

BURDITT, ROBERT B., OAK RIDGE, TN
PAGE 1 OF 4

April 23, 1996

124 Hampshire Court
 Oak Ridge, TN 37830

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

Sir,

I am attaching some specific comments on the Draft Programmatic Impact Statement on the Storage and Disposition of Weapons-Usable Fissile Materials. I have only had a limited amount of time for this review and so I have confined my comments to the summary document, although I have made a cursory review of the other documents. I am particularly concerned about three issues: (1) why Los Alamos, which is scheduled to be a plutonium production facility was not considered as a site, while Oak Ridge, which has no other planned plutonium activities was considered as a plutonium site; (2) why, since Oak Ridge already has storage capability and is anticipated to be an ongoing site with appropriate safety and security provisions, other alternatives for storage are given consideration; and (3) why high risk, expensive disposition alternatives such as borehole disposition are being considered when mixed oxide use in reactors would provide an effective and profitable disposition or disposition in CANDU reactors would be acceptable with appropriate IAEA oversight and inspection.

It would appear that the experimental and wasteful disposition alternatives would also divert dollars that are badly needed for completing programs for waste disposition activities on which billions of dollar have already been expended.

I regret that there was not more involvement in the disposition hearings in Oak Ridge. This was an inevitable consequence of the combining of this hearing with the Stockpile Stewardship and Management Program and the assumption that the results of this hearing were inevitable and acceptable and that there were significant uncertainties about the SSMP hearing results. I believe that even though there was not much participation in the hearings, you would find that a decision to site a plutonium processing facility in Oak Ridge would lead to a major uproar, as would a decision to move uranium storage out of Oak Ridge.


 Sincerely, Robert B. Burditt

Retired Program Manager for Weapons Manufacturing Development, Y-12

Attachment

1/01.05.00

2/01.05.00

3/01.05.00

4/08.03.01

M-057

01 05 00 Comment Number 1

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

01 05 00 Comment Number 2

Under NEPA, DOE is required to look at a range of reasonable alternatives where HEU storage could be accomplished, and to compare the environmental impacts of storage at this range of sites. The storage decision will be based on technical, cost, schedule, and nonproliferation considerations as well as the analyses in the PEIS.

01 05 00 Comment Number 3

This PEIS analyzes the environmental impacts of a range of reasonable alternatives that are within acceptable environmental limits. Analyses of the cost, schedule, technical, and Nonproliferation Policy impacts of these alternatives are presented in separate documents to support DOE's ROD. The documents related to technical, cost, and schedule analyses were made available for public review beginning in late July 1996. The nonproliferation analysis was made available to the public beginning in October 1996.

08 03 01 Comment Number 4

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

DISPOSITION QUESTIONS

Page S-2 Why is 50 years considered long term? What happens after that? Has any thought been given to truly long range impacts, 100 years or more?	5/02.00.08
Page S-6 Why is Los Alamos not considered as a potential site, since this is the one place where Pu production activities are scheduled? How can Los Alamos do Pu production without a storage capability?	1/01.05.00 cont.
Page S-13 What validation do we have for the borehole concept?	6/01.05.00
Page S-13 How can we evaluate alternatives without knowing that we have an acceptable site?	7/01.04.00
Page S-14 Do we really believe the radiation field would deter a committed terrorist?	8/13.00.00
Page S-14 Why the push for EMT and vitrification over established oxide technology?	9/01.04.00
Page S-14 Why is the absence of an MOX (mixed oxide) facility considered a problem, but the absence of an EMT (electrometallurgical treatment) or vitrification facility is not considered a problem?	10/01.04.00
Page S-16 Would handling of weapons materials by Canada require a change in Canadian law rather than just government approval	11/06.05.09
Page S-31 Why is it that only at Pantex is the Pu facility considered to be in conflict with the land use plan?	12/09.01.04
Page S-33 Why are we so confident that there will be no spills or exposures with Pu, yet we projected significant releases when discussing beryllium at Oak Ridge?	13/09.09.08
What, if any, non-proliferation safeguards/ inspection provisions have been considered in this study?	14/01.06.00
Is there not an inherent contradiction between this study, which considers Oak Ridge as a site for plutonium operations, and the Stockpile Stewardship and Management Study, which says that locating plutonium will not be considered an option for any facility which is not already involved in plutonium operations?	15/11.01.05

M-057

02 00 08

Comment Number 5

Fifty years was used as the timeframe for long-term storage for the environmental analysis. To increase this to 100 years or more would lead to a highly speculative environmental analysis, which would be contrary to the intent of NEPA. Fifty years also covers reasonable facility life cycles.

01 05 00

Comment Number 6

The Borehole concept was recommended for consideration in the PEIS by the NAS in their 1994 study, *Management and Disposition of Excess Weapons-Usable Plutonium*. Substantial experience on boreholes has been developed by Russia and other countries. The technology for drilling holes of this depth, diameter, and straightness needed for this kind of Pu disposition exists in the United States today. Technical and licensing issues related to the Borehole concept have been considered by DOE in their technical evaluations of storage and disposition alternatives. The technology appears quite feasible, although more work would have to be done on this concept before it could be implemented.

01 04 00

Comment Number 7

All the sites analyzed for the Pu disposition alternatives are acceptable sites. DOE cannot select sites for these alternatives at this time since some alternatives need further actions. For example, to select a site for the Existing LWR Alternative, DOE needs to issue a Solicitation of Interest to the commercial sector and then determine, from responses to the Solicitation, which site would be most suitable for implementing the Proposed Action.

13 00 00

Comment Number 8

The intent is to make the surplus Pu as unattractive and inaccessible as spent nuclear fuels. A committed terrorist would have to have the technical specialists and equipment to transport these radioactive materials and conduct extensive remote chemical processing in order to extract the Pu for weapons use.

01 04 00 Comment Number 9

The PEIS attempted to analyze all alternatives consistently. No preference was expressed within the Draft PEIS for immobilization over other alternatives. A Preferred Alternative is identified in the Final PEIS. In addition to the environmental analyses reflected in the PEIS, DOE has conducted technical, schedule, cost, and policy evaluations of each alternative. All of these factors will be considered in reaching the ROD.

01 04 00 Comment Number 10

As described in this PEIS, for Pu disposition, various sites were used for analysis purposes to provide an estimate of their environmental impacts. For each alternative, existing facilities, if possible, were used to provide reference data. If there were no existing facilities, such as the case of MOX fuel fabrication, the conceptual design of a new facility was used for the environmental analysis.

06 05 09 Comment Number 11

Several agreements would require negotiations with the Canadians to implement the CANDU Reactor Alternative. No modifications to Canadian law have been identified.

09 01 04 Comment Number 12

As discussed in Section 4.3.4.1.1, page 4-526 of the Draft PEIS, Zone 4 is the proposed location for the vitrification facility at Pantex. The master plan of the *Pantex Plant Site Development Plan* designates Zone 4 for weapons and weapons components staging. Therefore, the potential action would be inconsistent with the current site development plan. However, Pantex could revise the site development plan in accordance with the proposal. The Proposed Action would be in compliance if this change is approved, resulting in no impact to land resources. Section 4.3.4.1.1 of the Final PEIS was revised to include this condition.

09 09 08

Comment Number 13

The human health risk of exposure from normal and accidental releases of Pu is considered for all of the alternatives and presented in this PEIS. Chapter 4 and Sections M.2 and M.5 quantify the impacts of normal operational and accidental releases of Pu. Beryllium operations that are conducted at ORR are not within the scope of the alternatives under consideration in the PEIS.

01 06 00

Comment Number 14

All long-term storage and disposition alternatives considered in the Storage and Disposition PEIS would be subject to IAEA safeguards and inspections if implemented. These provisions would apply until the materials achieved a proliferation-resistant condition. Independent of the PEIS, DOE has conducted a nonproliferation assessment of each technology alternative. The results of these assessments will be factored into the ROD on the Storage and Disposition PEIS.

11 01 05

Comment Number 15

The ORR storage site at the Y-12 Plant (Y-12) is a candidate storage site being analyzed in the Storage and Disposition PEIS since it currently stores weapons-usable HEU. Six DOE sites, including ORR and other generic and specific sites, are analyzed to provide perspectives for the extent of environmental impacts from the various reasonable alternatives.

