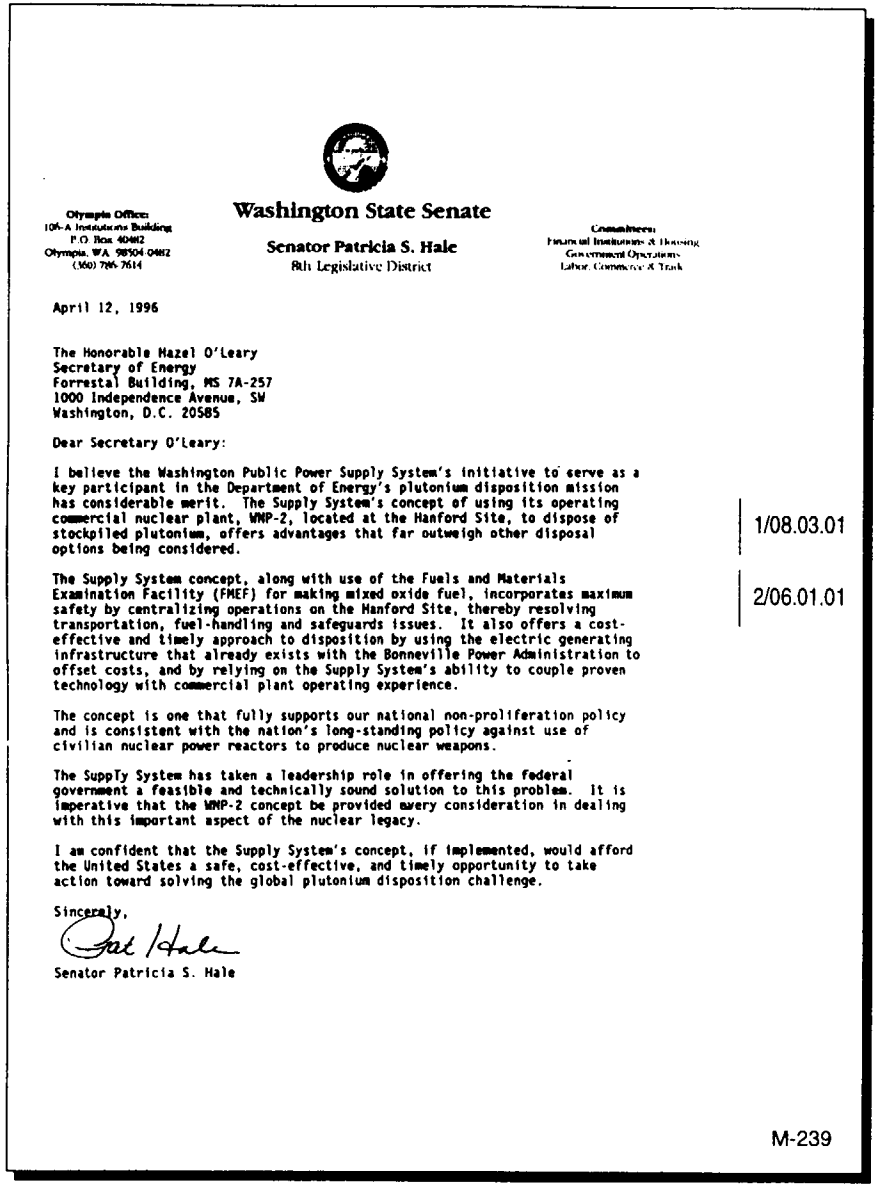
1/08.03.01

WA-017

08 03 01 **Comment Number 1**

The Department of Energy acknowledges the commentor's support for Pu disposition in reactors. Decisions on disposition will be made based upon environmental analyses, technical and economic studies, national policy considerations, and public input.

STATE OF WASHINGTON, STATE SENATOR, OLYMPIA, WA, PATRICIA S. HALE
PAGE 1 OF 1



Washington State Senate

Olympia Office:
105-A Institutions Building
P.O. Box 40482
Olympia, WA 98504-0482
(360) 786-7614

Senator Patricia S. Hale
8th Legislative District

Committees:
Financial Institutions & Housing
Government Operations
Labor, Commerce & Trade

April 12, 1996

The Honorable Hazel O'Leary
Secretary of Energy
Forrestal Building, MS 7A-257
1000 Independence Avenue, SW
Washington, D.C. 20585

Dear Secretary O'Leary:

I believe the Washington Public Power Supply System's initiative to serve as a key participant in the Department of Energy's plutonium disposition mission has considerable merit. The Supply System's concept of using its operating commercial nuclear plant, WNP-2, located at the Hanford Site, to dispose of stockpiled plutonium, offers advantages that far outweigh other disposal options being considered. 1/08.03.01

The Supply System concept, along with use of the Fuels and Materials Examination Facility (FMEF) for making mixed oxide fuel, incorporates maximum safety by centralizing operations on the Hanford Site, thereby resolving transportation, fuel-handling and safeguards issues. It also offers a cost-effective and timely approach to disposition by using the electric generating infrastructure that already exists with the Bonneville Power Administration to offset costs, and by relying on the Supply System's ability to couple proven technology with commercial plant operating experience. 2/06.01.01

The concept is one that fully supports our national non-proliferation policy and is consistent with the nation's long-standing policy against use of civilian nuclear power reactors to produce nuclear weapons.

The SuppTy System has taken a leadership role in offering the federal government a feasible and technically sound solution to this problem. It is imperative that the WNP-2 concept be provided awery consideration in dealing with this important aspect of the nuclear legacy.

I am confident that the Supply System's concept, if implemented, would afford the United States a safe, cost-effective, and timely opportunity to take action toward solving the global plutonium disposition challenge.

Sincerely,

Senator Patricia S. Hale

M-239

08 03 01 Comment Number 1

The Department of Energy acknowledges the commentor's support for new missions at Hanford and the potential utilization of the Washington Nuclear Power (WNP)-2 for Pu disposition. Decisions on storage and disposition of weapon-usable fissile materials will be based on environmental analyses, technical and economic studies, national policy considerations, and public input.

06 01 01 Comment Number 2

The FMEF is considered for use as a long-term storage facility for Pu, and the impacts are included in Section 4.2.1 of the PEIS. For the production of MOX fuel, a generic facility was considered for all six DOE sites. At Hanford, the MOX fuel fabrication facility would be located in the 200-Area adjacent to 200-East. The utilization of the FMEF would be a variant for MOX fuel fabrication at Hanford, which is bounded by the environmental analysis for the MOX fuel fabrication facility located in the 200-Area. Table 2.4–1 of the PEIS provides a brief description for variants which includes "Modification/ Completion of existing facilities for MOX fabrication." The storage options for Hanford also include constructing a new facility. Utilization of FMEF for the Upgrade Alternative would not preclude its use to also support Pu disposition activities for either Reactor or Immobilization Alternatives.

Comment ID: P0039
Date Received: May 8, 1996
Name: Father Jerry Stein
Address: Box 128
Happy, TX
Phone: (806) 558-2871

Transcription:

I want to say very strongly that I disagree that we should have plutonium storage here at Pantex. This is really wrong for the area. It's really wrong for the country. We've got to be making peace with the whole world and not more dangerous material that could make other countries want to build them too, and this agricultural area - an area that water and food - reputation needs to be kept high. Plus needs to be kept clean - all those things. Far into the future, we need to think of the future and future generations of our children and not give them waste - long-term waste - to deal with in an area that's going to be very difficult to do it with winds and strong storms and everything else here. This is not the place and no place needs to have any more of it, so we've got to stop making the stuff. Please for the sake of future generations for the good honor and reputation of our own country, let's stop this now. Thank you. 1/08.03.01

P-039

08 03 01 **Comment Number 1**

The Department of Energy acknowledges the commentor's opposition to new missions at Pantex. Decisions on storage and disposition of weapons-usable fissile materials will be based upon environmental analyses, technical and economic studies, national policy considerations, and public input.

STOCK, SIDNEY, BELLEVUE, WA
PAGE 1 OF 1

Storage and Disposition of Weapons-Usable Fissile Materials Draft Programmatic Environmental Impact Statement (PEIS) Public Comment Form

Name (optional): SIDNEY STOCK
Address (optional): 6223 NARCISSUS WAY S.E. BELLEVUE, WA 98006-2611

Please write down your comments and drop this form in the marked boxes before you leave tonight. These forms will be submitted to the Department of Energy as part of the formal comment on this PEIS. If you are unable to complete this form tonight, written comments can be mailed to:

Department of Energy
Office of Fissile Materials Disposition
P.O. Box 23786
Washington, D.C. 20026-3786

or, you can call this toll-free number to leave comments by phone: 1-800-820-5156. Comments must be submitted by May 7, 1996.

The Department of Energy has identified three types of technologies as options for disposing of weapons-usable fissile materials. The Department has also considered a "no action alternative" which would result in long-term storage of these materials. Please write down your comments on the following three types of options for disposal and the storage option.

1. **Materials Immobilization/Vitrification** - Immobilize fissile materials by mixing them with glass, glass bonded zeolites, or ceramics.

APPEARS MOST REASONABLE - NEED MORE INFO. | 1/08.03.01

2. **Deep borehole disposal** - Materials would be disposed in boreholes at least 2.5 miles deep, in geologically stable formations. Materials could be disposed directly into the deep borehole, or materials could be immobilized first, and then deposited into the deep borehole.

3. **Reactor Options** - Surplus plutonium/highly enriched uranium would be made into MOX fuel for use in nuclear reactors, destroying by fission a major portion of the weapons grade materials.

ARE YOU KIDDING? NO PUBLIC INTEREST GROUP SUPPORTS IT. ONLY VESTED INTEREST GROUPS SUPPORT IT. | 2/08.03.01

4. **Storage Options** - USDOE would continue existing storage practices for weapons-usable fissile materials at current locations and/or consolidate that storage at one or more of the designated sites.

M-233

08 03 01 **Comment Number 1**

The Department of Energy acknowledges the commentor's support for the Vitrification Alternative. Decisions on disposition of weapons-usable fissile materials will be based upon environmental analyses, technical and economic studies, national policy considerations, and public input.

