

**LETTER EXPRESSING SUPPORT FOR THE DISASSEMBLY AND CONVERSION OF
NUCLEAR WEAPONS PLUTONIUM COMPONENTS AT THE PANTEX PLANT**

PAGE 1 OF 1



U.S. Department of Energy
Office of Fissile Materials Disposition
MD-4 Forrestal Building
1000 Independence Avenue SW
Washington, D.C. 20585

I am a citizen of Amarillo, Texas, and am totally in support of the disassembly and conversion of nuclear weapons plutonium components at the Amarillo Pantex plant.

Please consider the effort and history of the Pantex plant in your decision making process as respects this site.

Thank you very much.

500 S. Taylor - Suite 901
(806) 374-4621 • FAX (806) 374-2823

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Alternatives

DOE acknowledges the commentor's support for siting the pit conversion facility at Pantex. Decisions on the surplus plutonium disposition program at Pantex will be based on environmental analyses, technical and cost reports, national policy and nonproliferation considerations, and public input. DOE will announce its decisions regarding facility siting and approach to surplus plutonium disposition in the SPD EIS ROD.

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LETTER EXPRESSING REASONS FOR NOT SUPPORTING PLUTONIUM PROCESSING AT THE PANTEX PLANT

PAGE 1 OF 3

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

Dear Department of Energy, Office of Fissile Materials Disposition:

I do not support plutonium processing at the Pantex Plant. In the *Surplus Plutonium Disposition Draft Environmental Impact Statement*, the Department of Energy prudently decided against locating one plutonium processing facility (MOX fuel fabrication) at the Pantex Plant. For the following additional reasons, a Plutonium Pit Disassembly and Conversion facility also should not be located at Pantex:

Pantex Should Not Become the Next Rocky Flats

Pantex has never processed plutonium. The Pantex Superfund site has so far apparently escaped the type of radioactive contamination found at plutonium processing sites like Rocky Flats in Colorado and Hanford in Washington.

Risks That Are Unknown Are Too High

The Pantex Plant occupies an area that is a fraction of the size of other plutonium sites.

SIZE MATTERS: A Comparison of the Area of the Four Candidate Sites (Square Miles)			
Pantex	Savannah River Site	Idaho National Engineering Lab.	Hanford
23	309	890	560

The technologies proposed in the Plutonium Pit Disassembly and Conversion Facility are undemonstrated and unproven. It is unacceptable to have plutonium operations above the Ogallala Aquifer and only one mile from where people live and work in a vibrant agricultural producing area. The Pantex legacy already includes heavy contamination in a perched layer of groundwater less than one hundred feet above the Ogallala Aquifer. This pollution extends from under the Pantex Plant to adjacent private property and the real impacts remain unknown. The risk of any additional groundwater pollution is unacceptable in an agricultural region.

Common sense dictates that negative consequences to people and farmland from nuclear accidents are far more likely in a small, open, windy location like Pantex. The Department of Energy has acknowledged that the most visually unappealing feature of the plutonium facilities will be their smokestacks. Visual blight will be a minor inconvenience compared to the air pollutants--many of them radioactive--expected to escape into the atmosphere daily through smokestack filters. Routine air emissions of tritium, plutonium, americium, and beryllium constitute unacceptable new hazards to the Texas Panhandle.

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Alternatives

DOE acknowledges the commentor's opposition to siting the proposed surplus plutonium disposition facilities at Pantex. As described in Chapter 4 of Volume I and summarized in Section 2.18, potential impacts of any of the proposed activities during routine operations at any of the candidate sites would likely be minor. To avoid contamination that has occurred in the past at some DOE sites, DOE would design, build, and operate the proposed surplus plutonium disposition facilities in compliance with today's environmental, safety, and health requirements. Decisions on the surplus plutonium disposition program at Pantex will be based on environmental analyses, technical and cost reports, national policy and nonproliferation considerations, and public input. DOE will announce its decisions regarding facility siting and approach to surplus plutonium disposition in the SPD EIS ROD.

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Human Health Risk

Although Pantex is smaller in overall size in comparison with the other candidate sites, analyses in Chapter 4 of Volume I indicate that impacts of operating the pit conversion facility on health, safety, and the environment at Pantex would likely be minor (e.g., see Section 4.6).

While it is true that the pit conversion facility is the first consolidated facility for accomplishing this mission on a large scale, the processes that would be used in this facility are not entirely new. Many of these processes are in use at LANL and LLNL. In addition, DOE has recently started a pit disassembly and conversion demonstration project at LANL, where processes will be further developed and tested.

Section 4.26.3.2 analyzes impacts to the environment (including contamination to the Ogallala aquifer) due to construction and normal operation of a pit conversion facility at Pantex. There would be no discernible contamination of aquatic biota (fish) or drinking water, either from the deposition of minute quantities of airborne contaminants into small water bodies or from potential wastewater releases. Therefore, it is estimated that no measurable component of the public dose would be attributable to liquid pathways. Appendix J.3 includes an analysis of

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**LETTER EXPRESSING REASONS FOR NOT SUPPORTING PLUTONIUM
PROCESSING AT THE PANTEX PLANT
PAGE 2 OF 3**

potential contamination of agricultural products and livestock and consumption of these products by persons living within an 80-km (50-mi) radius of Pantex. If the proposed surplus plutonium disposition facilities were located at Pantex, a very small incremental annual dose to the surrounding public from normal operations would result via radiological emission deposition on agricultural products (i.e., food ingestion pathway). This dose (about 0.56 person-rem/yr) would be 0.0006 percent of the dose that would be incurred annually from natural background radiation. This analysis indicates that impacts of operating the pit conversion facility on agricultural products, livestock, and human health at Pantex would likely be minor.