BURNS, CASEY, IDAHO FALLS, ID
PAGE 1 OF 2

Casey Burns
 1438 Ashmont Apartment 1
 Idaho Falls, ID 83404
 April 15, 1996

Have you ever turned on the television, light bulb, or microwaved a hot dog? How would you like it if this were not possible not only for you, but for your children and grandchildren as well? Part of the electricity used to cook that hot dog, power the T.V., and light the light bulb comes from nuclear power. Isn't it interesting one nuclear reactor provides more power per day than all the hydroelectric dams on the Snake River combined, without damaging the habitat of the fish?

Idaho doesn't have to become a waste repository. What Idaho needs to become is a leader concerning the future of spent nuclear fuel. With your knowledge about the subject, surely you can see that the only feasible solution is to reprocess this spent fuel at the Idaho Chemical Processing Plant. There is one catch however, in order to process this spent fuel, there needs to be a waste repository site. There are sites already waiting to be opened at WIPP and Yucca Mountain. As Idaho was one of the leaders in the forefront of shutting these projects down, Idaho needs to be a leader in the reopening of these waste repositories. Then we can deal with Idaho's main concern: spent nuclear fuel being stored at the INEL.

The spent fuel will not go away, however the implementation of WIPP and Yucca Mountain, along with the restart of the Idaho Chemical Processing Plant, will provide a solution for the nuclear waste issue. What the Department of Energy needs to do is to implement a complete nuclear fuel cycle and, at the same time, show the American public the benefits of nuclear energy. If these two sites were operational, the Idaho Chemical Processing Plant could start up again and reclaim the fuel. Uranium is a natural resource that is NOT renewable and needs to be recycled.

There are people who would like the general public to believe that the nuclear industry is not safe. This is just not true! With the stringent guidelines implemented by both the United States Nuclear Regulatory Commission and the Department of Energy, we are safer today than we have ever been. There is

1/08.03.01

2/15.00.00

ID-003

08 03 01

Comment Number 1

The Department of Energy acknowledges the commentator's support for new missions at INEL. 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. However, the President's Nonproliferation Policy says the United States will not recycle Pu. The operation of the Idaho Chemical Processing Plant (ICPP) is beyond the scope of this PEIS.

15 00 00

Comment Number 2

Idaho National Engineering Laboratory is one of six candidate storage sites considered in the PEIS. DOE will base its final decisions on the results of environmental analyses, information from technical and economic studies, national policy objectives, and public input. Decisions regarding potential repositories for transuranic (TRU) waste, HLW, and spent fuel will be made by DOE pursuant to separate NEPA reviews. DOE is committed to removing spent nuclear fuel from INEL by 2035, although such spent fuel is beyond the scope of this PEIS. Similarly, the operation of the ICPP, and associated socioeconomic benefits, is beyond the scope of this PEIS.

BURNS, CASEY, IDAHO FALLS, ID
PAGE 2 OF 2

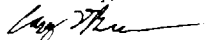
greater probability for accidents involving automobiles than in the nuclear industry. I'll bet you don't see people protesting against automobiles! There are also people who would like the public to believe the nuclear industry releases tons of pollutants into the atmosphere. This also is a complete fabrication. Whenever radiation is released accidentally, it is true that the measurement is in curies. However, when radiation is released on purpose, the measurement used is microcuries.

Go up Taylor Mountain in Idaho Falls early one morning and take a good look around, the haze you see is us, slowly killing the environment as well as ourselves. Each year over two hundred million tons of pollutants are introduced into the atmosphere by coal fired power plants! Of this two hundred million tons, there are significant quantities of radiation being released into the environment, including Radium-226! Are we supposed to bury our heads in the sand and do nothing about this? My answer is ABSOLUTELY NOT!! If we don't press forward with safe, clean, high efficient power plants, whether they be nuclear or not, I see nothing but a bleak future for generations to come.

Are you aware of the economic benefits spent nuclear Navy fuel has upon our state? By allowing spent nuclear Navy fuel shipments into Idaho along with the start up of the Idaho Chemical Processing Plant, we would be able to offset some of the layoffs that employees of the INEL have been suffering. This would contribute greatly to the economy of Eastern Idaho as well as the rest of the state. As Idaho's third largest employer, the INEL provides thirteen percent of the tax base. Where is that thirteen percent going to be cut from the budget? Who is going to take responsibility, and provide for the families of the workers who have lost their jobs!?

The public is not educated well enough about the nuclear age to feel safe about it. In lieu of this, I encourage you to visit one of the Radiation Safety Programs at the Eastern Idaho Technical College in Idaho Falls, or at Idaho State University in Pocatello. I would be very interested in hearing your feelings and policies concerning the nuclear industry and specifically, the Idaho National Engineering Laboratory.

Sincerely,



Casey Burns
Radiation Safety Student
Eastern Idaho Technical College

2/15.00.00
cont.

ID-003

CAMPAIGN 1
PAGE 1 OF 1

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

Comments on Stockpile Stewardship and Management (SSM) PEIS: I support the selection of Pantex for weapons assembly and disassembly functions. I strongly favor the continuation of high explosives functions at Pantex, and oppose any plan to move these functions to the national labs. Since Pantex is the most cost-effective DOE facility and enjoys the strongest local support, I also support the addition of other environmentally sound stewardship and management functions at Pantex.

Comments on Fissile Materials Storage and Disposition (MD) PEIS: I believe that Pantex should be chosen as the location for fissile materials storage and disposition functions. Pantex already stores surplus plutonium, and has the needed safety and security capabilities to cost-effectively accommodate an expanded role. Fair budgetary comparisons, strong local support, and national security concerns, should lead DOE to choose Pantex for new fissile material storage and disposition functions that are conducted in a safe and environmentally sound fashion.

1/08.03.01

Name: John McKinnon Address: 71 Box 50741

TX-001

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.



TEXAS HOUSE OF REPRESENTATIVES

**Committee on
Environmental Regulation**
74th Texas Legislature

Warren Chisum
Chairman

Mike Jackson
Vice Chairman

March 27, 1996

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).

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 effect 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 a 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. Labor costs, utility rates, 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 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 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

1/09.00.04



Derek Seal, Committee Clerk
Office: Texas Capitol Extension, Room E2-154 • 512-461-0778
Mail P.O. Box 2910 • Austin, Texas • 78768-2910 • FAX 512-461-5898
Robert Saunders, Edmund Kuempel, Mark Stiles
Jerry Yost, Robert Talton, Dawnna Dukes, Charlie Howard

M-006

09 00 04

Comment Number 1

Potential environmental consequences of each alternative at Pantex were analyzed in the PEIS. Results of these environmental analyses will be given full weight, along with other factors such as cost, technical risk, schedule, and national security requirements, in the process of selecting the storage and disposition strategy. Pantex will continue to operate in compliance with all Federal, State, and local regulations.

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.

2/08.03.01

Pantex Letter page 3 of 4

the statement in the draft PEIS that there are no advantages in doing high explosives at Pantex as opposed to the national lab. 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 HX 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 and efficient manner for more than forty 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, understanding 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 the DOE with minimal cost and difficulty. Pantex currently maintains more than 1,000 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.

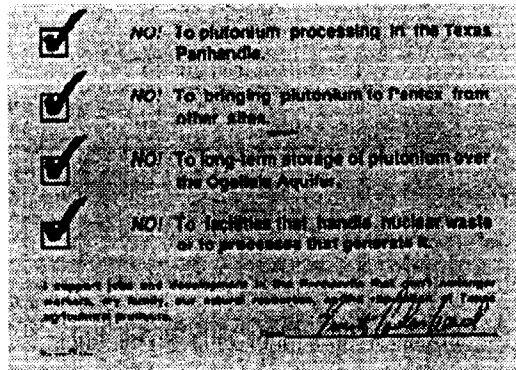
IV. Conclusion: Based upon these reasons, I respectfully urge DOE to designate Pantex as the preferred alternative site for all existing and new strategic management and surveillance functions as well as consideration of all plutonium storage and disposition and any related functions. Again, thank you for the opportunity to comment on these documents.

Sincerely,

Darren Chasum
Warren Chasum

WC/sg

M-006



1/08.03.01

2/08.03.01

PC-004

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.

08 03 01

Comment Number 2

Comment noted.