08 03 01 **Comment Number 2**

The Department of Energy acknowledges the commentor's opposition to the Reactor Alternatives. However, NEPA requires that DOE look at all reasonable alternatives, and, therefore, reactor burning must be considered. Decisions on the disposition of weapons-usable fissile materials will be based upon environmental analyses, technical and economic studies, national policy considerations, and public input.

Date: Thu, 2 May 1996

Subject: FORUM Form - incoming

serial_no = 166
MailTitle = FORUM Form - incoming

name = Rich Szempruch
title =
company =
addr1 = 5513 West Sixth Avenue
addr2 =
city = Kennewick
state = WA
zip = 99336
phone = 509 783-3080
fax =
email = richszem@aol.com
ctype = public
subject = Request for Extension of Comment Period

** The following is the text of the Author's Comment.

Based on issues and concerns raised at recent public comments meetings on the PEIS, I too have to voice my opinion that the public comment period is too short. I request that a minimum of 30 days be added to the comment period. 1/08.01.00

Thank you,
Rich Szempruch
END comment

** The folloing is the space reserved for an Offical Reply. If you
** do not wish to reply to this comment then do not change it.
** If you wish to leave a comment then enter it here in the REPLY
** area

End Reply

E-002

08 01 00 **Comment Number 1**

At the request of several organizations and individuals, the public comment period was extended to a total of 92 days.

SZEMPRUCH, RICH, KENNEWICK, WA
PAGE 1 OF 2

Commment on Storage and Disposition EIS:

The scope as defined in the EIS is confusing and appears incomplete. Correcting this may allow individuals to better judge the potential impacts to themselves and potentially involved sites and communities so that intent of the NEPA can be fulfilled. To that end I suggest information regarding the quantities and locations of plutonium addressed in the EIS (and perhaps more important that excluded from this EIS) be included in the EIS, particularly the Summary, and the document be revised to correctly address the scope.

1/01.00.00

The attached figure is a suggested way to accomplish this if the quantities are added to it and scope definitions keyed to the figure. Information on quantities and locations were provided in documents available at public meetings. As a minimum, the lower right hand boxes (locations and surplus, programmatic, and strategic reserve quantities) need to be provided. A cursory examination of this figure shows that LANL has significant plutonium but is not addressed in this EIS even in the No Action alternative. Other flaws in scope logic and completeness exist in this document and are not included in other EIS efforts of the DOE.

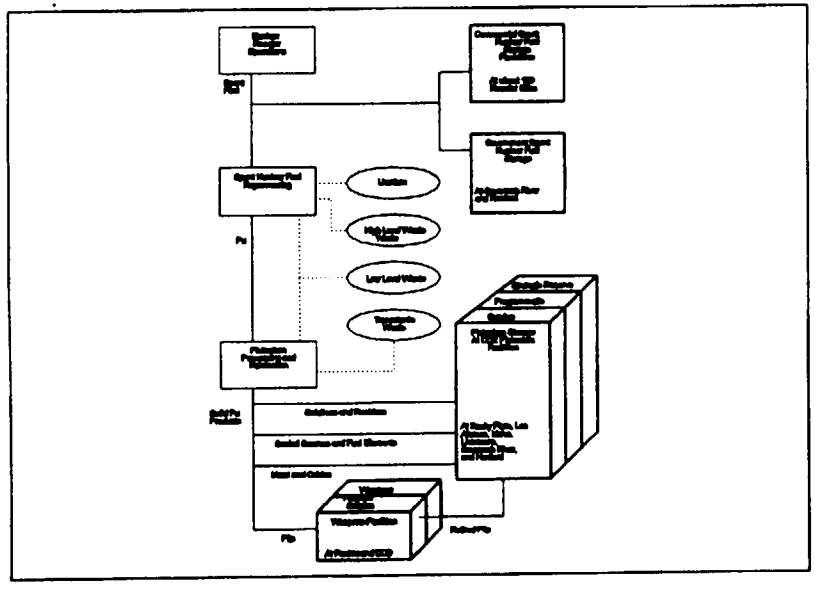
Thank you for consideration of the matter. Should you desire clarification of these comments please feel free to contact me.

Rich Szempruch
5513 West Sixth Avenue
Kennewick, WA 99336
(509) 783-3080

F-059

01 00 00 **Comment Number 1**

Information on the quantities of some weapons-usable fissile materials at various DOE sites is classified. To overcome this problem, the PEIS analyses assumed that the design of storage facilities would accommodate all existing weapons-usable fissile materials. Similarly, the design of Pu disposition facilities would be based on their annual throughput, so that the length of time these facilities are in operation could be adjusted based on the quantities of Pu being processed.



F-059

TENNESSEE VALLEY AUTHORITY, HOLLYWOOD, AL, NICHOLAS C. KAZANAS
PAGE 1 OF 5

Tennessee Valley Authority, Post Office Box 2000, Hollywood, Alabama 35752

May 3, 1996

Mr. J. David Nulton, Director
U.S. Department of Energy
DOE-Office of Fissile Materials Disposition
SAIC-PEIS
P.O. Box 23786
Washington, DC 20026-3786

Dear Mr. Nulton:

Reference: Comments to the Storage and Disposition of Weapons-Useable Fissile Materials Draft Fissile Materials Draft Programmatic Environmental Impact Statement (PEIS) dated February 1996

The Tennessee Valley Authority (TVA) has reviewed the Draft Programmatic Environmental Impact Statement (PEIS) for the Storage and Disposition of Weapons-Usable Fissile Materials. (Storage and Disposition PEIS). Our comments on the various volumes of this document are enclosed and primarily pertinent to partially completed LWR alternatives for the model plant used in the study. In general, we found this document to be well written and informative. Feedback on our comments should be forwarded to Mr. James S. Chardos, P.O. Box 2000, Hollywood, Alabama 35752.

Sincerely,

Nick
Nicholas C. Kazanas
General Manager
Bellefonte Nuclear Plant

Enclosures

M-164

Draft PEIS - Volume I

- **Page 2 - 145**

  Why is the number of potential intersite transportation fatalities for the existing LWR a factor of around three less than the other reactor alternatives? Given the information stated, it would appear they would all be equal. Also, see comments for Page 2-257. — 1/10.02.00

- **Figures 2.5.2-3 and 2.5.2-4 (Water Use and Operation Fatal Cancers)**

  Why are the values for the partially complete reactors so much higher than the similar existing LWR's? All LWR's require the same cooling levels and have similar risks for fatal cancer. — 2/09.04.08, 3/09.09.08

- **Figures 2.5.2-8 and 2.5.2.1-13**

  These figures do not agree in terms of values of solid waste. (Disposition Alternative vs Reactor Alternative) Also, the existing LWR value of zero hazardous waste is not realistic. (Figure 2.5.2.1-13) The stage of construction for the partially completed model used in this study is not properly reflected. (i.e., - concrete work complete) — 4/09.11.08

- **Figure 2.5.2.1 - 10 (Workforce Cancers)**

  Why is incremental workforce fatal cancers for the partially complete LWR almost a factor of four times greater than the existing LWR's? Since both options operate similarly and for the same mission length, the partially complete LWR should be same as existing LWR's. Also, this figure has different values than Table 4.3.5.3.9-2. — 3/09.09.08 cont.

- **Table 2.5 - 2**

  Page 2 - 239 — 5/09.06.08

  For the partially complete model used in this study, there should be no salt drift.

  Page 2 - 241 — 6/09.07.08

  There is no impact to Native American resources for the partially completed model studied similar to the existing complete LWR's .

- **Table 2.5 - 2a**

  Page 2- 245 (Normal Radiological Impacts) — 3/09.09.08 cont.

  The annual dose and the number of fatal cancers to the total public should be same for both existing and partially complete LWR's. These reactors operate in the same

M-164

10 02 00 Comment Number 1

The transportation risk presented in this PEIS is the incremental impacts over current conditions. For existing LWRs, only health risks from the transportation of material to the MOX fuel fabrication site is included since transportation from the fuel fabrication site and spent fuel transportation are already occurring. For the partially completed and evolutionary LWRs, all three transportation steps are included (to the MOX fuel fabrication site, to the reactor, and to the repository). This information is located in Footnotes b and c in Table 4.4.3.3–5 of the PEIS. The PEIS has been modified to show transportation impacts for the MOX fuel to the existing LWRs and not just the increment.

09 04 08 Comment Number 2

The partially completed LWR currently uses no water (nonoperational) and so the increase is much larger than the existing LWR which has no incremental change due to the use of MOX fuel. The absolute water used by the two reactors will be similar but the increment will be much different. The same is true for the radiological impact. However, the increased use of MOX fuel is slight for the radiological impact. The PEIS has been modified to show the absolute values as well.

09 09 08 Comment Number 3

When assessing human health risk, the following are two differences between the partially completed reactors and the existing LWRs:

1) The existing LWRs are already in operation. Any radionuclide releases and radiation exposures for existing LWRs are taken from reactor operating histories. However, the partially completed reactor has never been in operation. Actual radionuclide releases or radiation exposures are not available. Conservatively calculated radionuclide releases and radiation exposures for the partially completed LWR are taken from reactor licensing documents. Compared to the conservative release and radiation exposure estimates in the licensing documents, the actual releases and exposures should be lower.

TENNESSEE VALLEY AUTHORITY, HOLLYWOOD, AL,
NICHOLAS C. KAZANAS
PAGE 3 OF 5

Draft PEIS - Volume I
(Continued)

- **Page 2 - 257 (Intersite Transportation)**

  The difference between incremental potential for existing and maximum potential for partially complete does not make any sense. Since there are currently no transports to any facility whether existing or partially complete, why are the potential fatalities so much higher for partially complete LWR? (5.49 vs 1.39) It would appear that the value for existing and partially complete LWR's should be the same. — 1/10.02.00 cont.