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Human Health Risk

It is DOE policy to operate in compliance with all applicable air quality requirements and to protect human health and the environment. DOE takes into consideration pollution reduction techniques to minimize air releases when designing, constructing, and operating its facilities. It also considers aesthetic and scenic resources in the design, location, construction, and operation of facilities. Potential concentrations of air pollutants at Pantex for the various alternatives have been estimated, considering appropriate local meteorology and other data associated with the area. Because the releases from the pit conversion and MOX facilities would be very small (see Appendix J.3.1.4), estimates of resultant radiological health risks are small. As indicated in Section 4.17.2.4, the maximum possible dose delivered to a member of the public during normal operations of the MOX and pit conversion facilities at Pantex would be 0.068 mrem/yr, 0.02 percent of the dose that individual would receive annually from natural background radiation. The estimated dose to the public from radiological emissions (e.g., americium, tritium, and plutonium) would be 0.077 person-rem/yr which would result in an increase of 2.9×10^{-3} LCFs over the 10-year operating life of the pit conversion facility. Any new facilities that might be built would be within existing site boundaries, and would be matched aesthetically with the current plant to limit potential visual impacts.

**LETTER EXPRESSING REASONS FOR NOT SUPPORTING PLUTONIUM
PROCESSING AT THE PANTEX PLANT
PAGE 3 OF 3**

**There is Valid, Strong Criticism of Safety
in the Storage of Plutonium at Pantex**

Since Pantex became the nation's long-term storage location for up to 20,000 plutonium pits, promises to improve safety conditions have not happened. The U.S. Government Accounting Office and the Defense Nuclear Facilities Safety Board have issued reports critical of plutonium storage safety at Pantex. Fifty million taxpayer dollars were spent on a failed plutonium pit container program (the AT-400A) and the plan to move over 10,000 pits into a safer remodeled building (Building 12-66) has also failed.

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When it comes to plutonium pit storage problems, Panhandle residents are back to square one. The plutonium remains in old, unsuitable, corroding storage containers and in 35-55 year old "bunkers" that the Department of Energy promised were for "temporary" use. Plutonium that is supposed to be stored in a stable environment now sits in the bunkers--all but three without air conditioning--even as the Texas Panhandle experiences a spell of more than 40 consecutive days of 90+ degree temperatures, and more than 20 days this summer with thermometers registering 100+ degrees. If the Department of Energy cannot accomplish the job of safely storing Pantex plutonium in the most stable environment, there is no reason to accept its unsubstantiated assurances to safely process deadly plutonium powders at Pantex.

Thank you for this opportunity to comment.

Sincerely:

4

DOE Policy

DOE acknowledges the commentor's concern regarding safe storage of plutonium pits at Pantex. DOE is committed to the safe, secure storage of pits and is evaluating options for upgrades to Pantex Zone 4 facilities to address plutonium storage requirements. DOE has addressed some of the commentor's concerns in an environmental review concerning the repackaging of Pantex pits into a more robust container. This evaluation is documented in the *Supplement Analysis for: Final Environmental Impact Statement for the Continued Operation of the Pantex Plant and Associated Storage of Nuclear Weapon Components—AL-R8 Sealed Insert Container* (August 1998). This document is on the MD Web site at <http://www.doe-md.com>. Based on this supplement analysis, the decision was made to repackage pits at Pantex into the AL-R8 sealed insert container and to discontinue plans to repackage pits into the AT-400A container.

Worker exposure estimates attributable to the decision to repackage pits in AL-R8 sealed insert containers were incorporated in the revised Section 2.18 and Appendix L.5.1.

The issues raised in this comment relate to pit storage decisions made in the *Storage and Disposition PEIS* and the *Final Environmental Impact Statement for the Continued Operation of the Pantex Plant and Associated Storage of Nuclear Weapon Components* (DOE/EIS-0225, November 1996). DOE is considering leaving the repackaged surplus pits in Zone 4 at Pantex for long-term storage. An appropriate environmental review will be conducted when the specific proposal for this change has been developed; addressing, for example, whether additional magazines need to be air-conditioned. The analysis in this SPD EIS assumes that the surplus pits are stored in Zone 12 in accordance with the ROD for the *Storage and Disposition PEIS*.

LETTER EXPRESSING REASONS WHY THE FUELS AND MATERIALS EXAMINATION FACILITY AT THE HANFORD SITE SHOULD BE SELECTED TO DISPOSITION U.S. SURPLUS PLUTONIUM

PAGE 1 OF 1

U. S. Department of Energy
Office of Fissile Materials Disposition

SUBMITTAL TO THE SURPLUS PLUTONIUM DISPOSITION DRAFT ENVIRONMENTAL IMPACT STATEMENT PUBLIC COMMENT PERIOD.

The Department of Energy (DOE) should select the Fuels and Materials Examination Facility (FMEF) at the Hanford Site to disposition the Nation's surplus plutonium. The FMEF is a \$750 million national asset designed for Mixed Oxide (MOX) fuel fabrication and postirradiation examination. A DOE study estimates \$200 million in capital savings if this facility were used instead of building a new MOX facility. Savings could double if pit disassembly/conversion activities were performed in FMEF. The DOE and the Nuclear Regulatory Commission (NRC) have acknowledged that collocation of both programs in the facility is possible. Savings from a dual mission could be used to accelerate cleanup at DOE sites.