CAMPAIGN 4
PAGE 1 OF 1

Comment Form

United States Department of Energy

NAME: (Optional) TERENCE A. Klute
 ADDRESS: Rt. 4 Box 9636 Richland, WA 99352
 TELEPHONE: (509) 627-1452

Sir, I am writing this to inform you that I want to be counted as in favor of Option #1 that is for the plutonium brown concept.

Thanks for asking,
Terence A. Klute

1/08.03.01

WA-012

08 03 01

Comment Number 1

The Department of Energy acknowledges the commentator'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.

April 24, 1996

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

I am seriously concerned that the Programmatic Environmental Impact Statement prepared for the Department of Energy regarding storage and disposition of weapons-usable fissile materials suggests Pantex in Carson County, Texas as a likely place for plutonium pit disassembly and conversion. This document fails to address the negative effects plutonium missions could have on the people, agriculture, and water of the Texas Panhandle.

Processing plutonium generates an incredible amount of radioactive waste as well as other undesirable contaminants. These types of operations have contaminated other parts of the country and the cost has been high - in lives, land use, and billions of dollars in cleanup.

The Texas Panhandle is prime agricultural farmland. Nothing should ever be done at Pantex that would risk this valuable part of the country. The food produced here is shipped all over the world. The quality of these food products would be questionable if Pantex is used for plutonium storage or processing.

It is estimated that one quarter of all jobs in the Panhandle are agriculture related. The loss of these jobs would devastate this area. Contamination of farmland or water resources in such a productive part of the country would affect the entire world. After all, food is a commodity all need. It must be protected.

The Ogallala aquifer is the source of groundwater for drinking and irrigation in Texas and seven other food producing states. Pantex is located over this aquifer and operations there have already contaminated the water bearing sands above the aquifer. We must not allow any water resource so important to become unsafe or unusable for any reason. The processing of plutonium would surely do this.

Therefore, plutonium should not be stored or processed at the Pantex plant. Shipping plutonium or highly enriched uranium to Pantex from already contaminated sites is not in the best interest of Texas or the rest of the country. The suggestion that the DOE use Pantex as the site for plutonium storage, processing, or waste management is shortsighted and ill conceived. Following such a suggestion puts us all at risk.

Sincerely,


Constance Q. Bhasker

1/09.00.04

2/08.03.01

M-051

09 00 04

Comment Number 1

Radiological and chemical releases resulting from the Proposed Actions for normal operations are analyzed in the PEIS and would be within Federal and State regulatory limits. Therefore, the quality of agriculture in the Panhandle would not be affected, and agriculture-related employment in the Panhandle region would remain unaffected.

Also, current and future operations at Pantex are not expected to affect the water quality of the Ogallala Aquifer. However, the PEIS acknowledges that this aquifer is being depleted (that is, the current withdrawal is exceeding the current recharge); the PEIS analyzes whether and the extent to which potential Pantex operations under the various alternatives could contribute to the depletion of the Ogallala Aquifer.

Current and future operations at Pantex are not expected to impact the soil used for agriculture and farming in the Pantex region. All activities will be limited to Pantex and any impacts to the surrounding areas are within Federal, State, and local regulatory limits.

The PEIS includes analyses on the radiological and chemical impacts to workers and the public from both normal operations and accidents. These analyses also address the effects to local plant and animal resources as well as the effects on prime farmland.

08 03 01

Comment Number 2

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.

CAMPAIGN 6
PAGE 1 OF 1

April 22, 1996

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

In a democracy the voices of all people should be listened to and considered in decision-making when policies so greatly affect grassroots America. Being concerned with the preservation of rural America, I am seriously troubled by the Programmatic Environmental Impact Statement prepared for the Department of Energy regarding Storage and Disposition of Weapons-Usable Fissile Materials.

Although 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 in active warheads would be stored at Pantex - 20,000 pits, plus much of the plutonium now at Rocky Flats Plant, Colorado; Hanford, Washington; Los Alamos, New Mexico; Savannah River, South Carolina; 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 dismantling/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.

This document states there would be few negative effects from doing any and all of these 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 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.

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?

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.

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

Sincerely,

Marjorie De Long
Richard De Long

— 0 —

1/09.00.04

1/09.00.04
cont.

2/08.03.01

M-062

09 00 04

Comment Number 1

Radiological and chemical releases resulting from the Proposed Actions for normal operations would be within Federal and State regulatory limits. Therefore, the quality of agriculture in the Panhandle would not be affected, and agriculture-related employment in the Panhandle region would remain unaffected.

Also, 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), and since Pantex operations contribute to the depletion of the Ogallala Aquifer, impacts to the aquifer were analyzed in the PEIS.

Current and future operations at Pantex are not expected to impact the soil used for agriculture and farming in the Pantex region. All activities will be limited to Pantex and any impacts to the surrounding areas are within Federal, State, and local regulatory limits.

The PEIS includes analyses on the radiological and chemical impacts to workers and the public from both normal operations and accidents. These analyses also address the effects to local plant and animal resources as well as the effects on prime farmland.

08 03 01

Comment Number 2

The Department of Energy acknowledges the commentator'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.

<input checked="" type="checkbox"/>	Yes	To plutonium processing in the Texas Panhandle.	1/08.03.01
<input checked="" type="checkbox"/>	Yes	To bringing plutonium to Pantex from other sites.	
<input checked="" type="checkbox"/>	Yes	To long-term storage of plutonium over the Ogallala Aquifer.	2/08.03.01
<input checked="" type="checkbox"/>	Yes	To facilities that handle nuclear waste or to processes that generate it.	3/08.03.01
I support jobs and development at the Pantex site, but don't endanger others, my family, our natural resources, or the reputation of Texas agricultural products.			1/08.03.01 cont.

PC-069

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.

08 03 01 Comment Number 2

If Pantex is chosen for long-term storage mission, storage facility design and operations would assure safety, health, and integrity of the Ogallala Aquifer.

08 03 01 Comment Number 3

Any generation and handling of nuclear waste resulting from fissile materials storage and disposition activities will include measures that ensure public and worker health and safety.

CAMPBELL, DAWN, WASHINGTON, NJ
PAGE 1 OF 1

June 10 1996
45 Broad St
Wash. N.J. 07882

U.S. DOE
Office of Fissile Material Disposition
P.O. Box 23786
Wash. D.C. 20026-3786

Storage and Disposition of Weapons-Usable Fissile
Materials: MOX.

We are disturbed about proposals to
use Plutonium in nuclear power plants.
Do we need any more opportunities
for terrorists to acquire fissile
materials.

New new plants to process MOX are
possible in the billion dollar class;
which nuclear waste products
worsened.

We urge you to stop this
outrageous proposal.

Sincerely yours,
Dawn Campbell

1/08.03.01

M-291

08 03 01

Comment Number 1

The Department of Energy acknowledges the commentator'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.

Canadian Embassy



Ambassade du Canada

501 Pennsylvania Ave., N.W.
Washington, D.C. 20001

June 6 1996

DOE-Office of Fissile Materials Disposition
c/o SAIC-PEIS
P.O. Box 23786
Washington, D.C. 20026-3786

Attn: Mr. J. David Nulton
Director
NEPA Compliance and Outreach

Dear Mr. Nulton:

We are writing to comment on the Storage and Disposition of Weapons-Usable Fissile Materials Draft Programmatic Environmental Impact Statement (DOE/EIS-0229-D) (the PEIS). We refer specifically to the CANDU reactor alternative, which is one of the nine primary alternatives assessed in the PEIS for the disposition of surplus weapons plutonium. The following is provided to give you a Canadian Government perspective on this issue.

At the April 20, 1996 Summit on Nuclear Safety and Security, leaders agreed that international cooperation is needed for the safe management and use of plutonium no longer required for defense purposes. In support of this objective the Canadian Prime Minister, the Right Honourable Jean Chrétien, announced that Canada had agreed, in principle, to the concept of using this plutonium in a "once-through" mixed-oxide (MOX) fuel for Canadian-based CANDU reactors. Rendering the surplus plutonium effectively inaccessible for weapons purposes is seen as a significant benefit to non-proliferation objectives.

Canada is also exploring with the Government of Russia the use of MOX fuel from Russian nuclear weapons in Ontario Hydro CANDU reactors. There may well be some synergies if the United States and Russian "Swords into ploughshares" programs proceed in parallel. To this end, further studies and assessments of the CANDU option are being conducted by Atomic Energy of Canada Limited (AECL) and Ontario Hydro in collaboration with U.S. and Russian experts. When taking decisions on continued support for this initiative, the Government of Canada will take careful note of the results of these further assessments and the evolving views of the Government of the United States.