- **Page 3 - 370 (Water Resources)**

  Strike the word "likely" in the fifth line and add "via Town Creek" at the end of the 6th line. — 7/09.04.08

M-164

2) For incremental latent cancer fatalities, the existing LWR is already in operation without regard to the Pu disposition program. The incremental impact is the difference between the potential latent cancer fatalities of existing conditions (operating with UO_2 fuels) and the new actions (continue to operate the existing LWRs with MOX fuels). Section 4.3.5.2.9 of the Final PEIS has been updated to show the incremental and total impact using MOX fuel. For the partially completed LWR, the reactors are not yet in operation. Therefore, there are no radiation exposures from these facilities. Also, if the partially completed reactors are not used for the Pu disposition, the facilities would never be completed. The baseline for the partially completed reactors assumes no radionuclide releases nor radiation exposures. Therefore, partially completed reactors will have a larger incremental health impact relative to operating reactors. The PEIS has been modified to show the projected impacts as well as the incremental impacts for existing LWRs.

These two major factors contribute to the higher latent fatal cancers for partially completed reactors compared to the existing LWRs.

09 11 08 Comment Number 4

Figure 2.5.2.1–13 of the Draft PEIS does not include MOX fuel fabrication facility generated waste since it is only comparing reactors that all use MOX fuel. Figure 2.5.2–8 of the Draft PEIS includes the waste generated from the MOX facility since the comparison is being done to other alternatives that do not use the MOX fuel fabrication process. The zero hazardous waste for the existing LWR in Figure 2.5.2.1–13 of the Draft PEIS is the incremental change for using MOX fuel. None of the figures contain information on the construction impacts. Construction impacts information is presented in Chapter 4. The PEIS has been modified to show the projected waste quantities as well as the incremental quantities for using MOX fuel, and based on comments received, the comparison figures in Section 2.5 of the Draft PEIS have been removed.

09 06 08 Comment Number 5

Information presented on page 2–130 of the Draft PEIS indicates that the Bellefonte Nuclear Power Plant was selected for inclusion as a typical partially completed power plant. The Bellefonte Final EIS (pages 2.5–3 and

Draft PEIS - Volume II

- **Section 4.3.5.3.10 (Waste Management)**

  The data in this section states that the annual fuel discharge from the same size existing PWR's is between 50.7 to 108.5. This section needs to be revised to agree with 4.3.5.2.10 which states that the average existing PWR annual fuel discharge is 48 bundles. This will affect heavy metal content. The differences between the existing and partially complete reactors in terms of annual spent fuel discharge are minimal at best. — 8/09.11.08

- **Figure 4.6.2.5-18 (Annual Volume of Spent Fuel...)**

  This figure shows spent fuel from the two partially completed reactors to be greater than existing LWR's. See above comment on waste management. Also, this figure does not agree with Figure 2.5.2.1-12.

- **Figure 4.6.2.5-12 (Annual Solid Mixed Low Level Waste...)**

  The amount of solid mixed low-level waste should be the same for both the existing and partially complete LWR's since they operate the same.

- **Figures 4.6.2.5-9 and 4.6.2.5-10** — 9/09.11.08

  The liquid low-level waste annual volumes show essentially zero for existing LWR and over 35km³ for partially complete LWR. There appears to be a similar problem with the solid low-level waste differences between existing LWR and the partially complete LWR. The liquid and solid low-level waste values for the existing and partially complete LWR's should be the same given similar operational characteristics.

- **Figure 4.6.2.5-5 (Fatal Cancers to Involved Workforce)**

  The maximum incremental impacts to the involved workforce for the existing and partially complete should be the same. Since these types of LWR's will operate the same for plutonium disposition, the number of incremental fatal cancers should be the same. — 3/09.09.08 cont.

- **Section 4.9/Page 4 - 888 (Avoided Human Health Impacts...)**

  The partially completed LWR alternative should be given credit for avoided impacts. New MOX facilities will have to be completed no matter which reactor alternative is chosen. To apply credit to only the existing LWR's is not correct. — 10/09.09.08

M-164

2.5–4) states that essentially all of the salt drift is expected to fall within 914 m (2,998 ft) of the cooling towers.

09 07 08 **Comment Number 6**

Because the existing LWR is in use, its effects are known. Effects of the partially completed LWR are not. There is a potential for impacts to Native American resources under this alternative associated with infrastructure improvements and facility operation. Although such impacts are unlikely, they cannot be ruled out at this programmatic level of analysis.

09 04 08 **Comment Number 7**

Comment was incorporated.

09 11 08 **Comment Number 8**

The number of fuel assemblies with UO_2 fuel discharged for seven different existing LWR types is 48 assemblies per year (21 t [23.1 tons]). Using MOX fuel increases the number of assemblies by an average of 32 assemblies (14 t [15.4 tons]) as an average of 33, 61, and 3 more assemblies for a CE-R1, CE-R2, and W-ER, respectively. This gives a total of 80 fuel assemblies discharged per year using MOX fuel. For the partially complete LWRs using MOX fuels, the number of fuel assemblies discharged is 81, 109, and 51 for a CE-R1, CE-R2, and W-ER, respectively. Therefore, the range in Section 4.3.5.3.10 is 50.7 assemblies (22 t [24.2 tons) to 108.5 assemblies (47 t [51.7 tons]) but the average is 80 assemblies discharged similar to the existing LWR. Additional information is contained in Data Report *FMDP LWR PEIS*, Rev 3, December 21, 1995.

09 11 08 **Comment Number 9**

Figures 4.6.2.5–9, 4.6.2.5–10, and 4.6.2.5–12 of the Draft PEIS include the incremental low-level and mixed LLW generated by replacing UO_2 fuel with MOX fuel. As stated in Section 4.3.5.2.10, the use of MOX fuel versus UO_2 fuel would not increase the waste generation rate at existing LWR site. The

partially completed LWR using MOX fuel would generate even more waste since none is currently being generated (nonoperational). The PEIS has been modified to show the projected waste quantities as well as the incremental quantities for using MOX fuel.

09 09 08 Comment Number 10

The avoided environmental impacts for the partially completed LWRs were analyzed and documented in the Final PEIS.

Teton Technologies, Inc.

860 W. Riverview Dr.
Idaho Falls, ID 83401
Phone 208-535-9001
Fax 208-529-3955

Email wjq@srv.net

Notegram from
Bill Quapp

Please Deliver To: Public Comment Office Date: June 7, 1996

I recommend that the DOE consider a passive safety storage system such as described on the attached slides. I have conceived and evaluated such project while at the INEL about 1.5 years ago. I believe that the concept has merit and provides unique and substantial safeguards.

1/14.00.00

Since the presentation slides do not tell the story by themselves, I will be happy to convey additional information as requested. Feel free to call me at the above number.

Sincerely,

Bill Quapp

F-056

14 00 00 **Comment Number 1**

Comment noted.

TETON TECHNOLOGIES, INC., IDAHO FALLS, ID,
BILL QUAPP
PAGE 2 OF 9

Passively Secure Plutonium Storage Concept

W. J. Quapp
J. W. Sterbentz
E. L. Shaber
E. P. Stroupe

October 1994

Plutonium:

If you can't move it - it can't be used to produce weapons

F-056

Plutonium Storage Has Specific Functional Requirements

- Safe from diversion risks
- Chemically inert storage environment
- Critically safe under all postulated conditions
- Safe from external events (fire, flood, tornado, earthquake)

Desirable Features of Storage System

- Available technology
- Low cost
- Easily demonstrated
- Easily implemented

Conventional Storage Uses Active Protection to Keep Secure

Based on:
- Need for material accessibility
- Short term storage requirements
- Used temporary storage containers

Passively Secure

- Cast cylinders
- Formed wafers

F-056

TETON TECHNOLOGIES, INC., IDAHO FALLS, ID,
BILL QUAPP
PAGE 4 OF 9

INEL Has Conceived A Passively Secure System that Uses A Massive Container for the Long Term Storage of Weapons Grade Plutonium

- System consists of critically safe, heavy wall, cylinders of borated steel with a cast Pu core
- Cylinders assembled into a robust steel overpack
- The total system is engineered to weigh 50 to 100 tons
- Facilities needed for a process demonstration are already in the DOE complex

INEL Has Performed Nuclear Design Calculations to Determine Criticality Control Requirements

- System will use passive criticality control methods built into crucible alloy
- Container and subassemblies are designed to be subcritical in an infinite lattice
- Vulnerability to physical penetration will be assured by design
- Concept allows storage of Pu in any of several physical or chemical forms

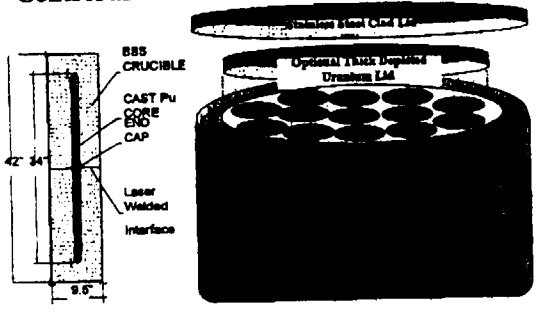
F-056

Preliminary Design Concept for a 50 Ton Inventory

[redacted]

Assembly Diameter (ft)	Number of Subassy's	Assembly Mass (ton)	No of Assemblies
8	80	52	29
10	125	79	19
12	180	110	13

Concept Uses a Critically Safe Cylinder of Borated Steel for both Nuclear Criticality Control and Diversion Resistance



F-056

TETON TECHNOLOGIES, INC., IDAHO FALLS, ID,
BILL QUAPP
PAGE 6 OF 9

Passively Secure Plutonium Storage Area Provides Physical Security and Satellite Surveillance Access

Storage Concept Provides Security and Safeguards Auditability

- Security is achieved through large mass and robust structure
- Storage can be in open area since diversion would require massive lifting capability or heavy machine tooling
- Open storage allows safety inspections, public scrutiny, and satellite surveillance for compliance with international treaties and safeguards requirements
- Open concept reduces the mystique of plutonium storage
- If activities are initiated to move containers, warning can be assured using satellite surveillance

F-056

International Implementation Offers Substantial Benefits and Ease of Treaty Verification

- Concept does not require any irreversible decision such as mixing Pu with fission products or depleted uranium
- Storage configuration provides security against internal diversion
- Eventual use in power reactors is feasible
- Only the Pu casting requires high technology facility
- Steel components could be fabricated in Russia and create jobs and exportable products