The FMEF is DOE's most expeditious and most economical choice for surplus plutonium disposition. Neither hazardous or radioactive materials have ever been used in the FMEF. Modifications for plutonium disposition activities could be accomplished faster and at less cost because the facility is uncontaminated. The FMEF is operationally complete with 120,000 square feet of process space (250,000 sq. ft. total). It was designed and constructed to NRC reactor standards, it meets current safety standards, and it is deemed capable of NRC licensing.

The draft Surplus Plutonium Disposition Environmental Impact Statement (SPD-EIS) is complete and the preferred alternatives for pit disassembly and MOX fuel fabrication do not include Hanford. I strongly urge the Office of Fissile Materials Disposition and the Secretary of Energy to thoroughly reevaluate the preferred alternatives for plutonium disposition. The Record of Decision for the SPD-EIS should reflect the realities of a balanced federal budget and the assets that DOE already has. Don't ignore the cost advantages of using the FMEF and the potential for misusing billions of dollars if a new MOX facility were built.

Thank you.

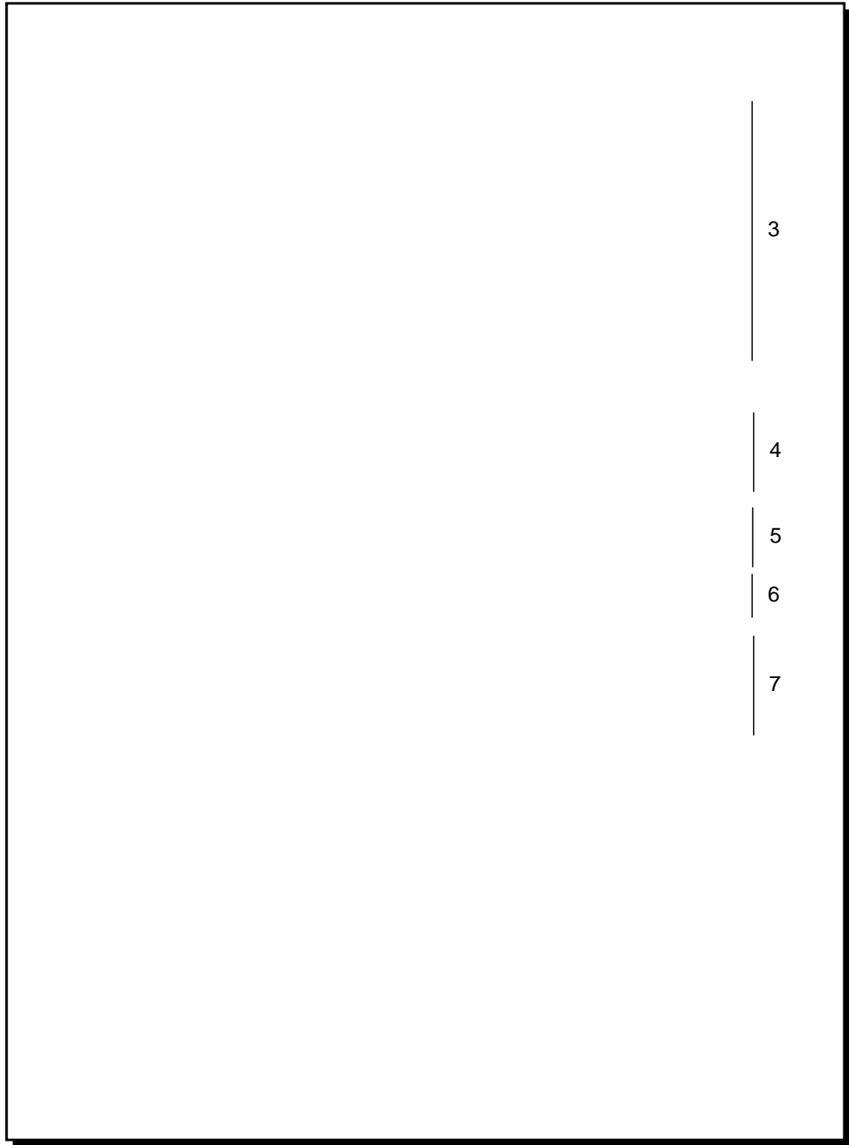
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Alternatives

DOE acknowledges the commentor's support for collocating pit disassembly and conversion and MOX fuel fabrication in FMEF at Hanford. DOE believes that Hanford's efforts should remain focused on its current high-priority cleanup mission. The importance of cleanup at Hanford was taken into consideration in identifying preferred sites for surplus plutonium disposition activities. However, no decision has been made, and DOE will continue to consider Hanford for surplus plutonium disposition or other programs that are compatible with the Hanford mission, especially in regard to the use of existing facilities.

Because cost issues are beyond the scope of this SPD EIS, this comment has been forwarded to the cost analysis team for consideration. The *Cost Analysis in Support of Site Selection for Surplus Weapons-Usable Plutonium Disposition* (DOE/MD-0009, July 1998) report and the *Plutonium Disposition Life-Cycle Costs and Cost-Related Comment Resolution Document* (DOE/MD-0013, November 1999), which covers recent life-cycle cost analyses associated with the preferred alternative, are available on the MD Web site at <http://www.doe-md.com> and in the public reading rooms at the following locations: Hanford, INEEL, Pantex, SRS and Washington, D.C.