1/01.03.00

F-051

01 03 00

Comment Number 1

The Department of Energy appreciates the interest of the Canadian Government in this important international activity. DOE has worked closely with Canada to determine if such an alternative would work, and if so, how to best implement it.

CANADIAN EMBASSY, WASHINGTON, DC,
BRIAN MORRISEY
PAGE 2 OF 2


Canada has been a Party to the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) since it entered into force in 1970. Through the NPT, Canada made an international commitment not to develop or acquire nuclear weapons. Canada has a long history of initiating and supporting measures to strengthen the international non proliferation regime. The CANDU option for reducing the accessibility of surplus weapons material -- whether of U.S. or Russian origin -- is entirely consistent with Canada's nuclear weapons non-proliferation policy. The full scope of Canada's nuclear program is covered by International Atomic Energy Agency (IAEA) safeguards. The IAEA has confirmed its ability to reliably safeguard CANDU reactors.

Canadian government policy does not exclude the use of plutonium as a reactor fuel, but the cost of producing plutonium makes it an uneconomic alternative to natural uranium for the CANDU reactor. Using MOX fuel from existing plutonium in a productive endeavour, such as the generation of electricity, could make economic sense for Canada. The CANDU MOX initiative is confined to the possible use of existing plutonium no longer required for defense purposes and is not related to a commercial plutonium fuel cycle.

MOX fuel fabrication using reactor grade plutonium is now a well known technology employed in Germany, France, Belgium, and Britain, and the use of weapons grade plutonium would be expected to provide an added advantage because of its lower radioactivity. Techniques for transporting and handling MOX fuel for the generation of electricity have been refined over the last 10 to 15 years. The composition of the spent fuel produced by the MOX fuel would be quite similar to that which is currently being produced using natural uranium. The storage of spent MOX fuel would be managed as an integral component of the Canadian spent fuel program. However, the amount of spent MOX fuel produced will be about 15% less than that from the use of natural uranium fuel to generate the same amount of electricity.

If the DOE selects Ontario Hydro CANDU reactors for the plutonium disposition program, implementation would be subject to Canadian federal and provincial policies and regulations. These would include detailed, satisfactory assessments of health, safety and environmental aspects before issuance of an Atomic Energy Control Board (AECB) operating license to Ontario Hydro for the use of MOX fuel. We expect that the public reviews included in the AECB assessment process would focus on issues such as the safe and secure transportation of MOX fuel from the international boundary as well as matters specific to the reactor site.

Yours sincerely,


Brian Morrisey
Minister-Counsellor
Economic and Trade Policy

1/01.03.00
cont.



CANADIAN ENVIRONMENTAL LAW ASSOCIATION
L'ASSOCIATION CANADIENNE DU DROIT DE L'ENVIRONNEMENT

June 17, 1996

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

VIA FAX 202-586-2710

RE: STORAGE AND DISPOSITION OF WEAPONS-USABLE FISSILE MATERIALS
DRAFT PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

Dear Sirs/Mesdames,

The Canadian Environmental Law Association (CELA) is a public interest legal clinic within the Ontario Legal Aid Clinic system, and has a mandate to represent citizens' and environmental groups and low income individuals, and promote law reform and public education about environmental matters. CELA has been involved in nuclear issues since the organization was founded in 1970. Please accept our apologies for the lateness of this submission. We hope you will still be able to consider it.

We wish to express our opposition to the importation of plutonium fuel for use in the Bruce "A" Nuclear Generating Station. We have followed this matter closely in recent months - since public information has finally become available - and we have reviewed the submission of Nuclear Awareness Project - colleagues of ours in Canada. We strongly support the Nuclear Awareness Project Submission to the U.S. Department of Energy on the matter of mixed-oxide (MOX) fuel use in CANDU reactors.

It appears that your department should be very concerned about the quality of the report from Atomic Energy of Canada Limited. The report contains overly optimistic and even erroneous assumptions about reactor rehabilitation and performance expectations. Such flaws call into question the validity of the entire report.

517 COLLEGE STREET • SUITE 401 • TORONTO • ONTARIO • M6G 1A2
TELEPHONE: 416/960-2284 • FAX 416/960-9392 • E-MAIL: cel@webnet.net

1/08.03.01

F-069

08 03 01

Comment Number 1

The Department of Energy acknowledges the commentator'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 concerning the CANDU Reactor Alternative. In addition, according to the Canadian Government, implementation of the CANDU Reactor Alternative would be subject to Canadian Federal and Provincial policies and regulations and would require health, safety, and environmental assessments before issuance of a Canadian license. (See the letter from the Canadian Embassy in Washington, DC, dated June 6, 1996, reproduced in this CRD.) Should the CANDU Reactor Alternative be chosen for Pu disposition, further negotiations between the U.S. and Canadian Federal and Provincial Governments will be required before implementation, as well as business negotiations with reactor owners.

CANADIAN ENVIRONMENTAL LAW ASSOCIATION, TORONTO, ON,
KATHLEEN COOPER
PAGE 2 OF 3

The excessive cost of this proposal appear to have been misrepresented. The cost alone of rebuilding Bruce "A", rehabilitating reactors and upgrading security on the site could approach \$1 Billion. These costs would be additional to the already excessive costs of running these reactors. Ontario Hydro has been misrepresenting its nuclear program for years as a bargain to Ontario electricity ratepayers. Apparently, this latest proposal is being similarly misrepresented. Ontario's electricity ratepayers are not interested in paying for yet another wasteful megaproject. In the current climate of rate freezes and increased competition, this proposal would seem to be on very shaky economic ground.

1/08.03.01
cont.

Another dubious assumption contained in this proposal concerns the management of the spent fuel. The ongoing Federal Environmental Assessment Panel addressing Canada's high level nuclear waste is considering a proposal from Atomic Energy of Canada Limited that has been found to be technically deficient by many reviewers including the Atomic Energy Control Board, Environment Canada and the Review Panel's own Scientific Review Group. Nor does this proposal, which took fifteen years to prepare, include consideration of spent MOX fuel. Hence, the assumption that this spent fuel can be rolled into that Environmental Assessment process is unwarranted and premature.

We wish to echo the concern expressed by Canadian environmental organizations that the use of MOX fuel would violate the spirit of Canada's non-proliferation stance by removing the separation between Canadian nuclear programs and the military nuclear programs of foreign powers. Many Canadians are opposed to the prospect of this country becoming a dumping ground for foreign military radioactive waste. Canadians are similarly concerned that the use of MOX fuel would create enormous security problems to avoid the theft or diversion of plutonium.

2/15.00.00

Finally, the public health and environmental risks of this proposal are unacceptable. Ontario Hydro's nuclear program already contributes to radioactive contamination, especially tritium pollution which is found at elevated levels near all CANDU reactors. The risk of severe accidents increases as Ontario Hydro's reactors age. And, the AECL report regarding the MOX fuel proposal is deficient in a key area of public health and environmental safety. Plutonium is one of the most carcinogenic substances known and this proposal poses unacceptable risks of criticality accidents. Further, it leaves a proper assessment of criticality risks to the licensing stage. Not only is it unacceptable to downplay and avoid evaluation of such serious environmental and public health risks at this early stage, there is no guarantee that a full environmental assessment will occur at the licensing stage.

3/09.09.08

This proposal has been accompanied by an unusually level of secrecy, manipulation of information and inadequate public consultation. The misrepresentation of this initiative in the international media as a "nuclear to ploughshares" success story rarely, if ever, provided Canadians with the full story. We strongly object to this proposal and urge the U.S. Department of Energy to rule out the option of using CANDU reactors located in Canada for plutonium disposition purposes. We support our colleagues in the environmental movement in calling on your department to choose the alternative of immobilizing plutonium within the United States.

4/08.02.00

F-069

15 00 00

Comment Number 2

Comment noted. Prior to implementation, further negotiations between the U.S. and Canadian Federal and Provincial Governments will be required, as well as business negotiations with reactor owners. These negotiations will include further environmental analyses, as appropriate. Appropriate security will be maintained during the MOX fuel fabrication, transportation, and reactor cycle for the material.