Process Can Be Accomplished on a Timely Basis

- In the U.S. most or all the facility infrastructures are in existence
- Steel for crucibles can be obtained from industry
- Alternatively, recycled steel from low level waste could be used -- probably resulting in a cost reduction
- Demonstration of concept can be performed with minimal development costs and facility preparations

F-056

TETON TECHNOLOGIES, INC., IDAHO FALLS, ID,
BILL QUAPP

In Summary

- Storage concept replaces guards with mass
- Provides intermediate to long-term storage in chemically stable environment
- Requires only moderate facility upgrades to accommodate process demonstration
- Makes Pu recovery difficult and easily detectable
- Can be implemented on an international basis to provide secure storage for all sources of plutonium

INEL Would like to Conduct Preconceptual Design Studies

- Develop preliminary design details and perform design optimization studies
- Obtain vendor material and equipment costs
- Evaluate modifications for ANL-West facilities
- Develop unit costs ($/kg-Pu) for various options
  - Cast Pu cylinders
  - Forged wafers
  - Other
- Evaluate vulnerability

F-056

Storage System Components Can Be Demonstrated Using INEL Facilities

- Purchase forged & machined borated steel crucibles
- Melt and cast Pu into crucibles at ANL West
- Seal weld crucibles
- Weld two crucibles together to form large subassembly
- Load subassemblies into storage container
  - weld subassemblies in place
  - weld cover on assembly
- Moved to long term storage area

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TEXAS NATURAL RESOURCE CONSERVATION COMMISSION, AUSTIN, TX, DAN PEARSON
PAGE 1 OF 6

TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

Protecting Texas by Reducing and Preventing Pollution

May 7, 1996

Mr. T.C. Adams
Governor's Office of Budget and Planning
P.O. Box 12428
Austin, Texas 78711

Re: U.S. Department of Energy
Draft Programmatic Environmental Impact Statement(PEIS)/
Storage and Disposition of Weapons-Usable Fissile Materials
TX-R-96-03-28-0002-50-00
Draft PEIS/Stockpile Stewardship and Management/
TX-R-96-03-28-0001-50-00

Dear Mr. Adams:

The Texas Natural Resource Conservation Commission (TNRCC) has reviewed the above-referenced Draft PEISs, and our technical review comments are enclosed. The joint comments of the State natural resources trustees are also enclosed.

The TNRCC is concerned that both PEISs should include greater evaluation of risks posed by the alternatives proposed. The PEIS addressing the storage and disposition of weapons does not, but should, consider migration of liquid or solid contaminants and a general worst-case release scenario in case of an accident. The PEIS addressing stockpile stewardship and management does not consider risks from exposure to hazardous chemical releases to water and soils or from a complete phase-out of the Pantex facility. The TNRCC also recommends that the Department of Energy (DOE) share regulatory oversight with another federal or state agency, to minimize the management problems that have caused problems at DOE facilities in the past.

Thank you for the opportunity to participate in this review process. I believe these comments will assist the DOE in considering use of the Pantex facility. If you have any questions regarding these comments, please feel free to contact Mr. David Duncan, Director, Intergovernmental Relations Division, at (512) 239-3510.

Sincerely,

Dan Pearson
Executive Director

F-039

REVIEW COMMENTS
STORAGE AND DISPOSITION OF WEAPONS-USABLE FISSILE MATERIALS
DRAFT PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT (EIS)
TEXAS NATURAL RESOURCE CONSERVATION COMMISSION (TNRCC)
OFFICE OF WASTE MANAGEMENT
April 29, 1996

Exposure Modeling -
The MELCOR Accident Consequences Code System (MACCS) model was limited to examining contaminant transport and exposure via atmospheric dispersion. No exposure modeling was conducted for migration of contaminants in liquid and/or solid phases. For instance, the perched aquifer has been contaminated as a result of wastewater discharges to the ditches and playas, not by air emissions. In addition, the accident scenarios do not account for management error, although human error is identified by DOE as a hazard during the safety design process, or for accidental release of hazardous and/or radiological wastes. — 1/09.09.04

Accident Impacts
Considering the value of the Ogallala aquifer, the TNRCC requests that DOE include in its evaluation the impacts/risks of a worst case release to the environment and the state's ability to recover, should such an accident occur. As presented in the PEIS, DOE has diluted the stated risks by factoring in the probability of the accident occurring. The TNRCC requests that the accident probability not be factored into the risk. — 2/09.09.04

Regulatory Oversight of Radioactive Constituents -
Although all surface water discharges will reportedly be monitored and subject to NPDES requirements, the TNRCC notes that no radiological water quality parameters are specified in TNRCC Permit No. 02296, which corresponds to NPDES Permit No. TX0107107. These parameters are of particular interest to the state, considering the potential for waste releases from the proposed Pu conversion processes. The TNRCC requests that DOE take action which will enable the State of Texas to legally monitor and regulate radioactive constituents.

The TNRCC would be more willing to accept plutonium conversion processes within the State of Texas if DOE would actively champion external regulatory oversight for radioactive source, special nuclear or byproduct material. It is our understanding that many of the serious problems DOE facilities are facing today occurred as a result of management problems and conflicting missions, rather than lack of technical expertise. It is our opinion that these sorts of errors can best be minimized if the oversight is shared with a regulatory agency outside of DOE. — 3/01.00.00

If you have any questions regarding these comments, please contact Mr. Geoffrey Meyer, Industrial and Hazardous Waste Division, Federal Facilities Team, at (512) 2577.

F-039

09 09 04 Comment Number 1

The MACCS code does not calculate water-pathway exposures. However, if an accident occurs, radioactive air emissions would be the immediate concern and dominate the human health impact. Other pathways such as a liquid release may be a concern after an accident. However, the potential impacts are delayed and the magnitude of the impacts is smaller since it takes time for radioactivity to reach to an aquifer, following a release, and be consumed by or exposed to humans, animals, or plants. This is particularly true for Pu, which has slower migration characteristics in unsaturated and saturated soils, delaying its transport to an aquifer.

The accident scenarios were developed based on applicable information including Safety Analysis Reports, NEPA documents and related backup information, DOE's safety surveys, and discussions with experts familiar with potential accidents for facilities and operations evaluated in this PEIS. The accident scenarios were developed to yield the maximum, or bounding, consequences to cover all potential accidents initiating events.

09 09 04 Comment Number 2

If an accident were to occur, radioactive air emissions would be an immediate concern and would be closely monitored to determine the potential for any human health impacts. Although other pathways such as liquid releases are also a concern, they may not be apparent until some time after an accident. As a result, their impacts would be delayed. There would be more time to take corrective action, and the magnitude of the impacts would be much smaller. This is because it takes substantially more time for contaminated liquids to reach an aquifer and then be consumed or come in contact with humans, animals, or plants. This is particularly true for Pu which has slow migration characteristics into unsaturated soils, thereby further contributing to a long delay of a liquid release reaching an aquifer.

When analyzing an anticipated accident, both the consequences and the frequency of the accident occurrence are considered. If an accident occurs, the consequences include the identification of potential human impacts. The accident frequency reflects the probability that an accident will occur. Both the consequences and the probability need to be presented in the PEIS so that

TEXAS NATURAL RESOURCE CONSERVATION COMMISSION, AUSTIN, TX, DAN PEARSON
PAGE 3 OF 6

REVIEW COMMENTS
ADDENDUM
STORAGE AND DISPOSITION OF WEAPONS-USABLE FISSILE MATERIALS
DRAFT PROGRAMMATIC EIS
Geoffrey Mayer
May 3, 1996

The acceptable lifetime cancer risk under the TNRCC corrective action process is between 1x10-4 and 1x10-6 (one in ten thousand and one in a million). According to Table 4.2.4.9-1, the estimated risk of cancer fatalities for the public under the No Action and Storage Scenarios is between 7.9x10-6 and 2.4x10-11. The following plutonium disposition alternatives/subalternatives have estimated cancer risks for the public that exceed the maximum risk of 1x10-4 under normal operations at Pantex (Chapter 4):

Direct Disposition - Deep Borehole
MOX Fuel Fabrication Facility

The following plutonium disposition alternatives/subalternatives have estimated cancer risks for the site workers that exceed the maximum risk of 1x10-4 under normal operations at Pantex (Chapter 4): 4/09.09.04

Pit Disassembly/Conversion Facility
Plutonium Conversion Facility
Deep Borehole Complex
Ceramic Immobilization
Vitrification
Electrometallurgical Treatment
MOX Fuel Fabrication Facility
Evolutionary Light Water Reactor

Workers involved in the storage of plutonium at upgraded facilities, consolidated plutonium storage facilities, and facilities that collocate plutonium with HEU have an estimated fatal cancer risk on 5.0x10-3.

F-039

the public and the decisionmaker can put the risk of each alternative into proper perspective.

01 00 00 Comment Number 3

Comment noted. DOE is committed to operating its facilities in full compliance with applicable regulatory requirements.

09 09 04 Comment Number 4

The cancer risks for the MEI of the public for the deep borehole and MOX fuel fabrication facility are 3.1×10^{-10} to 1.6×10^{-5} (generic site) and 5.6×10^{-8} (Pantex) during facility lifetime normal operation. However, worker radiological exposures are regulated by annual dose limits. For the workers involved in the proposed disposition actions, the maximum radiation dose is 810 mrem/yr (large evolutionary LWR). This dose is below DOE's administrative control limit of 2,000 mrem/yr (DOE/EH 0256T) and the Federal limit of 5,000 mrem/yr (10 CFR 835). It is DOE's policy to practice ALARA and keep worker exposures below their administrative control limit.