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MOX Approach

DOE acknowledges the commentator's opposition to the MOX approach. The *Joint Statement of Principles* signed by Presidents Clinton and Yeltsin in September 1998 provide general guidance for achieving the objectives of a future bilateral agreement to disposition surplus plutonium in the United States and Russia. Sensitive negotiations between the two countries have indicated that the Russian government accepts the technology of immobilization for low-concentration, plutonium-bearing materials, but that the MOX approach would be considered for higher-purity feed materials.

Decisions on the surplus plutonium disposition program will be based on environmental analyses, technical and cost reports, national policy and nonproliferation considerations, and public input.

The addition of the plutonium-polishing process was analyzed and a description of the potential environmental impacts was added to the impact sections presented for the MOX facility in Chapter 4 of Volume I. As indicated by the analyses, the addition of this process is not expected to materially affect human health of the population living within 80 km (50 mi) of the candidate sites. For example, the annual dose associated with operating the MOX facility is expected to increase by between 0.017 and 0.18 person-rem/yr for the population living within 80 km (50 mi) of the candidate sites.

4

General SPD EIS and NEPA Process

DOE has prepared this SPD EIS in accordance with the provisions of NEPA (42 U.S.C. 4321 et seq.) and the related CEQ and DOE implementation regulations (40 CFR 1500 through 1508 and 10 CFR 1021, respectively). It is intended as a source of environmental information for the DOE decisionmakers and the public. The primary objective of the EIS is a comprehensive description of proposed surplus plutonium disposition actions and alternatives and their potential environmental impacts. As with any EIS, technical information is included to the extent that it is required to understand those actions and impacts. Other data were added in the course of the EIS development—for example, expected radiological

release quantities, including airborne releases, in Appendix J. Additional technical information concerning the proposed facilities is given in various data reports reflected in the list of references for Chapter 2, Volume I. These referenced materials are available in DOE reading rooms.

5**MOX Approach**

The commentor is correct that MOX fuel is not widely produced, however, the process is similar to production of LEU fuel. In fact, after the uranium and plutonium oxide powders are blended, the MOX fuel fabrication process is essentially identical to LEU fuel fabrication. While weapons-grade plutonium is currently used in MOX fuel, its behavior in fuel is essentially the same as that of non-weapons origin plutonium, and so does not present a situation different from MOX fuel experience to date. In addition, a limited number of MOX fuel assemblies would be irradiated and tested in accordance with NRC requirements to verify acceptability prior to fabricating the fuel on a larger scale for insertion into the reactors. NRC will also license the MOX facility under 10 CFR 70, and be responsible for issuing operating license amendments under 10 CFR 50 for the domestic, commercial reactors that have been selected to irradiate the MOX fuel. There are always uncertainties involved with construction projects and startup of new facilities and processes. However, DOE has considered the uncertainties in its evaluations and determined that MOX fuel fabrication for use in commercial reactors is a viable option to surplus plutonium disposition.

6**Pit Disassembly and Conversion**

While it is true that the pit conversion facility is the first consolidated facility for accomplishing this mission on a large scale, the processes that would be used in this facility are not entirely new. Many of these processes are in use at LANL and LLNL. However, to ensure successful transition to full-scale operation, DOE is testing these components as an integrated system at LANL. This pit disassembly and conversion demonstration is focusing on equipment design and process development and will provide information for fine-tuning the process and operational parameters prior to pit conversion facility operation. While this demonstration could

**LETTER EXPRESSING SUPPORT FOR IMMOBILIZING ALL SURPLUS
PLUTONIUM AND REJECTION OF THE MIXED OXIDE FUEL OPTION
PAGE 5 of 5**

continue for up to 4 years, the information from the demonstration would be generated, gathered, and be available on a continuous basis throughout the facility design phase. This demonstration project and other R&D projects are described in the *Pit Disassembly and Conversion Demonstration EA* (DOE/EA-1207, August 1998), which is available on the MD Web site at <http://www.doe-md.com>.

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Alternatives

DOE acknowledges the commentor's concern for potential shortcomings in the surplus plutonium disposition program. While it is correct that the disposition of large quantities of plutonium is a new endeavor, the various disposition alternatives are not. Several countries, including Russia and the United States have experience with immobilizing high-level wastes and the proposed can-in-canister approach, using ceramic instead of glass, offers advantages in the areas of proliferation resistance, repository durability, lower worker radiation exposure during processing, and cost effectiveness.

Commercial reactors in the United States are capable of safely using MOX fuel without any physical modifications to the reactor vessel or supporting systems. (Operating procedures, fuel management plans, and other activities would need to be modified.) The MOX technology is used in Europe, and therefore does not require extensive research and development for implementation in the United States. The R&D effort would be concentrated on fabricating samples of MOX fuel and conducting limited experiments and tests on those samples to assess fuel performance. The main objectives of this effort by DOE are to ensure that the plutonium and uranium feed materials will produce acceptable MOX fuel and to examine key issues relative to the performance of MOX fuel in commercial reactors.

**LETTER EXPRESSING SUPPORT FOR LOCATING DISASSEMBLY AND CONVERSION
OF NUCLEAR WEAPONS PLUTONIUM COMPONENTS AT THE PANTEX PLANT**

PAGE 1 OF 1

U.S. Department of Energy
Office of Missile Materials Disposition
MD-4 Forrestal Building
1000 Independence Avenue, SW
Washington D.C., 20585

As a citizen of Amarillo, I wish to express my feeling about the location of the disassembly and conversion of nuclear weapons plutonium components("pits") at the Amarillo Pantex Plant. I am totally in support of this function and hope you will consider the effort and the history of the Pantex plant in your decision making process for this site.