09 09 08

Comment Number 3

The Department of Energy is working with Canadian Government and industry to conduct environmental and health risk analyses for activities in Canada to meet relevant regulatory requirements in both Canada and the United States. These analyses would include impacts from emissions, age of facilities and potential severe accidents, as well as environmental and public health risks.

08 02 00

Comment Number 4

Proposed activities and environmental analyses in the United States have been reviewed with the public through a series of public meetings and a comment period. If CANDU Reactor Alternative is chosen, it is DOE's understanding that in Canada there will be appropriate environmental and related analyses, and that the public will be involved in this process. DOE acknowledges the commentator's support for the Immobilization Category of Pu disposition alternative.

CANADIAN ENVIRONMENTAL LAW ASSOCIATION, TORONTO, ON,
KATHLEEN COOPER
PAGE 3 OF 3

We would appreciate a reply to this letter and would like to be added to any of your mailing lists for informing the public about your decisions on this matter. By way of a final question, could you also clarify for us your policy on subsidizing demands or foreign utilities using MOX fuel made from DOE plutonium?

Thank you. Once again, our apologies for the lateness of this submission.

Yours truly,

CANADIAN ENVIRONMENTAL LAW ASSOCIATION


Kathleen Cooper
Researcher

F-069

CENTER FOR RADIOACTIVE WASTE MANAGEMENT,
ALBUQUERQUE, NM, WERNER LUTZE
PAGE 1 OF 6



The University of New Mexico

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e-mail: BRBL@unm.edu

CeRaM

CENTER FOR RADIOACTIVE WASTE MANAGEMENT

Albuquerque, May 1, 1996

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

Dear Sir/Madam,

Enclosed please find our comment (5 pages including title page and references) on document DOE/EIS-0229-D

Storage and Disposition of Weapons-Usable Fissile Materials
Draft Programmatic Environmental Impact Statement
issued in February 1996.

Yours truly,

Werner Lutze,
Professor and Director

M-213

**The Zircon Option
for Storage and Disposal of Surplus Plutonium**
A 4-Billion-Year Track Record Points to a Simple Solution

Center for Radioactive Waste Management (CeRaM)
The University of New Mexico
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Dr. Werner Lutze, Director

April 1996

M-213

CENTER FOR RADIOACTIVE WASTE MANAGEMENT,
ALBUQUERQUE, NM, WERNER LUTZE
PAGE 3 OF 6

The Case for the Zircon Option

We propose that the U.S. convert its surplus weapons plutonium (WPs) into a ceramic waste form by chemically bonding it with one of earth's most durable minerals: zircon ($ZrSiO_4$). Because zircon is so durable and because WPs bonds so strongly with it, this waste form will.

1/08.03.01

- guarantee safe storage,
- provide unparalleled integrity for deep borehole disposal, or
- with the addition of Cesium-137, easily meet standards for disposal in a civilian repository.

This paper summarizes the merits of the zircon option. We are submitting it as a formal comment on the U.S. Department of Energy's February 1996 draft PEIS on disposition of WPs and are circulating it widely within the policy and scientific communities. We welcome requests for more information.

Our proposal draws on both scientific disciplines and the broad, interdisciplinary approach that characterizes the University of New Mexico's Center for Radioactive Waste Management. We believe scientific, technical, management, and institutional factors together converge to support the zircon option, which capitalizes on physical assets unique to zircon and on key assets zircon shares with the vitrification and MOX fuel options, while avoiding their severe liabilities.

The bottom line. The zircon option delivers a high level of technical and managerial confidence coupled with a low level of institutional risk, and can support either borehole or repository disposal.

An unparalleled database. Zircon is a ubiquitous mineral, and it is ubiquitous because it is durable—so durable that it serves as the standard for age-dating geologic materials. The vast literature on zircon (well over 6,000 publications) provides exceptional understanding of its characteristics. We know with a high degree of certainty how it behaves under a broad range of physical and chemical conditions and over time periods of up to 4 billion years.

Unparalleled performance. In a repository environment, the zircon waste form will outperform both glass and the spent fuel resulting from the MOX fuel option. For a deep borehole, neither glass nor spent MOX fuel are disposal options, whereas the zircon waste form can easily meet borehole disposal standards.

Repository disposal. Zircon can both immobilize and stabilize WPs; its natural affinity with Pu creates a strong chemical bond. Moreover, the durability of that bond can be confirmed through long-term performance assessments drawn from zircon's vast database. The database for predicting how glass will perform is much more limited in scope and geologic time.

Because glass corrodes in groundwater much faster than zircon, it is at greater risk of plutonium release and criticality. The zircon waste form, far more durable, thus offers more flexibility in repository design. And while optimum waste loading will be determined by several factors including safeguard and criticality considerations, zircon can accept up to 10% Pu by weight, with an upper limit still to be established; borosilicate glass can accept only a much smaller percentage. Accordingly, R&D is needed to create glasses that are both more durable and capable of accepting a larger percentage of Pu.

Because zircon is twice as dense as glass it will yield lower volumes of waste and, depending on fabrication processes, may yield them faster, accelerating the schedule for WPs disposition.

Deep borehole disposal. Not only will the zircon waste form itself be exceptionally stable; surrounding it with a barrier of WPu-free zircon in a granitic site that itself contains natural zircon will further constrain WPu-bearing zircon from corroding. The zircon waste form will mimic neighboring and resident zircon; that is, it will most likely do what zircon almost always does, even under high temperatures and high pressures, under

M-213

08 03 01

Comment Number 1

The Department of Energy acknowledges the commentator's support for the Immobilization Alternative. During the screening of alternatives for inclusion in the PEIS, various immobilization forms were considered. The PEIS analyzes immobilization in ceramic and glass forms. The specific ceramic form is 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. Decisions on disposition of weapons-usable fissile materials will be based upon environmental analyses, technical and economic studies, national policy considerations, and public input.

CENTER FOR RADIOACTIVE WASTE MANAGEMENT,
ALBUQUERQUE, NM, WERNER LUTZE
PAGE 4 OF 6

conditions of radiation damage, and in the presence of groundwater: it will tend to stay where it is and change very little.

An existing fabrication technology. To immobilize WPU in zircon it may be most expeditious to simply adapt the existing MOX fuel fabrication process, substituting zirconium oxide and silicon dioxide for uranium oxide. The ceramic pellets that constitute the final waste form can be containerized for storage and transport. To minimize transportation, a fabrication facility could be sited at Pantex, where most WPU is stored; but any site suitable for the MOX fuel or vitrification options will be suitable for zircon, too.

A reliable schedule. The longer it takes to implement an option, the longer WPU remains exposed to the risk of theft or diversion. Consequently, a reliable schedule is itself a safeguard. On this crucial point, zircon has clear advantages over both the MOX fuel and vitrification options.

MOX fuel. This option is technically proven, but if it is implemented domestically it is likely to encounter protracted resistance that will retard its schedule. Not only must a MOX fabrication facility be licensed; reactors must obtain license amendments to burn MOX fuel. Critics who oppose nuclear power, critics who fear that the MOX option will increase risks of proliferation domestically, and critics who fear that the MOX option will send an unwanted signal to other nations—all may intervene in all licensing proceedings. They may also oppose shipments of MOX fuel to nuclear power plants. The MOX fuel option is thus exposed to the risk of delay on numerous fronts.

Vitrification. Plutonium has only been vitrified in isolated laboratory experiments. Scaling these experiments up to a production process is without precedent and will pose significant technical uncertainties that must be accurately defined and expeditiously resolved. But any schedule for doing this is called into serious question by the Savannah River vitrification facility for defense waste: despite ample funding it has experienced a long history of delays and a recent shutdown. A schedule for vitrifying WPU is essentially a schedule for what could become another prolonged and costly R&D program. It must therefore be viewed as highly speculative.

Zircon. While technical questions must be resolved for zircon, too, because this option can adapt a proven technology—MOX fuel fabrication—questions can be more easily defined and answered than for glass, and forecasts of schedule and cost will be more reliable, coming from market-driven private sector competitors. And unlike the MOX fuel option, the zircon option should not attract intervenors who can retard its schedule.

Reliable—and efficient—quality control (QC). The integrity of the waste form depends on reliable QC. Zircon can use the QC process successfully used in MOX fuel fabrication, but QC for vitrifying WPU has yet to be developed. Zircon enjoys other QC advantages, too. Because each zircon ceramic pellet will be homogenous, each pellet sampled will accurately represent the whole; but glass may not always be homogenous. And because zircon pellets are so much smaller than glass logs, if QC identifies defects, fabrication can be promptly halted with minimal disruption and loss of "product."