REVIEW COMMENTS
STORAGE AND DISPOSITION OF WEAPONS-USABLE FISSILE MATERIALS
DRAFT PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT (EIS)
Texas Natural Resource Conservation Commission (TNRCC)
Office of Air Quality
April 30, 1996

Our review was limited to Pantex Plant and only with regard to air quality impacts of nonradiological pollutants:

- There is no significant difference in the No Action Alternative and Storage at Pantex Alternative.
- No increase in toxic/hazardous air pollutants is anticipated under the no action alternative..
- Estimated operational concentrations of pollutants are provided in Table 4.2.4.3-1 in the PEIS. It is not clear how the emissions were estimated. Neither TNRCC nor the DOE operates monitors at Pantex for criteria pollutants (Ozone, Carbon Monoxide, Sulfur Dioxide, Nitrogen Dioxide, and Lead), except for respirable particulates of 10 microns or less in diameter (PM10). — 5/09.03.04
- Table 4.2.4.3-1 provides an annual average value of 8.73 micrograms/m3 and 24 hour average of 88.5 micrograms/m3 as estimated concentrations of PM10 for No Action Alternative. Storage alternative increases both values slightly. These numbers vary considerably from monitored levels. The highest annual average of monitored values is 22 micrograms/m3 (versus 50 micrograms/m3 standard), and the highest 24-hour average of monitored values is 270 micrograms/m3 (versus 150 micrograms/m3). — 6/09.03.04
- Since TNRCC started monitoring at Pantex in September 1992, we have recorded five exceedances of the PM10 24-hour standard at Pantex, the highest of which was 353 micrograms/m3 in January 1996.
- The same holds true for Total Suspended Particulates (TSP). The table indicates that no sources are indicated for TSP. However, we recorded two very high readings in 1993 at 650 and 461 micrograms/m3. Since there are no national standards for TSP, TNRCC has stopped analyzing filters for TSP. — 6/09.03.04 cont.
- Methylene Chloride is the only toxic pollutant that exceeded the effects screening levels established by the TNRCC Toxicologists. However, it was determined that no long-term health impacts are to be expected from this one time event.
- It is to be noted that the PM10 exceedances were recorded on days when blowing dust was present or some dirt moving activity was taking place close to the monitoring station. In the Consolidation Alternative, the PEIS makes a statement that appropriate control measures would be followed to minimize pollutant concentrations (PM10 and TSP) during construction. This should satisfy TNRCC requirement for protecting public health and welfare. — 7/09.03.04

If you have any questions regarding the above comments, please contact Mr. Joe Panketh, Office of Air Quality, Ambient Monitoring Section, at (512) 239-1656.

F-039

09 03 04 **Comment Number 5**

Concentrations of air pollutants for the No Action Alternative presented in Table 4.2.4.3–1 are provided by Pantex. These concentrations are based on modeling of recent emissions data. Emission data is routinely assembled by Pantex and presented to the Texas Natural Resources Conservation Commission (TNRCC) in the quarterly *Air Quality Assessment Program-Pantex Nuclear Facility Ambient Air Monitoring Quarterly Report*. As described on page 3–6, the baseline air quality of the affected environment is based on model-predicted pollutant concentrations for existing sources using concentrations presented or by modeling recent emission data. The emissions data for Pantex are from an inventory completed in 1994 for DOE. TNRCC, in cooperation with DOT, operates several air quality monitoring stations at Pantex. The measured pollutants include particulate matter less than or equal to 10 microns (PM_{10}), hydrogen fluoride (HF), and organic pollutants such as volatile organic compounds (VOCs).

09 03 04 **Comment Number 6**

Concentrations of air pollutants for the No Action Alternative presented in Table 4.2.4.3–1 are provided by Pantex. These concentrations are based on modeling of recent emissions data. Emissions data is routinely assembled by Pantex and presented to TNRCC in the quarterly *Air Quality Assessment Program-Pantex Nuclear Facility Ambient Air Monitoring Quarterly Report*. The emissions data for Pantex are from an inventory completed in 1994 for DOE. The PM_{10} concentrations represent the maximum estimated concentration of PM_{10} based on a 500, 1,000, and 2,000 weapons level of activity and scenarios which include the burning of 45.36 kg (100 lb) and 362.88 kg (800 lb) of high explosives. The PM_{10} monitoring data from TNRCC monitors at Pantex were not used since these data do not reflect the anticipated future level of activity at the site.

09 03 04 **Comment Number 7**

It is assumed in the PEIS, that all Federal, State, and local environmental regulations and guidelines would be met during construction and operation of the various facilities, and that standard industry-accepted mitigation control measures would be utilized. Particulate matter control measures may include watering of exposed areas and roads as may be required by TNRCC.

TEXAS NATURAL RESOURCE CONSERVATION COMMISSION, AUSTIN, TX, DAN PEARSON
PAGE 5 OF 6

Texas Natural Resource Conservation Commission

TO: Sidney Wheeler, Intergovernmental Relations DATE: May 3, 1996

FROM: Ginny King, TNRCC Natural Resource Trustees Program (NRTP)

SUBJECT: Joint Trustee Comments to the "Stockpile Stewardship and Management" and "Disposal of Weapons-Usable Fissile Materials" Environmental Impact Statements for the Pantex Superfund Site

As Lead Administrative Trustee (LAT) on behalf of the State Trustees, Texas General Land Office (TGLO), Texas Parks and Wildlife (TPWD), and Texas Natural Resource Commission (TNRCC), this memo is written to provide the State Trustees' comments on the "Stockpile Stewardship and Management EIS " and the "Storage and Disposal of Weapons-Usable Fissile Materials EIS" for the Pantex Superfund Site.

The Trustees for the State of Texas strongly support the President of the United States and the Department of Energy (DOE) in the unilateral efforts to reduce the number of armed nuclear warheads worldwide. We further recognize the difficult responsibility of storing and stockpiling the Nation's disassembled nuclear weaponry. However, the DOE is one of the Federal Trustees for natural resources and has the responsibility of protecting those natural resources from injury on behalf of the public.

The Trustees have concerns with the Storage and Disposition of Fissile materials at the Pantex Superfund site due to the natural resources associated with this site. The Pantex site overlies one of the most pristine groundwater resources in the United States, the Ogallala aquifer. As a pristine natural resource, it is worthy of much protection. Former waste management practices at the Pantex facility have generated a perched aquifer that is not consistent across the site but is present in the Zone 11 and 12 areas. The Trustees understand that to date, the extent of the perched aquifer has not been determined. We further understand that discharges of wastewater are not directly discharged into the perched aquifer; however, the connection of the discharge areas to the perched aquifer and eventually to the Ogallala has not been established. This perched aquifer is contaminated with several hazardous substances. The proposed constructions of the Pit Disassembly Conversion facility, Plutonium (Pu) conversion facility and MOX fuel facility cause great concern among the Trustees. The proposed locations for these facilities are all within Zones 11 and 12 which overlie the perched aquifer. The potential for this perched aquifer to be further contaminated exists as a result of these proposed operations, which increases the potential for injury to the Ogallala. 8/09.04.04

The potential for Playa 1 to be further contaminated is another concern. The Playas may be a potential recharge source for the perched aquifer which may be a source of recharge for the Ogallala. In addition, the Playas are surface water resources for many aquatic and terrestrial, vertebrate and invertebrate species. Therefore, the Pantex site contains many natural resources that have the potential to be injured as a result of the proposed DOE practices. 9/09.04.04

F-039

09 04 04 Comment Number 8

Waste/hazardous material treatment/handling operations are regulated to minimize the potential for releases of hazardous substances to the soil or surface water which could then migrate to the groundwater.

09 04 04 Comment Number 9

Wastewater discharge to Playa 1 is regularly monitored for specific parameters under a National Pollutant Discharge Elimination System (NPDES) permit issued by the TNRCC. The actions proposed in the PEIS are not expected to have an effect on the quality of wastewater discharged to Playa 1 and, therefore, are not expected to have an effect on the perched or Ogallala Aquifer.

Memo Re: Joint Trustee Comments to the Pantex Draft EIS
Page 2

Although the surface water discharges will reportedly be monitored and subject to NPDES permit requirements, the Trustees note that no radiological water quality parameters are specified in the TNRCC permit no. 02296, which corresponds to NPDES Permit NO. TX0107107. These parameters are of particular interest to the Trustees, considering the potential for waste releases from the proposed Pu conversion processes. The Trustees understand that many of the serious problems DOE facilities are facing today are as a result of management problems and conflicting missions rather than lack of technical expertise. It is the opinion of the Trustees that errors of this nature can be minimized if the oversight is shared with a regulatory agency outside of DOE. The Trustees request that DOE initiate action which will enable the State of Texas to legally monitor and regulate radioactive constituents.

Considering the value of the Ogallala aquifer, the Trustees request that DOE include in its evaluation, the impacts of a worst case release to the environment and the ability of the Panhandle of Texas to recover, should such an accident occur. Under this scenario, the accident probability would be set at one, rather than the typical one in 10,000 or 10,000,000. | 2/09.09.04 cont.

It is the understanding of the Trustees that a Treatability study of the contaminated perched aquifer is ongoing at the Pantex site. We further understand that this study has been successful and several thousand gallons of "clean water" are being generated as a result of this treatment. If the new Pu facilities are constructed in Zone 12, the Trustees recommend the utilization of this treated water for the Pu process rather than impact the water supply of the Ogallala. This would insure further protection of a natural resource on behalf of the public. | 10/09.04.04

The DOE should consider both short term and long term protection strategies for the Ogallala aquifer. The Trustees recommend that DOE include the natural resource Trustee agencies in the evaluation of minimizing injuries to natural resources and potential candidate areas for restoration when residual injury remains. | 11/09.04.04

cc: Richard Seiler, Manager, NRTP TNRCC
Don Pitts, TPWD
Diane Hyatt, TGLO
Bob Short, USFW Arlington
Steve Spencer, DOI
Ron Gouguet, NOAA CRC Region 6
Geof Meyer, RCRA TNRCC

F-039

09 04 04 Comment Number 10

The Department of Energy will consider reuse of this treated groundwater for any potentially beneficial uses. However, re-injection (to the perched aquifer) of this treated water may be necessary for optimal performance of the groundwater treatment system.

09 04 04 Comment Number 11

It is DOE's opinion that the opportunity to comment on this and other documents relating to potential activities at Pantex includes the Trustee agencies in the evaluation of potential environmental impacts. DOE will continue to work with the State Trustee agencies on compliance and restoration activities, and protection strategies for the Ogallala Aquifer.