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Sincerely,

Signature

Address

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Alternatives

DOE acknowledges the commentor's support for siting the pit conversion facility at Pantex. Decisions on the surplus plutonium disposition program at Pantex will be based on environmental analyses, technical and cost reports, national policy and nonproliferation considerations, and public input. DOE will announce its decisions regarding facility siting and approach to surplus plutonium disposition in the SPD EIS ROD.

**PETITION EXPRESSING OPPOSITION TO MIXED OXIDE FUEL
TRANSPORTATION ACROSS THE UNITED STATES**

PAGE 1 OF 3

Petition / Opposed to MOX fuel transportation across the U.S.

We, the undersigned, are opposed to the fabrication and transportation of mixed oxide fuel (MOX), to be created from U.S. bomb plutonium. We oppose this government initiative because plutonium fuel, or MOX, presents many serious problems including:

- 1. Plutonium would be transported through the thumb area, the heart of the Great Lakes Region. Transport accidents would endanger millions of citizens and our precious environment.**
- 2. Plutonium is a radioactive substance that lasts for thousands of years and one-millionth of a gram of plutonium can be lethal to a human being.**
- 3. Use of MOX turns plutonium into high-level atomic waste, for which no safe storage solution is known.**
- 4. The MOX program would allow foreign corporations to have significant control over plutonium - the most sensitive material in nuclear weapons - and would contradict more than 20 years of U.S. nuclear non-proliferation policy.**

Full Name (please print) Address Signature (written)

1. _____
2. _____
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8. _____
9. _____
10. _____
11. _____
12. _____

Send completed petitions to: CAP, Citizens For a Healthy Planet, P.O. Box 335, Emmett, Mi. 48022

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MOX Approach

DOE acknowledges the commentor's opposition to the MOX approach to surplus plutonium disposition. The goal of the surplus plutonium disposition program is to reduce the threat of nuclear weapons proliferation worldwide by conducting disposition of surplus plutonium in the United States in an environmentally safe and timely manner. Converting the surplus plutonium into MOX fuel and using it in domestic, commercial reactors is an effective way to accomplish this. Section 4.28 was revised to discuss the potential environmental impacts of operating Catawba, McGuire, and North Anna, the reactors that would use the MOX fuel.

The transportation of surplus plutonium through the Great Lakes Region is beyond the scope of the proposed action analyzed in this SPD EIS. Shipments of a small quantity of MOX fuel from LANL to Canada were part of a separate proposed action. DOE has prepared an *Environmental Assessment for the Parallex Project Fuel Manufacture and Shipment* (DOE/EA-1216, January 1999) and FONSI, signed August 13, 1999, on fabrication of the MOX fuel and its transportation to Canada. The transportation analyses in the Parallex EA indicate that no serious health effects would occur due to the transport of MOX fuel. This EA and FONSI can be viewed on the MD Web site at <http://www.doe-md.com>.

Transportation would be required for both the immobilization and MOX approaches to surplus plutonium disposition. Transportation of special nuclear materials, including fresh MOX fuel, would use DOE's SST/SGT system as described in Appendix L.3.2. Since the establishment of the DOE Transportation Safeguards Division in 1975, the SST/SGT system has transported DOE-owned cargo over more than 151 million km (94 million mi) with no accidents causing a fatality or release of radioactive material.

2

Human Health Risk

The small radiological release quantities expected from each of the proposed surplus plutonium disposition facilities are presented in the Source Term Data sections of Appendix J. The Atomic Energy Act of 1954

authorizes DOE to establish standards to protect health and minimize dangers to life. Radiation protection standards are based on controlling radioactive releases to ALARA levels in recognition of the potential risk of radiation exposure. The small cancer risks presented in this SPD EIS are a direct result of the small quantities of material (plutonium, etc.) expected to be released from the facilities. Calculation of these cancer risks is based on methodologies presented in the accredited National Research Council's publication *Health Effects of Exposure to Low Levels of Ionizing Radiation BEIR V* (1990). As is shown in the radiological impact tables in Chapter 4 of Volume I, the cancer risk (associated with the estimated plutonium releases) to members of the public is well below one, thus demonstrating that the quantity of plutonium released would not be close to the amount associated with causing a fatality.

3

Repositories

As described in Sections 2.18.3 and 4.28.2.8, additional spent fuel would be produced by using MOX fuel instead of LEU fuel in domestic, commercial reactors. Spent fuel management at the proposed reactor sites is not expected to change dramatically due to the substitution of MOX assemblies for some of the LEU assemblies. Likewise, the additional spent fuel would be a very small fraction of the total that would be managed at the potential geologic repository.

This SPD EIS assumes, for the purposes of analysis, that Yucca Mountain, Nevada, would be the final disposal site for all immobilized plutonium and MOX spent fuel. As directed by the U.S. Congress through the NWPA, as amended, Yucca Mountain is the only candidate site currently being characterized as a potential geologic repository for HLW and spent fuel. DOE has prepared a separate EIS, *Draft Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada* (DOE/EIS-0250D, July 1999), which analyzes the environmental impacts from construction, operation and monitoring, related transportation, and eventual closure of a potential geologic repository.