Safeguards and criticality controls. An adaptation of an existing fabrication process that already meets safeguard and security standards may more readily meet those standards than a large-scale vitrification process for WPU that has no precedent. For criticality control, the zircon option can meet standards during fabrication and storage; vitrification will require further R&D. And as noted above, after disposal zircon is at far less risk of criticality than glass, which, being less stable, could release WPU more quickly.

A precedent for licensing. DOE's commitment to external regulation ensures that WPU disposition will be subject to oversight in a public forum; indeed, that forum may be defined by Congress. Whoever the regulators, they will find no precedent for licensing vitrification, whereas the MOX fuel fabrication process offers ample precedent abroad. And whatever the licensing process, performance assessment criteria will have to be satisfied; zircon's 4-billion-year track record will be an enormous assist in meeting them.

08 03 01

Comment Number 2

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 3

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.

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3/08.03.01

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CENTER FOR RADIOACTIVE WASTE MANAGEMENT,
ALBUQUERQUE, NM, WERNER LUTZE
PAGE 5 OF 6

An unambiguous signal of non-proliferation. The potential for proliferation of nuclear materials, particularly within the former Soviet Union, is generating grave international concern. At best, the MOX fuel option appears to be a solution in search of a problem; but within this context, it is a problem: by keeping plutonium in use it will perpetuate security concerns. Moreover, it will do so for benefits that are trivial and even dubious. The electricity yielded by the MOX option would equal a mere few months of the world's total supply of nuclear-generated electricity, and because MOX fuel will cost more than the fuel utilities now burn, they will want subsidies to buy it.

2/08.03.01
cont.

We strongly believe that any benefit derived from the MOX option is far eclipsed by the strategic benefits of a clear commitment to non-proliferation. U.S. selection of irreversible geologic disposal signals that commitment, and can help lead other nations in the direction of greater global security.

4/01.06.00

Definitive closure. The zircon option, like vitrification, offers not just "disposition" of a policy issue, but literal, physical, disposal of WPs. By contrast, after MOX fuel is burned in reactors, up to 50 percent plutonium will remain, requiring further "disposition." Because US policy does not permit reprocessing, the MOX fuel option defers this problem to a future policy scenario yet to be defined.

Winning public acceptance. Finally, DOE must sell the option it selects—to Congress; to the scientific, technical, and policy communities; to the international community; to the American public. The simpler the option, the more readily it can be understood and the more easily it will win acceptance.

Zircon's literally elemental nature, the durability attested to by its 4-billion-year performance record, the availability of a proven technology for fabricating the waste form, and the appeal of a definitive policy signal sent by irreversible disposal can together help win wide popular support for a policy that says, in simple terms,

Using one of earth's oldest, most durable minerals, we will convert surplus weapons plutonium into an extremely stable waste form that guarantees safe storage above ground and safe disposal deep in the earth.

Fast-tracking the zircon option. Moving aggressively to marshal domestic and international resources, and engaging nuclear states in the former Soviet Union in collaboration, DOE can pursue work in parallel on several fronts.

Fabrication: Solicit from MOX fuel fabricators cost and schedule estimates for adapting that process.

Regulation: Petition the Nuclear Regulatory Commission to examine how other nations regulate MOX fuel fabrication and how the US can adapt these procedures.

R&D and engineering analyses: 1) Verify chemical durability/long-term performance of the zircon waste form under deep borehole and repository conditions. 2) Determine adaptation of the MOX fuel fabrication process. 3) Determine optimum method for adding Cesium-137 to meet spent fuel standard. 4) Determine optimum percent waste loading. 5) Resolve criticality issues.

6) Optimize parameters for safeguards: waste loading, size of the waste form, number of waste-form units. 7) Conform zircon waste form to waste-acceptance specifications developed for disposal.

The United States policy and scientific communities have the talent and resources to operationalize the zircon option quickly, establishing it as the exemplary model that will make the world a safer place. We urge its prompt adoption.

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01 06 00

Comment Number 4

Comment noted.

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CHAMBLISS AND BANNER PLIC, CHATTANOOGA, TN,
CHARLES N. JOLLY
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April 5, 1996

The Honorable Hazel O'Leary
Secretary of Energy
Forrestal Building
1000 Independence Avenue S.W.
Washington, D.C. 20585

Dear Mrs. O'Leary,

I am the Democratic candidate for Congress from the 1st District of Tennessee. On April 1st of this year I attended the DOE public hearing on the Programmatic Environmental Impact Statement for Stockpile Stewardship and Management as both a concerned citizen and a candidate for Congress. After participating in that public hearing I wish to advise you personally of my deep concern that this administrative proceeding is seriously flawed.

At the risk of stating the obvious, this entire proceeding is about downsizing of DOE's mission in an entirely new geopolitical context. It is obvious that there are several sites, notably including both Los Alamos and Oak Ridge, competing for the stockpiling and stewardship functions which will remain once downsizing is completed.

It is also apparent that a downsizing which simply involved a reduction of existing stockpiling and stewardship activities at existing sites would require no new environmental impact statement. That a FEIS has been prepared at all speaks eloquently to the fact that the DOE plan from the outset has been to perform stockpile and stewardship activities either at new locations and/or to a much greater extent than previously.

The documents ostensibly comprising the underlying administrative record in the FEIS amount to more than five inches of reading material of a highly complex and technical nature. Participants at the public hearing, and especially public

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CHAMBLISS AND BANNER PLIC, CHATTANOOGA, TN,
CHARLES N. JOLLY
PAGE 2 OF 3

The Honorable Hazel O'Leary
April 5, 1996
Page 2

officials were highly critical of DOE's procedure of making these background documents available only a matter of days before the hearing seriously impairing the public's ability to familiarize themselves with the data and assumptions which underlie the PEIS.

The proceedings were compromised further by the combination of the hearings on stockpile and stewardship PEIS with the hearings on the Storage and Disposition of Weapons PEIS with all of its attendant administrative record. And, although the underlying documents were only available at the last minute there was an abundance of visual aids and even subject specific video which obviously had been prepared well in advance of the Oak Ridge hearing.

The net impression was that DOE was not proceeding even-handedly to obtain informed input on a question still undecided. Rather the impression was that DOE was attempting to overwhelm Oak Ridge with paper and slick presentations in an attempt to sell a preordained conclusion which favored Los Alamos without regard for critical facts and factors which favor Oak Ridge.

In this context it should hardly be surprising that the PEIS hearings have been viewed with public skepticism and not inconsiderable resentment. DOE has further compounded an already acute credibility problem by assigning major responsibility for development of the PEIS administrative record to Los Alamos personnel when it is obvious on its face that Los Alamos is one of the sites competing for future stewardship activities. This action destroys any illusion of fairness or objectivity, and instead conjures up visions of foxes designing henhouses.

It is my feeling that the administrative record of this proceeding so abundantly demonstrates a lack of even-handedness that a defensible conclusion to this proceeding is impossible. I urge you to put an immediate end to the travelling road show presenting the Stockpile and Stewardship PEIS and the Storage and Disposition of Weapons PEIS and instead develop a process whereby each of the competing locations can be objectively evaluated in a fair and objective process.

Based on my own participation and first hand observation, I would find it impossible to defend DOE's decision making process in this proceeding as it has unfolded.

1/08.02.00

1/08.02.00
cont.

2/08.02.00

M-251

08 02 00

Comment Number 1

The combining of meetings was done at the specific request of the public near several DOE sites and not to have any negative impact on the public review process. This request was based upon a need to hear how these documents were related to one another and to avoid requiring public attendance at several meetings spanning several days. The Draft PEIS and reference documents were made available in advance of the public meetings.

08 02 00

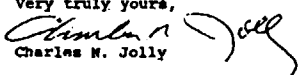
Comment Number 2

The Department of Energy does not view the NEPA process as a competition among sites. It is viewed as a process for determining the environmental impacts for a series of alternatives and specific sites. This information then can be presented, along with other information to the decisionmaker so that good sustainable decisions can be made.