TEXAS TECH UNIVERSITY HEALTH SCIENCES CENTER, AMARILLO, TX, ARTHUR A. NELSON
PAGE 1 OF 2

TEXAS TECH UNIVERSITY HEALTH SCIENCES CENTER at AMARILLO

School of Pharmacy
Office of the Dean

1400 Wallace Boulevard
Amarillo, Texas 79106
(806) 354-5465
FAX (806) 354-5549

April 10, 1996

U.S. Department of Energy
Office of Reconfiguration
P.O. Box 3417
Alexandia, Virginia 22302

U.S. Department of Energy
Office of Fissile Materials
P.O. Box 23786
Washington, DC 20026

RE: Comment on Stockpile Stewardship and Management (SSM) and Storage and Disposition (S&D) of Weapons-Usable Fissile materials Draft Programmatic Environmental Impact Statements (PEISs)

Thank you for this opportunity to comment on the U.S. Department of Energy's (DOE) Programmatic Environmental Impact Statements (PEISs) on Stockpile Stewardship and Management (SSM) and Storage and Disposition (S&D) of Weapons-Usable Fissile Materials. These comments are also directed toward the Pantex Site-Wide Draft Environmental Impact Statement, as most issues addressed in both these documents are identical.

Texas Tech University Health Sciences Center School of Pharmacy fully supports the retention and expansion of the Pantex facility as a storage, processing and component fabrication complex with capabilities for non-nuclear manufacturing and also research, development and testing. Pantex has been an integral part of this community for more than forty years, and has done so as a safe and environmental "clean" complex. There is every reason to believe that the facility would continue operating in such a manner. Pantex has been a pivotal force in expanding the economic base of the Panhandle from agrarian to industrial. As part of the community of Amarillo, we at Texas Tech University Health Sciences Center at Amarillo, depend on the socio/economic impact Pantex provides our area. 1/08.03.01

I am pleased that the DOE selected Pantex as the preferred alternative for assembly/disassembly. It is hopeful that Pantex will also be recognized as the preferred candidate site for new and/or consolidated stockpile management facilities. Pantex is the best site for maintaining the integrity of the U.S. nuclear stockpile because of maximum efficiencies and cost savings.

Labor cost, utility rates and water and land availability at Pantex make it the best site and perhaps the most cost-effective alternative for any new construction of SSM facilities. As an alternative site for all future defense-related facilities, Pantex would complement activities at the national

M-041

08 03 01 **Comment Number 1**

The Department of Energy acknowledges the commentor's support of Pantex. Decisions related to future missions at Pantex will be based upon environmental analyses, technical and economic studies, national policy considerations, and public input.

labs (such as the planned Atlas Facility and plutonium pit fabrication site at Los Alamos National Laboratory). Additional defense-related activities at Pantex would ensure that core technical capabilities are preserved at a location that can secure them at the most efficient cost. The DOE should insist that, in its deliberations, budgetary comparisons between Pantex and the other sites are accurate and include capital, transportation, training, remediation and other costs.

The high explosives (HE) functions should also remain at Pantex in conjunction with the assembly/dissassembly functions. HE capabilities must be retained to process the inventories on site from dismantling. This is also the least expensive alternative. Transfer of HE functions away from Pantex would cost between $40 and $50 million. Should future need arise for new weapon production it would be critical to have the HE facility at the weapons production/assembly site.

Pantex currently safely stores more than 8,000 surplus pits and plans are being made to ship additional pits from Rocky Flats to Pantex. I does not make sense to re-create storage facilities at another site and transport large amounts of plutonium across the country.Pantex should be designated the preferred site for any disposition options and related functions. Pantex could continue to store plutonium which is already on site and upgrade facilities for any and all storage options by DOE with minimal cost. It makes budgetary and policy sense to site disposition where storage already exists. Pantex already has the necessary safety , security and surveillance capabilities to accommodate an expanded role and is the production site closest to Los Alamos, the planned pit fabrication site.

1/08.03.01
cont.

I respectfully request DOE to designate Pantex as the preferred alternative site for all existing and new stockpile management and stewardship functions as well as consolidation of all plutonium storage and disposition and any related functions.

Thank you for the opportunity to comment on these documents.

Sincerely,

Arthur A. Nelson, R.Ph., Ph.D., Dean

M-041

THOMAS J. WATSON RESEARCH CENTER, YORKTOWN HEIGHTS, NY, RICHARD L. GARWIN PAGE 1 OF 2

From rsa@watson.ibm.com Mon Apr 8 14:21:26 1996
Date: Mon, 08 Apr 1996 14:18:52 -0400 (EDT)
From: "Jean Hernandez (Secretary to R.L. Garwin)" <rsa@watson.ibm.com>
Subject: 04/08/96 Letter R.L. Garwin to President Bill Clinton.
To: president@WhiteHouse.GOV
Reply-to: RSA@watson.ibm.com
Message-id: <01I3AVO0VFZ800007K@STORM.EOP.GOV>

Richard L. Garwin
IBM Fellow Emeritus
Thomas J. Watson Research Center
P.O. Box 218
Yorktown Heights, NY 10598-0218
(914) 945-2555
FAX: (914) 945-4419
INTERNET: RLG2 at watson.ibm.com

April 8, 1996

President Bill Clinton
The White House
1000 Pennsylvania Avenue
Washington, DC 20500

Dear Mr. President:

I am writing to support enthusiastically the letter to you of 03/19/96 from John Ahearne, Floyd Culler, Paul Doty, Richard Kennedy, Piet Panofsky, and Nobel Prize winner Glenn T. Seaborg to hasten and reinforce the program for protection and disposition of excess weapon-usable fissile materials.

At Los Alamos during the 1950s and 60s I helped design, build, and test nuclear and thermonuclear weapons. Over the decades, I have also been a member of U.S. teams and backup groups for the negotiation of limitations on nuclear weapons and on their testing.

Now at a time of historic agreement with the Russian state, we are frittering away a golden opportunity not only to get rid of vast numbers of Russian nuclear weapons, but also of the material to make them. What we need now is Presidential leadership that will

1. Inspire DOE to move forward with actual project-oriented programs to burn excess plutonium in existing U.S. reactors (without endorsing the reprocessing of nuclear fuel to obtain further plutonium) as well as to vitrify a portion of the excess weapon plutonium. 1/08.03.01

E-008

08 03 01 Comment Number 1

The Department of Energy acknowledges the commentor's support of the Reactor and Immobilization Alternatives. Decisions on disposition of weapons-usable fissile materials will be based upon environmental analyses, technical and economic studies, national policy considerations, and public input.

2. Establish in law a national priority to proceed with plutonium disposition, making an explicit statement to utilities, regulatory authorities, and others that this is the policy of the United States, in the interests of U.S. national security. 2/15.00.00

3. Support DOE's request for plutonium disposition activities, while directing that at least 15% of the

3/01.03.00

total should be expended on programs in Russia, to ensure that disposition of Russian excess weapon plutonium can be accomplished together with disposition of U.S. plutonium.

4. Increase funding for material protection, control, and accounting. 2/15.00.00 cont.

5. Lead a Comprehensive approach to controlling nuclear smuggling.

6. Redouble the focus on nuclear transparency to ensure that the U.S. has an insight into actual Russian activities, and that Russia has similar insight into U.S. stockpiles and disposition activities, in order to quell Russian internal propaganda. 3/01.03.00 cont.

7. Show that reinventing government works in DOE in going beyond openness to effective action.

I was in Beijing in February and Moscow in March, and I know how much U.S. leadership is necessary in this field. We are way behind where we should be in avoiding this threat to our national and international security, and I urge you to act both in Washington and at the nuclear summit in Moscow.

Sincerely yours,

Richard L. Garwin

cc:
B. Clinton, DC. (Via Email to president at whitehouse.gov)

RLG:jah:V099BC:040896..BC

15 00 00 **Comment Number 2**

Comment noted.

01 03 00 **Comment Number 3**

Comment noted.

THOMAS, ANITA, POCATELLO, ID
PAGE 1 OF 1

Comment ID: P0021
Date Received: April 18, 1996
Name: Anita Thomas
Address: 3559 Conlin Road
Pocatello, ID
Phone: 208-238-1696

Transcription:

I believe that it would be a very good idea to use the plutonium to generate energy in a nuclear reactor before disposing of it. Thanks. | 1/08.03.01

P-021

08 03 01 Comment Number 1

The Department of Energy acknowledges the commentor's support for Pu disposition in reactors. Decisions on disposition will be made based upon environmental analyses, technical and economic studies, national policy considerations, and public input.

To Whom It May Concern
(1-800-820-5156)

May 6, 1996

From L.B. Thomas
3409 Pickard Ave. NE
Albuquerque, NM 87110

Subject: Storage and Disposition of Weapons-Usable Fissile Materials Draft Programmatic Environmental Impact Statement Comments

I wish to present the following comments:

1) What is the legal reason HEU and Pu pits are not considered a solid waste under 40 CFR 261.2 (a)(1), (a)(2), (a)(2)I, (a)(2)ii, (a)(2)iii, (2)(b), (2)(b)1, (2)(b)2, (2)(b)3, (2)(c), (2)(c)(1), (2)(c)(2), 2(d), or 2(e).

2) When do HEU and Pu pits become a solid waste under comment #1's citations.

3) Please provide EPA's opinion on the issue in comment #1. — 1/01.00.00

4) Please provide the US Justice Department's opinion on the issue in comment #1. Further provide State RCRA program opinions of the respective sites.

5) If HEU and Pu pits become solid waste at some point, would the waste be hazardous waste because of lead (Pb) content, D001, and or D003? Or other?

6) If surplus HEU and Pu are not considered solid waste because of the value and potential use in a nuclear weapon or other reason covered under the Atomic Energy Act, what proof does DOE provide that a strategic or surplused HEU or Pu pits can pass recertification back into the stockpile. This EIS does not prove DOE possesses the capability of recertifying HEU and Pu pits during a crisis. Nor does DOE prove recertification and reassembly does not pose a greater risk to workers because of changes to the aging pits through increased radiation output, material fatigue of the casing, or other material related problems. — 2/01.00.00
Further since one of DOE's missions includes providing safe and reliable weapons, what proof does DOE have that a recertified HEU and Pu pit from storage can be safe and reliable? Request DOE be prudent and provide proof or bound the impacts. This issue of DOE's recertification capability is a fatal flaw of this EIS because the DOE lack s "technical maturity" in this area. Further, DOE has not assessed this weakness.