**PETITION EXPRESSING OPPOSITION TO MIXED OXIDE FUEL
TRANSPORTATION ACROSS THE UNITED STATES
PAGE 3 OF 3**

4

Nonproliferation

The DOE contract under which DCS would provide MOX fuel fabrication and irradiation services has very specific provisions that would not allow foreign corporations or governments to have control over the surplus plutonium or have the ability to access any sensitive U.S. technology information. Prior to awarding the contract, a National Interest Determination and a Foreign Ownership Control and Influence Determination were made to ensure that there would be, among other things, no breach of nonproliferation policy.

**POSTCARD CITING SAVINGS FROM CONSOLIDATING ALL OF DOE'S
PLUTONIUM DISPOSITION MISSIONS AT THE SAVANNAH RIVER SITE
PAGE 1 OF 1**

Dear Secretary Peña:

As I'm sure you know, a decision to consolidate all of DOE's plutonium disposition missions at the Savannah River Site would result in a near-term capital cost savings of over \$500 Million and a total life cycle savings of about \$1.6 Billion.

I and taxpayers throughout the nation will thank you for keeping our interests in mind when you make your plutonium decisions later this year.

Thank-You,

Signature

County of residence/affiliation

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Alternatives

DOE acknowledges the commentor's support for siting the proposed surplus plutonium disposition facilities at SRS. As indicated in the revised Section 1.6, SRS is preferred the proposed facilities because the site has extensive experience with plutonium processing, and these facilities complement existing missions and take advantage of existing infrastructure.

Because this comment relates directly to the cost analysis report, it has been forwarded to the cost analysis team for consideration. The *Plutonium Disposition Life-Cycle Costs and Cost-Related Comment Resolution Document* (DOE/MD-0013, November 1999), which covers recent life-cycle cost analyses associated with the preferred alternative, is available on the MD Web site at <http://www.doe-md.com> and in the public reading rooms at the following locations: Hanford, INEEL, Pantex, SRS and Washington, D.C.

**POSTCARD CITING COST SAVINGS AND SUPPORT FOR CONSOLIDATING
DOE'S PLUTONIUM DISPOSITION MISSIONS AT THE SAVANNAH RIVER SITE
PAGE 1 OF 1**

Dear Mr. Secretary:

As you already know, consolidating the DOE's plutonium disposition missions at the Savannah River Site—pit disassembly and conversion, MOX fuel fabrication and immobilization—will save millions of dollars by reducing or eliminating operating costs of other DOE mission sites.

As a resident of the Central Savannah River Area, I can assure you that these missions are wanted and community support is strong.

Thank-You,

Signature

County of residence/affiliation

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1

Alternatives

DOE acknowledges the commentor's support for siting the proposed surplus plutonium disposition facilities at SRS. As indicated in the revised Section 1.6, SRS is preferred the proposed facilities because the site has extensive experience with plutonium processing, and these facilities complement existing missions and take advantage of existing infrastructure.

Because cost issues are beyond the scope of this SPD EIS, this comment has been forwarded to the cost analysis team for consideration. The *Cost Analysis in Support of Site Selection for Surplus Weapons-Usable Plutonium Disposition* (DOE/MD-0009, July 1998) report and the *Plutonium Disposition Life-Cycle Costs and Cost-Related Comment Resolution Document* (DOE/MD-0013, November 1999), which covers recent life-cycle cost analyses associated with the preferred alternative, are available on the MD Web site at <http://www.doe-md.com> and in the public reading rooms at the following locations: Hanford, INEEL, Pantex, SRS and Washington, D.C.

POSTCARD EXPRESSING OPPOSITION TO PLUTONIUM PROCESSING IN THE TEXAS PANHANDLE AND CONVERTING MILITARY PLUTONIUM FOR USE IN MIXED OXIDE FUEL

PAGE 1 OF 1

<input checked="" type="checkbox"/>	YES!	Keep Texas Panhandle water, air, and soil safe from radioactive pollutants	1
<input checked="" type="checkbox"/>	NO!	To any plutonium processing in the Texas Panhandle	2
<input checked="" type="checkbox"/>	YES!	To minimal handling and processing of plutonium and other nuclear materials	3
<input checked="" type="checkbox"/>	NO!	To converting military plutonium for use in mixed oxide (MOX) fuel	4



Signed: _____

1 Alternatives
 Sections 4.17, among others, and 4.26.3 describe the potential effects of the maximum impact alternative on air quality, water resources, and soil. These analyses indicate that the impacts of construction and normal operation of the pit conversion and MOX facilities on air, water, and soil at Pantex would likely be minor.

2 Alternatives
 DOE acknowledges the commentor's opposition to the surplus plutonium disposition program at Pantex. Decisions on the surplus plutonium disposition program will be based on environmental analyses, technical and cost reports, national policy and nonproliferation considerations, and public input.

3 DOE Policy
 The goal of the surplus plutonium disposition program is to reduce the threat of nuclear weapons proliferation worldwide by conducting disposition of surplus plutonium in the United States in an environmentally safe and timely manner. DOE is committed to public and worker safety during the construction, operation, and deactivation of the proposed surplus plutonium disposition facilities, and would implement appropriate controls and procedures to ensure compliance with all applicable Federal, State, and local laws, rules, regulations, and requirements.