CHAMBLISS AND BANNER PLIC, CHATTANOOGA, TN,
CHARLES N. JOLLY
PAGE 3 OF 3

The Honorable Hazel O'Leary
April 5, 1996
Page 3

I would appreciate your personal response to this letter at your earliest opportunity and would further request that a copy of these remarks be placed in the administrative record of both the Stockpile and Stewardship PEIS and the Storage and Disposition of Weapons-Usable Fissile Materials Draft PEIS.

Very truly yours,

Charles N. Jolly

cc: U.S. Department of Energy
Office of Reconfiguration
PO Box 3417
Alexandria, Virginia 22302

M-251

CHARLESS, ADDIS, JR.
PAGE 1 OF 2

April 22, 1996

My name is Addis Charless, Jr. I own, live on, and operate a ranch ten miles north of the Pantex facility.

Although I am somewhat comfortable with the current mission at Pantex, I have marked reservations about an expanded role at Pantex that would include permanent storage of plutonium pits, other plutonium scrap, uranium, etc., as well as processing/reprocessing of same, and the possibility that a nuclear reactor of whatever type might be built there to accommodate any burning of mixed oxide fuel (MOX), or to produce tritium.

1/08.03.01

To expand Pantex's role to accommodate any or all of the above is to me grossly irresponsible in view of the fact that the plant lies above the largest fresh water aquifer in the U. S., and that said aquifer is the lifeblood of this area's agriculture industry. Why the Ogallala aquifer has not been classified as a Class 1 water source is a puzzlement to me.

2/09.04.04

None of the draft PEIS's have adequately addressed what would happen to this area's farm and ranch economy if a significant accident releasing substantial quantities of radionuclides were to occur regardless of how well it were to be cleaned up. I think the public's perception of the contamination would be such that it would make our products unmerchantable not just for the immediately affected area, but for the entire Panhandle's products.

3/09.09.04

TX-043

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.

09 04 04

Comment Number 2

Currently, 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.

The Ogallala Aquifer has not been classified as a Class 1 (that is, sole source) aquifer since other sources of drinking water are available in areas above this aquifer.

09 09 04

Comment Number 3

Perceived risks are not exactly quantified. The impacts of such perceived risks to a region's economy are more difficult to evaluate. Moreover, NEPA documents do not, as a practice, include market analyses for housing, tourism, or agricultural products. Statements can be made that part of a region's economy (for example, agriculture) would be adversely impacted by a release of nuclear material. However, the degree of that impact cannot be quantified.

CHARLESS, ADDIS, JR.
PAGE 2 OF 2

It is a further contention by Pantex boosters that no substantial water pollution has occurred except for the perched water above the Ogallala aquifer. On June 27, 1995, a water sample was taken from one of my windmill wells and submitted for analysis. The results yielded the following information:

For 16 high explosives tested for, results were BQL.
For gross alpha, gross beta, Pu 239/240, Ra 226/228, Sr-90, tritium,
U 234/238--detected, but below Safe Drinking Water Act maximums.

How much will these levels rise if Pantex's role is expanded? Is it something we are willing to risk? Is it truly necessary for the viability of Amarillo's or the Panhandle's economy? Is short term economic prosperity worth eternal contamination?

2/09.04.04
cont.

TX-043

CHRISTIANSON, MARLENE, POCA TELLO, ID

PAGE 1 OF 1

Comment ID: P0009
Date Received: April 18, 1996
Name: Marlene Christianson
Address: 1045 Concord
Pocatello, ID

Transcription:

I would definitely like to tell you no, do not bring anymore of this type of thing to Idaho. We're sitting over an aquifer. I have children and grandchildren growing up in the area. It takes 20-30 years before we know what affect this would have on them. There are lists, endless lists, of train wrecks and derailments over the last this last 3-4 months. It's not safe. It's not necessary. Stop this killing of people in order to learn how to kill more people.

1/08.03.01

P-009

08 03 01

Comment Number 1

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

Section 4.4 and Appendix G provide the results of the transportation analyses indicating that the transportation impacts are minimal.

CHUBB, WALSTON, MURRYSVILLE, PA
PAGE 1 OF 2

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

April 11, 1996

Re: Draft Programmatic EIS for Storage and Disposition of Weapons
Usable Fissile Materials (DLE/EIS - 02230).

Dear Sirs,

The authors of this draft PEIS have accepted conventional wisdoms without due caution or consideration. It is wishful thinking to imagine that fissionable materials can be disposed of as if they were worthless annoyances. This error is expressed in the comment (page 4-393) that "Pu (disposed of) is lost forever". Fissionable isotopes have a natural property which gives them a unique value. That property cannot be destroyed by wishful thinking. It is wasteful and futile to bury fissionable isotopes in unguarded, unmonitored graves. An EIS on the storage and disposition of fissile materials must consider the efforts that most people are willing to make to acquire extremely valuable materials. Only worthless trash has a chance of remaining undisturbed after burial.

1/01.02.00

Those who stand in awe of the fissionable isotopes don't seem to appreciate the fact that the separation of one isotope from its sister isotopes is a difficult operation, a "value-added" operation. The current market price of natural uranium is \$13.25 per pound or approximately \$3300 per pound of separable U-235. That is more than half the current price of refined gold. Separation of isotopes usually increases value by 100 to 10,000 times depending upon the "difficulty" and degree of separation. 95% pure U-235 is probably worth over \$3 million per pound, about 500 times the value of pure gold. The fissionable isotope, Pu-239, can be assumed to have a value similar to that of U-235.

The draft PEIS is proposing to store or dispose of 38.2 metric tons of surplus Pu-239 worth about \$250,000,000,000. One suggestion involves digging 23 boreholes (graves) about 4 km deep. Each grave is to contain about 180 critical masses of Pu in a 500 foot length of each grave. That suggestion constitutes expensive, hazardous, insecure storage, not disposal. For 5000 years, enterprising grave robbers have outwitted the best efforts of people to take their wealth with them in death. Fissionable isotopes are already appearing on the clandestine markets of a world with maturing plutonium economies.

1/01.02.00
cont.

The suggestion that surplus Pu be adulterated with glass, zeolites and/or Cs-137 is perverse. Dilution is an additional operation requiring expense and resulting in a volume increase. A volume increase will make storage and recovery more expensive. Cs-137 has a half-life of 30 years. It will have to be replenished at least every 300 years. Future supplies of Cs-137 will have to be purchased from countries which have developed economically successful plutonium economies.

2/05.00.08

M-037

01 02 00

Comment Number 1

Comment noted. Use of the Borehole Alternative for disposition would provide barriers to recovery and reuse that do not exist with current storage practices. These include both radiological and physical barriers. Further, if the Borehole Alternative were chosen, it would not be left unguarded. Appropriate monitoring, safeguards, and security measures would be provided. With regard to burning Pu in reactors, some individuals argue that this alternative is more unacceptable than the Borehole Alternative because it results in residual Pu that could, under some conditions, be recovered and used in a weapon. All of the alternatives considered in the PEIS result in Pu being placed in a condition where diversion and reuse is extremely unlikely due to a combination of physical and radiological barriers, administrative controls, and international inspections. NEPA requires that DOE consider a range of reasonable alternatives for Pu disposition, and accordingly, both the Borehole and Reactor Burning Alternatives were included. The preference for continued secure storage noted in this comment is also addressed in the PEIS under the No Action Alternative.

05 00 08

Comment Number 2

Diluting Pu makes it unattractive for reuse in weapons and, hence, enhances nonproliferation goals. A need to reestablish a radiation barrier after 300 years using cesium-137 (Cs-137) would be precluded by geologic disposal of these material forms. As discussed in the PEIS (Appendix H), all surplus Pu disposition alternatives ultimately require geologic disposal.

-2-

The lack of due consideration in this PEIS is clearly demonstrated by the suggestion which requires that the U.S. purchase Ce-137 from a more advanced country. Apparently, there has been no consideration of the environmental-economic impact of spending about \$10 billion to build an industrial complex to (1) downgrade the value of our surplus Pu or (2) to recover valuable Pu from the "much larger and growing quantity of Pu that exists in spent nuclear fuel". Only fools would attempt to make a weapon from reactor-grade plutonium. Economically successful companies make products by adding value to their raw materials. Wasteful policies have quintupled the federal debt since 1980.