7) DOE's response to Comment #6 should be independently confirmed by EPA, NRC, or other agency.

8) Global comment. DOE states throughout the document the word disposition. I would argue the word should be disposal. Legally speaking isn't the definition of the word disposition defined as the act or the power of disposing or the state of being disposed? If DOE believes what it is doing is not management of a solid waste as defined in 40 CFR 261, and therefore not a hazardous waste, then DOE should state that RCRA does not apply. Further, one of NEPA's purposes is to provide the public with the best available information in plain language. This hopefully allows for easy understanding by the public in complicated actions. Use of the word disposition is not plain language and thus not meeting one of the basic requirements of NEPA. One has to question DOE objectiveness on this issue since declaring pits a solid waste would result in massive non-compliance with RCRA. — 3/01.02.00; 1/01.00.00 cont.; 3/01.02.00 cont.; 1/01.00.00 cont.

9) To further argue the point in comment #8 that DOE plans to do disposal while avoiding requirements under RCRA please note the choice of words used on page 1-3. DOE states "Examples of residue forms — 4/01.02.00

1

Storage and Disposition of Weapons-Usable Fissile Materials Draft Programmatic Environmental Impact Statement-Comments

F-011

01 00 00 Comment Number 1

The *Atomic Energy Act* materials (including special nuclear materials such as weapons-usable fissile materials) are excluded from the definition of solid waste under RCRA and its implementing regulations, as stated in the *Solid Waste Disposal Act*, Section 1004. Furthermore, Section 1006 also states that RCRA does not apply to any materials that are subject to the AEA.

All reasonable alternatives for Pu disposition analyzed in the PEIS would generate wastes. The environmental impacts of the various wastes are discussed in Section 4.3 and Appendix E of the PEIS.

01 00 00 Comment Number 2

The purpose and need of the PEIS is to disposition surplus Pu, and under the HEU EIS and ROD, to disposition surplus HEU consistent with the President's Nonproliferation Policy. There is no intent or proposal to "recertify" or convert the materials into weapons once the surplus weapons-usable materials has been dispositioned.

01 02 00 Comment Number 3

The Department of Energy has considered your comment, but believes that "disposition" is plain English, and that "disposal" would be misleading for most disposition alternatives because it connotes direct discard of the material.

01 02 00 Comment Number 4

As explained in the PEIS, some residues after appropriate stabilization will be dispositioned through one of the disposition alternatives. Pu is special nuclear material that is not subject to RCRA as explained in the response to Comment Number 1. Any necessary stabilization or treatment is or will be covered by other DOE NEPA reviews. Treatment or stabilization could result in Pu which would be covered by this PEIS and, as explained above, such Pu is not subject to RCRA.

includes some impure oxides & metals, halide salts, combustibles, ash, sludges, and contaminated glass." These terms are clearly wastestreams. What is DOE's position?

10) To further argue the point in comment #8 please again note the wording on page 1-3. DOE states "portion of the residues will potentially be declared non-weapon-usable waste." This suggests DOE does not know whether it currently manages a solid waste. Thus DOE does not have a good handle on the material because it has not determined certain residues under its management are wastes. What is DOE's position? — 4/01.02.00 cont.

11) Legally what is DOE's position as to why Pu residue stabilization isn't considered RCRA treatment? Please provide the legal citations to defend position. What are the impacts of Pu residue stabilization if it is considered RCRA treatment?

12) Legally what is DOE's position regarding why HEU and Pu is not considered a "scrap metal" or "precious metal" as defined and managed under RCRA? Please provide the legal citations to defend position. — 1/01.00.00 cont.

13) Is it not conceivable that certain HEU and Pu weapon-usable fissile material currently in storage would not meet the current, scientifically prudent, and safety based QA/QC criteria for actual use on a nuclear weapon? Is it not true that this is partially because the DOE regards safety and reliability of utmost importance? A reasonable person could conclude that with or without expensive research into the recertification of old pits or a reduction in the safety and reliability QA/QC criteria, DOE would not successfully recertify dispositioned HEU and Pu pits back into the stockpile. Is it not reasonable to assume DOE would need to totally reprocess the pits or start from scratch (e.g. new production) to assure safety and reliability currently expected by the people of the United States? — 2/01.00.00 cont.

14) When does the storage of HEU and Pu meet the definition of "accumulated speculatively" and "inherently waste-like" occur? Please provide written defense of the position utilizing regulatory citations. — 1/01.00.00 cont.

15) To provide a reasonable response to comment #13. Yes or No, has DOE successfully tested dispositioned pits? For all current programs? Please respond in a classified appendix if necessary.

16) Since DOE does not prove in this EIS that it currently possesses an infrastructure to recertify dispositioned pits, then how can the decision maker effectively address where to put the pits? What proof does DOE provide in this document it has the ability to recertify? Further this connected action of recertification has not been analyzed for impacts to the storage and disposition EIS. Please assess impacts of this connected action? A reasonable person would believe the lack of discussion about the recertification capabilities current and future is a fatal flaw in the document. Also the impacts of restarting a production program has not been addressed (also a connected action) by this EIS should the recertification process fail. Please analyze and discuss the impacts to a new production program restart after a failed recertification program. DOE appears to be placing all its eggs in one basket without recognizing that once it selects storage and disposition there is no way back. — 2/01.00.00 cont. — 5/11.00.08

17) When does surplus fissile material meet the definition of a "solid waste"? Never? — 1/01.00.00 cont.

18) Clearly DOE knows certain HEU and Pu materials are not worth making strategic, what proof does DOE have that strategic reserves could be placed back into the stockpile during a time of crisis? The decision maker needs to know. The free people of the United States need to know whether our freedom is at risk because DOE plans to reduce the deterrence factor without a proven capability of restoring the deterrence if threatened. — 5/11.00.08 cont.

F-011

11 00 08 **Comment Number 5**

The Stockpile Stewardship and Management PEIS, which is referenced as related document in Chapter 1 of this Storage and Disposition PEIS, assesses pit refurbishment, stockpile management, and pit production capabilities.

19) DOE and EPA. What if I just surplused lead-acid batteries to the ground (a form of land disposal like storage) why is my activity considered a violation of RCRA but storage and disposition of HEU and Pu is not? Please provide written defense of your position. — 1/01.00.00 cont.

20) DOE and EPA. If Pu were considered a solid waste would one or all of the following apply: 40 CFR 261.21 (a)(2), 261.21 (a)(4), 261.23(a)(1), 261.23(a)(2), 261.23(a)(3), 261.23(a)(4), 261.23(a)(6)?

21) Why isn't deep borehole and immobilization RCRA treatment/disposal? Please provide a written position using regulatory citations.

22) What is EPA's position on comment #21? — 6/04.00.00

23) Does deep borehole meet the definition of an injection well? Has DOE considered this in the impacts?

24) Reconsider underground nuclear detonation. The test ban treaty might allow the disposition of warheads if no data is collected. Plus one detonation could be used to destroy multiple warheads or even pits. I would believe that Russian verification could be relatively easy.

25) Should consider underground nuclear detonation in Russia as an alternative.

26) Question the accuracy of the DOE statement that underground nuclear detonation might result in a violation of regulatory and licensing requirements? Please tell me what regulatory and licensing requirements would be needed by DOE to disposition pits? — 7/01.05.00

27) Reconsider R12 since the surplus of helium exists. The helium surplus is located near Amarillo-thus a synergistic factor exists that the selection committee was not unaware of. Further, the US government is responsible for the helium reserve and bring a lower solution to DOE.

28) I believe the requirement sections in 2.3.2 and associated subsections neglect a requirement of protecting the HEU and Pu repository from a large meteor and a kook's nuclear bomb. I am concerned DOE would store all the eggs in one basket without a highly protective configuration. Please all consider that the US stores patent documentation in a bomb proof repository. HEU and Pu should be equally protected. — 8/02.00.08

29) At a minimum, please use this material as a fuel for energy recovery, desalination of seawater, or desalination of brine for use in the arid Southwest.

30) Assess an alternative for desalination of salt water with weapon useable fissile material as a source of energy. — 7/01.05.00 cont.

31) Specifically, under what NEPA documentation is the storage and disposition of other materials not included in this EIS covered? How does that relationship impact this document?

32) Assess which facility would be best suited for recertification of fissile material taking into account assembly experience, security infrastructure, storage capabilities, nonproliferation track record, etc. — 5/11.00.08 cont.

33) Please sent me a copy of the Final.

3

Storage and Disposition of Weapons-Usable Fissile Materials Draft Programmatic Environmental Impact Statement-Comments

F-011

04 00 00 **Comment Number 6**

The Department of Energy recognizes that legislative and regulatory clarification may be required. The alternative was assessed even though legal clarification may be required, because the CEQ regulations that implement NEPA require consideration of a range of all reasonable alternatives.

01 05 00 **Comment Number 7**

The screening process and criteria used by DOE to identify reasonable alternatives are summarized in Chapter 2 and in a separate document entitled *Report of the Screening Process to Determine Reasonable Alternatives for Long-Term Storage and Disposition of Weapons-Usable Fissile Materials.* The NEPA coverage of storage and disposition of other materials is described in Section 1.4 of the PEIS. DOE continues to believe that underground detonation is an unreasonable alternative for disposition of fissile materials. Although DOE has considered your comment regarding desalination, the use of fissile materials as an energy source for desalination is indirectly included in the evolutionary LWR technology. The evolutionary LWR could be used for electricity generation or for some other heat or power source for a process such as desalination. Use of Pu for energy is evaluated in the PEIS in the Reactor Alternatives and, if selected in the ROD, licensing and further tiered NEPA analyses would be required.

02 00 08 **Comment Number 8**

Section 2.3.3.1 of the PEIS discusses security for the Collocation Alternative. Under the Collocation Alternative, material storage, material handling, and storage support would be located in a high security, protected area.