4 MOX Approach
 DOE acknowledges the commentor's opposition to the MOX approach to surplus plutonium disposition. Pursuing both immobilization and MOX fuel fabrication provides the United States important insurance against potential disadvantages of implementing either approach by itself. The hybrid approach also provides the best opportunity for U.S. leadership in working with Russia to implement similar options for reducing Russia's excess plutonium in parallel. Further, it sends the strongest possible signal to the world of U.S. determination to reduce stockpiles of surplus plutonium as quickly as possible and in a manner that would make it technically difficult to use the plutonium in nuclear weapons again.

POSTCARD EXPRESSING SUPPORT FOR DOE'S PLUTONIUM DISPOSITION MISSIONS AT THE SAVANNAH RIVER SITE AND VIEW THAT EXCESS PLUTONIUM CAN BE CONVERTED INTO MIXED OXIDE FUEL TO HELP MEET U.S. ELECTRICAL ENERGY NEEDS

PAGE 1 OF 1

Dear Secretary Peña:

The Savannah River Site is ready to serve the nation in meeting its need to dispose of excess plutonium from nuclear weapons.

We know this plutonium can be converted into MOX fuel to help meet our electrical energy needs for years to come. We view plutonium as an important national resource not as a waste material, and we welcome DOE's plutonium disposition missions at the Savannah River Site.

We're prepared to do it all -- pit disassembly and conversion, MOX fuel fabrication and immobilization. We look forward to the opportunity to accomplish these missions at one of the safest and most proven facilities in the DOE complex.

Thank-You,

Signature

County of residence/affiliation

1

Alternatives

DOE acknowledges the commentor's support for siting the proposed surplus plutonium disposition facilities at SRS. As indicated in the revised Section 1.6, SRS is preferred for the proposed facilities because the site has extensive experience with plutonium processing, and these facilities complement existing missions and take advantage of existing infrastructure. Decisions on the surplus plutonium disposition program at SRS will be based on environmental analyses, technical and cost reports, national policy and nonproliferation considerations, and public input. DOE will announce its decisions regarding facility siting and approach to surplus plutonium disposition in the SPD EIS ROD.

U.S. determination to reduce stockpiles of surplus plutonium as quickly as possible and in a manner that would make it technically difficult to use the plutonium in nuclear weapons again.

Under the hybrid approach, approximately 33 t (36 tons) of clean plutonium metal and oxides would be used to fabricate MOX fuel, which would be irradiated in domestic, commercial reactors. DOE has determined that 17 t (19 tons) of the surplus plutonium would be immobilized due to the complexity, timing, and cost that would be involved in purifying those plutonium materials to make them suitable for use in MOX fuel. Therefore, fabricating all 50 t (55 tons) of surplus plutonium into MOX fuel is not considered a reasonable alternative at this time and is not analyzed; however, immobilizing all of the surplus plutonium is analyzed. Given the variability in purity of the surplus plutonium to be dispositioned, some of the plutonium currently considered for MOX fuel fabrication may also need to be immobilized. The incremental impacts that would be associated with a small shift in materials throughput are discussed in Section 4.30.

4

Transportation

The shipment of nuclear material (e.g., depleted uranium) using commercial carriers would be the subject of detailed transportation plans in which routes and specific processing locations would be discussed. These plans are coordinated with State, tribal, and local officials. The shipment of waste would be in accordance with the decisions reached on the *Final Waste Management Programmatic Environmental Impact Statement for Managing Treatment, Storage, and Disposal of Radioactive and Hazardous Waste* (DOE/EIS-0200-F, May 1997) and the *WIPP Disposal Phase Final Supplemental EIS* (DOE/EIS-0026-S-2, September 1997). The transportation of special nuclear materials is the subject of detailed planning with DOE's Transportation Safeguards Division. The dates and times that specific transportation routes would be used for special nuclear materials are classified information; however, the number of shipments that would be required, by location, has been included in this SPD EIS. Additional details are provided in *Fissile Materials Disposition Program SST/SGT Transportation Estimation* (SAND98-8244, June 1998), which is available on the MD Web site at <http://www.doe-md.com>.

5

MOX Approach

Use of MOX fuel in domestic, commercial reactors is not proposed in order to subsidize the commercial nuclear power industry. Rather, the purpose of this proposed action is to safely and securely disposition surplus plutonium by meeting the Spent Fuel Standard. The Spent Fuel Standard, as identified by NAS and modified by DOE, is to make the surplus weapons-usable plutonium as inaccessible and unattractive for weapons use as the much larger and growing quantity of plutonium that exists in spent nuclear fuel from commercial power reactors. The MOX facility would produce nuclear fuel that would displace LEU fuel that utilities would have otherwise purchased. If the effective value of the MOX fuel exceeds the cost of the LEU fuel that it displaced, then the contract provides that money would be paid back to the U.S. Government by DCS based on a formula included in the DCS contract. The commercial reactors selected for the MOX approach include only those reactors whose operational life is expected to last beyond the life of the surplus plutonium disposition program.

6

DOE Policy

As discussed in Appendix D of the SPD Draft EIS, DOE did consider FFTF in the *Storage and Disposition PEIS*, but it was eliminated from further study because it was in a standby status and it could not satisfy the criterion of completing the disposition mission within 25 years using the historic FFTF plutonium enrichment specifications. In December 1998, the Secretary of Energy decided that FFTF would not play a role in producing tritium. As discussed in Section 1.7.4, Appendix D was deleted from the SPD Final EIS because none of the proposals to restart FFTF currently consider the use of surplus plutonium as a fuel source.