THOMPSON, GARY
PAGE 1 OF 2

Comment ID: P0044
Date Received: May 8, 1996
Name: Gary Thompson
Phone: (303) 966-6419

Transcription:

I had planned on faxing this, but I'll try to read it rapidly. First General Comment - We seem to be determined to eliminate our surplus materials, unilaterally if need be, in order to serve as an example to Russia and other nations. We are willing to do so whether or not Russia and other countries follow suit, and I've said this is our intention. We may expect other countries to do what they have said they will do. Keep materials in excess of those amounts needed for defense for use in reactors. Comments on the disposition alternatives - Deep borehole - Considering the amount of money already spent in digging holes in salt into salt and the citizens of the involved states dislike for accepting anything other than the money in creating the holes, this seems to be scant reason to spend time and money on the borehole option. 1/08.03.01

Plutonium immobilization - Most anti-nuclear activists and pacifists see vitrification as a way of preventing the fabrication of nuclear weapons components by the U.S. and weapons proliferation in other nations. While preventing proliferation is an admirable goal, our electing to immobilize plutonium in the hope that others will follow suit is naive. It is every bit as naive as President Carter's decision not to permit reprocessing spent fuel in the United States for the same reason - to serve as a good example to other nations. The United States is the only nuclear power that intends to dispose of plutonium in a waste, rather than use it as fuel. Once again, everyone is out of step in the nuclear parade except Uncle Sam. You can expect the same response from those whom we intend to influence, as they gave before. It would seem that it is too soon for us to rush to dispose of our plutonium in this manner. It would be more appropriate to recover and store it in 50 year cans. 2/01.06.00

To borrow a phrase from our environmentalists and anti-nuclear friends, when any suggestion to do something in the near future with nuclear materials is made, why don't we wait for 20 years, until the new technology has been developed. If we are determined to treat plutonium as waste, it might be worth while to consider the option of immobilizing it perhaps by vitrification and placing it in the ocean in areas so deep that nothing save sediment exists and there's no evidence of life now or in ages past. Among other references, this subject is discussed in the book "Trashing the Planet" by Dick Siluray and Lou Guzo. Given the undying opposition to dispose in New Mexico and Nevada and the fact that only one fourth of the earth is land, sea disposal should be at least worthy of consideration. It would also truly make the plutonium non-retrievable, since finding it and recovering it would be virtually impossible. 3/01.04.00

Mixed Oxide Fuel - The point is often made that the MOX fuel option may not be cost-effective for us now, since we didn't develop fuel reprocessing technology. But what may happen in the future is another matter. Again, it seems to early to transmogrify this element made and recovered at great expense from treasure into trash. Burning it in a reactor would provide energy and transmute the plutonium into shorter lived actinides and fission products. Transmutation is the only way we have at this time to really "get rid of" plutonium. 4/08.03.01

Final Comment - There is no decision that is acceptable to the public. That minuscule number of citizens who care for whatever reason. I would suggest abandoning work on any waste form of surplus fissile material other than vitrification. Properly formulated glass is an excellent waste form and has low leechability and 5/08.03.01

P-044

08 03 01 **Comment Number 1**

The Department of Energy recognizes the commentor's concern with the Borehole Alternatives. Decisions on the disposition alternatives will be based upon environmental analyses, technical and economic studies, national policy considerations, and public input.

01 06 00 **Comment Number 2**

Comment noted.

01 04 00 **Comment Number 3**

The process and justification for selection of technologies evaluated in the PEIS are described in a separate Screening Report prepared by DOE. A number of alternatives involving placement of materials below the earth's surface were considered, including emplacement in the sub-seabed and injection into the earth's magma. There is little data available to support these options and the retention of Pu in these media is questionable. A major concern would be the environmental impacts of any release of Pu materials following emplacement. Furthermore, the time and cost of developing these technologies would be significant and the outcome uncertain. It is expected that regulatory requirements would be extremely difficult to achieve, particularly if international waters were involved. Therefore, these types of technology were eliminated from consideration.

08 03 01 **Comment Number 4**

The Department of Energy acknowledges the commentor's support for Pu disposition in reactors. Decisions on disposition will be made based upon environmental analyses, technical and economic studies, national policy considerations, and public input.

08 03 01 **Comment Number 5**

The Department of Energy acknowledges the commentor's support for the Immobilization Alternative. Decisions on disposition of weapons-usable fissile materials will be based upon environmental analyses, technical and economic studies, national policy considerations, and public input.

dispursibility, and if vitrification is the only politically-correct option, let's stop wasting money digging holes that will not likely be filled and evaluating other unacceptable techniques. Vitrification is expensive, but so is this vacillation from one untenable position to another. Thank you again for this opportunity to comment.

5/08.03.01 cont.

P-044

THORPE, MIGNON S., UPPER MONTCLAIR, NJ
PAGE 1 OF 1

June 5, 1996

U. S. DOE
Office of Fissile Materials Disposition
P.O. Box 23786
Washington, DC 20026-3786

Storage and Disposition of Weapons Usable Fissile Materials: MOX

I most strongly oppose the DOE plan to permit commercial nuclear reactors to use MOX, "mixed oxide", which is largely plutonium and uranium.

MOX presents such dangerous proliferation problems when used in commercial nuclear power plants. The plutonium in MOX can be rather easily separated from its other constituents. The extensive transportation to many parts of the United States and Canada presents many hazards beyond those of accidents releasing radioactivity. It should certainly necessitate military protection as should the fuel while in storage. Terrorism is an escalating problem. There are many groups who would want to acquire MOX or the plutonium separated from it.

Furthermore, the use of MOX as fuel in commercial reactors would substantially increase the volume and the radioactivity of the nuclear waste. 1/08.03.01

The cost of one, possibly two, new plants to process the MOX would be $1 billion or more.

These dangers and expenses are inexcusable when there are at least two options already identified for plutonium: continued storage and vitrification.

Please do not make permit these long-term dangers, inherent in the use of MOX in commercial nuclear reactors, to be authorized. The world has already had too many accidents and near accidents, and exposure to low-level radiation continues to increase. Don't add this totally unnecessary new threat to our health and safety.

sincerely yours,

Mignon S. Thorpe

128 Norwood Ave.
Upper Montclair
NJ 07043

M-262

08 03 01 **Comment Number 1**

The Department of Energy acknowledges the commentor's opposition to the Reactor Alternative using MOX fuel. Decisions on disposition of weapons-usable fissile materials will be made based upon environmental analyses, technical and economic studies, national policy considerations, and public input.

Charles W. Turner
6323-5th Ave. N.E.
Seattle, WA 98115-0517

Telephone 206-523-0168

May 2, 1996

U.S. Dept. of Energy
Office of Fissile Materials Disposition
P.O. Box 23786
Washington, DC 20026-3786

To Whom It May Concern:

Starting in 1970, I decided to try to find out what elements were abundant in the earth's crust in the Pacific Northwest, at least in the part of the world from which I could conveniently collect my own rock samples.

As a result of having collected several hundred samples (of rocks, sands, clays, and a few other materials of geologic origin), and after analysing a number of these samples, I realized that stable, non-radioactive isotopes of the actinide elements did indeed exist, and in some places were very abundant, and easy to get.

I attended a Plutonium Forum, sponsored by nine different organizations, one of which was the U.S. Dept. of Energy, on Tuesday evening, April 30, in Seattle. All of those attending were asked to submit comments on a blue form (one of which is enclosed).

In view of the existence of stable, non-radioactive isotopes of the actinide elements, I believe that now the first two options listed can be modified to facilitate the safer disposal, or even make possible a safer storage of radioactive materials of all kinds.

I propose that the radioactive Plutonium be dissolved in hydrochloric acid, adding a minimum quantity of nitric acid, if necessary, and adding the resulting solution to a hydrochloric acid solution of non-radioactive actinide elements, and adding oxalic acid and then sodium hydroxide or sodium carbonate to precipitate the oxalates.

(Unless you already have sufficient data, the relative amounts of radioactive and non-radioactive elements to prevent the accumulation of any dangerous critical mass of radioactive elements would have to be determined by experiment.)

The oxalates, after being removed from the solution, can be either stored as such safely enough in drums, or they can be heated to form oxides, which can either be stored as such, or can be vitrified with other constituents to form a glass or a ceramic.

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14 00 00 **Comment Number 1**

Comment noted.

Comment Do... and ...

(2)

If you feel that my proposal makes sense, and that you would like to have a small amount of some of these non-radioactive actinide elements, I would be glad to give you a few hundred grams of a few of these elements, in the form of oxides or hydroxides.

There would be no charge for a small quantity for testing and evaluation.

Very truly yours,

Charles W. Turner

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Storage and Disposition of Weapons-Usable Fissile Materials Draft Programmatic Environmental Impact Statement (PEIS) Public Comment Form

M.O.

Name (optional): Charles W. Turner
Address (optional): 6733 54th Ave. N.E.
Seattle, WA 98115-6517

See enclosed letter.

Please write down your comments and drop this form in the marked boxes before you leave tonight. These forms will be submitted to the Department of Energy as part of the formal comment on this PEIS. If you are unable to complete this form tonight, written comments can be mailed to:

Department of Energy
Office of Fissile Materials Disposition
P.O. Box 23786
Washington, D.C. 20026-3786

or, you can call this toll-free number to leave comments by phone: 1-800-820-5156. Comments must be submitted by **May 7, 1996**.

The Department of Energy has identified three types of technologies as options for disposing of weapons-usable fissile materials. The Department has also considered a "no action alternative" which would result in long-term storage of these materials. Please write down your comments on the following three types of options for disposal and the storage option.

1. **Materials Immobilization/Vitrification** - Immobilize fissile materials by mixing them with glass, glass bonded zeolites, or ceramics.

2. **Deep borehole disposal** - Materials would be disposed in boreholes at least 2.5 miles deep, in geologically stable formations. Materials could be disposed directly into the deep borehole, or materials could be immobilized first, and then deposited into the deep borehole.

3. **Reactor Options** - Surplus plutonium/highly enriched uranium would be made into MOX fuel for use in nuclear reactors, destroying by fission a major portion of the weapons grade materials.

4. **Storage Options** - USDOE would continue existing storage practices for weapons-usable fissile materials at current locations and/or consolidate that storage at one or more of the designated sites.

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