QUESTIONNAIRE—HANFORD ACTION OF OREGON
PAGE 1 OF 3

The U.S. Department of Energy needs to hear you voice NOW!
What do you think about a new era of nuclear proliferation?

Hanford Action of Oregon will forward this questionnaire to USDOE. Please circle your responses.

- | | |
|--|---|
| 1. Should clean-up be the sole mission at Hanford?
Yes No | 1 |
| 2. Should the United States government maintain its longstanding policy opposing the use of weapons plutonium to fuel civilian nuclear reactors?
Yes No | 2 |
| 3. Should commercial nuclear reactors be allowed to run on MOX fuel containing weapons-grade plutonium?
Yes No | 3 |
| 3a. Should they be subsidized with tax dollars to do so?
Yes No | |
| 4. Which alternative would you prefer to see the U.S. Department of Energy pursue:
Immobilization (encasement of plutonium in glass logs or in caskets for entombment)
OR
The MOX plan (processing plutonium into fuel for use in civilian nuclear reactors). | 4 |
| 5. How concerned are you about the transportation of plutonium through the Northwest to Hanford?
Not concerned Slightly Concerned Very Concerned Completely opposed | 5 |
| 6. How concerned are you about transporting plutonium MOX fuel through the Northwest to Hanford?
Not concerned Slightly Concerned Very Concerned Completely opposed | 5 |
| 7. Should MOX fuel be used to restart the Fast Flux Test Facility (FFTF), a risky liquid-metal reactor at Hanford, to produce tritium for nuclear bombs?
Yes No | 6 |

Name _____
 Address _____
 Phone _____ e-mail _____

Please return to Hanford Action of Oregon by September 10, 1998.

Hanford Action of Oregon
 25-6 NW 23rd Pl. #406 tel: (503) 235-2924 fax: (503) 736-0097 e-mail: hannie@aol.com

3-1383

1

DOE Policy

DOE believes that Hanford's efforts should remain focused on its current high-priority cleanup mission. The importance of cleanup at Hanford was taken into consideration in identifying preferred sites for surplus plutonium disposition activities. However, no decision has been made, and DOE will continue to consider Hanford for surplus plutonium disposition or other programs that are compatible with the Hanford mission.

2

Nonproliferation

U.S. policy dating back to the Ford Administration has prohibited the commercial, chemical reprocessing and separation of plutonium from spent nuclear fuel. The use of U.S. surplus plutonium in existing domestic, commercial reactors does not involve reprocessing (reprocessing is a chemical separation of uranium, transuranic elements [including plutonium], and fission products from spent reactor fuel and the reuse of the plutonium and uranium to produce new fresh fuel). The proposed use of MOX fuel is consistent with the U.S. nonproliferation policy and would ensure that plutonium which was produced for nuclear weapons and subsequently declared excess to national security needs is never again used for nuclear weapons. Consistent with the U.S. policy of discouraging the civilian use of plutonium, a MOX facility would be built and operated subject to the following strict conditions: construction would take place at a secure DOE site, it would be owned by the U.S. Government, operations would be limited exclusively to the disposition of surplus plutonium, and the MOX facility would be shut down at the completion of the surplus plutonium disposition program.

3

MOX Approach

Use of MOX fuel in domestic, commercial reactors is not proposed in order to subsidize the commercial nuclear power industry. Rather, the purpose of this proposed action is to safely and securely disposition surplus plutonium by meeting the Spent Fuel Standard. The Spent Fuel Standard, as identified by NAS and modified by DOE, is to make the surplus weapons-usable plutonium as inaccessible and unattractive for weapons use as the much larger and growing quantity of plutonium that

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exists in spent nuclear fuel from commercial power reactors. The MOX facility would produce nuclear fuel that would displace LEU fuel that utilities would have otherwise purchased. If the effective value of the MOX fuel exceeds the cost of the LEU fuel that it displaced, then the contract provides that money would be paid back to the U.S. Government by DCS based on a formula included in the DCS contract. The commercial reactors selected for the MOX approach include only those reactors whose operational life is expected to last beyond the life of the surplus plutonium disposition program.

4

Alternatives

DOE has identified as its preferred alternative the hybrid approach. Pursuing both immobilization and MOX fuel fabrication provides the United States important insurance against potential disadvantages of implementing either approach by itself. The hybrid approach also provides the best opportunity for U.S. leadership in working with Russia to implement similar options for reducing Russia's excess plutonium in parallel. Further, it sends the strongest possible signal to the world of U.S. determination to reduce stockpiles of surplus plutonium as quickly as possible and in a manner that would make it technically difficult to use the plutonium in nuclear weapons again.

Under the hybrid approach, approximately 33 t (36 tons) of clean plutonium metal and oxides would be used to fabricate MOX fuel, which would be irradiated in domestic, commercial reactors. DOE has determined that 17 t (19 tons) of the surplus plutonium would be immobilized due to the complexity, timing, and cost that would be involved in purifying those plutonium materials to make them suitable for use in MOX fuel. Therefore, fabricating all 50 t (55 tons) of surplus plutonium into MOX fuel is not considered a reasonable alternative at this time and is not analyzed; however, immobilizing all of the surplus plutonium is analyzed. Given the variability in purity of the surplus plutonium to be dispositioned, some of the plutonium currently considered for MOX fuel fabrication may also need to be immobilized. The incremental impacts that would be associated with a small shift in materials throughput are discussed in Section 4.30.

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