The separated fissionable isotopes of uranium and plutonium command the custodial care due to extremely valuable and potentially dangerous materials. They should be stored in a repository at least as secure as Fort Knox. They must be stored in containers representing a small fraction of a critical mass. The containers must be separated by neutron absorbing barriers or walls. The storage rooms must be able to drain rapidly by gravity if the rooms should start to fill with water for any reason. The economic and environmental damage that might be caused by uninformed or haphazard disposition of fissionable materials could be enormous.

Our government's alleged concern about the imaginary hazards of weapons proliferation from consuming weapons-grade plutonium to produce nuclear electricity is contradictory, as noted above. The government's real concern has to do with the ability of nuclear energy to compete with fossil energy. Secure storage of our surplus fissile materials should be sufficient to satisfy this mean and unpatriotic concern. Continuing growth of the federal debt should force us back onto the road to peace and prosperity within a few years.

Sincerely,

Walston Chubb

Walston Chubb
3450 MacArthur Drive
Murrysville, PA 15668

412-327-8592

2/05.00.08
cont.

3/07.01.00

1/01.02.00
cont.

0

M-037

07 01 00

Comment Number 3

Cost data, along with technical and schedule data, were provided in Technical Summary Reports for disposition beginning in late July 1996. Recovery of Pu from the "much larger and growing quantity of Pu that exists in spent nuclear fuel" is outside the scope of the PEIS.

CINQUEMANI, D. K. & F. L., MONTCLAIR, NJ
PAGE 1 OF 1

535 Upper Mountain Avenue
Montclair, NJ 07043-1506
June 5, 1996

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

Storage and Disposition of Weapons Usable Fissile Materials: MOX Proposal:

We are unalterably opposed to the Department of Energy plan to allow commercial nuclear reactors to use MOX, mixed oxide, which as we all know is largely a blend of plutonium and uranium.

1. The initial cost of one or more new plants which would cost at least \$1 billion.
2. The use of MOX would greatly increase both the volume and radioactivity of the commercial nuclear power plant waste.
3. There are extremely dangerous proliferation problems posed by commercial power plant use of MOX:
 - a. It is relatively easy to separate the plutonium from the other components of MOX.
 - b. The transportation of the unused fuel would require military escorts. There would be long trips throughout the U. S. A. and Canada. We assume fuel storage would also require military protection.
 - c. Terrorism, national and international, is increasing. With so many private "militia" and others, there would be a ready market for MOX.
4. There are at least two options already identified for plutonium: continued storage and vitrification. We favor the latter.

Please do not make what is likely to become a catastrophic mistake. The world is lucky to have had but one Chernobyl so far, but there have been so many near disasters. Don't facilitate another unnecessary holocaust.

Sincerely yours,

D. K. & F. L. Cinquemani
Dr. D. K. & F. L. Cinquemani

1/08.03.01

2/08.03.01

M-261

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.

08 03 01

Comment Number 2

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.

CITIZENS FOR ENVIRONMENTAL JUSTICE,
DEBRA K. ABDALLAH
PAGE 1 OF 4

Mr. Vanda Omer
Chairman



Dr. Michael McClellan
National Co-Chairman

May 7, 1996

Mr. J. David Nelson,
Director
Office of NEPA Compliance and Oversight
Office of Public Materials Disposition
U.S. Department of Energy
1000 Independence Avenue, SW
Washington, DC 20585

Dear Mr. Nelson:

On the Storage and Disposition of Weapons-Grade Fissile Materials Draft
Programmatic Environmental Impact Statement, the following comments have been
drafted for consideration before the Record of Decision is announced. May 1 begins with
the following observations of the Department of Energy's plan for SR57.

Please note that the Department's "Reasonably Foreseeable Future Program at
SR57" includes the following proposed activities:

- 1) Storage and Disposition of Plutonium and Highly Enriched Uranium
- 2) Foreign Research Reactor Spent Nuclear Fuel
- 3) Highly Enriched Uranium Disposition
- 4) Isotopes Management of Nuclear Materials
- 5) Radioactive Waste Management and Management
- 6) Tritium Supply and Recycling
- 7) Waste Management

F-041

CITIZENS FOR ENVIRONMENTAL JUSTICE,
DEBRA K. ABDALLAH
PAGE 2 OF 4

The cumulative impact of the seven proposed activities would have a devastating effect on the populations and environmental status of the states of South Carolina and Georgia. For example, there would be a 6% increase in water usage over the no-action alternative. Collocation would account for approximately 11% of the total annual waste water discharge, along with increased impacts to wetlands and aquatic resources from discharges from proposed facilities. In addition, "minority" and low income communities would be adversely and disproportionately affected in the event of a radiological accidental/intentional/terroristical release.

1/09.00.06

Consider that neither of the options of choice in the PEIS for the Storage and Disposition of Weapons-Usable Fissile Materials can eliminate the environmental, safety and health risks, nor the dangers of proliferation. These available options can only reduce the risks, therefore, this paper cites vitrification as the disposition alternative of choice. However, this disposition alternative does not come without severe challenges, particularly in the area of environmental justice.

2/09.12.06

Data on geographic distribution of low income and minority populations and prevailing wind conditions are used to assess whether toxic/hazardous pollutants and radiological releases from the proposed actions would be emitted disproportionately in the direction of these populations. If SRS is the site of choice for the storage and disposition of Pu there "could be potential environmental justice impacts due to the large low income and minority population residing in two counties adjacent to the SRS" (PEIS). These counties have minority populations of greater than 50 percent and several other counties surrounding the site have populations of greater than 25 percent. Hence, low income and minority populations would be disproportionately affected by an accidental release. Because of this very significant factor, even though vitrification is the method of disposition cited here, please be advised that SRS is not the site of choice.

2/09.12.06
cont.

3/08.03.01

It is further recommended that:

pilot plants be constructed to test various vitrification technologies that are specific to the different forms of Pu recommended for vitrification;

4/15.00.00

vitrification must also be proven to be technologically safe; apart from criticality accidents, other types of accidents, such as spills of radioactive materials might occur during the vitrification process;

5/09.09.06

F-041

09 00 06

Comment Number 1

Section 4.7 of the PEIS analyzes the cumulative impacts for all of the Proposed Alternatives. Future site-specific NEPA analyses would provide a more detailed analysis, including further study of wetlands and aquatic resources.

09 12 06

Comment Number 2

The PEIS assessed potential health impacts from the accidental release of radiation for all of the Proposed Alternatives. The Environmental Justice section further evaluated whether such impacts would be disproportionately borne by low-income and minority communities. As discussed in Section 4.5 of the Draft PEIS, data on the distribution of the low income and minority populations and historical information on the prevailing wind conditions indicate that these minority and low-income populations would not likely be disproportionately affected in the event of an accidental release. The PEIS, however, does note that under certain conditions, low-income and minority populations could be disproportionately affected by such an accidental release.

08 03 01

Comment Number 3

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

15 00 00

Comment Number 4

Comment noted. DOE is currently testing the can-in-canister technology for vitrification. Should DOE choose new vitrification technologies for implementation, a pilot plant would be needed for the demonstration, and NEPA documentation would be prepared, as appropriate.

Pu vitrification options should be studied as an EIS under NEPA so that a sound decision regarding the choices of technology can be made;

4/15.00.00
cont.

Disadvantage of adding Pu vitrification to DWPF at SRS is the delay in the vitrification of the 34 millions gallons of High Level Waste that are already scheduled for the facility. Far greater potential for environmental contamination exists from the storage this nonvitrified waste. The consequences of such accidents with liquid wastes would also be far more severe than those of accidents that might occur from storage of vitrified high level radioactive wastes.

6/11.00.06

It is hereby recommended that Pu is treated as a waste product rather than as a resource. The disposition of Pu as a waste product would be fairly low in cost (if it is integrated with the current vitrification program at SRS) and it would be rendered highly, proliferation-resistant. However, if SRS is the site of choice for this procedure, then extensive environmental awareness and education must be offered to the surrounding communities, especially those that would be exposed in the event of an accident. These communities must also be made aware of any and all emergency procedures and evacuation routes. Considering the extent that such an accident could have on a population, relocation of these residents is an even more viable option to insure their health and safety.

7/01.04.00

The PEIS also states that radiation exposure is more likely to produce somatic effects than genetic effects as exposure risks to these same individuals who live in the 50 mile radius of the site. They are therefore, at risks from exposure from past and present releases and from any accidental release should Pu be stored and disposed of at SRS.

8/09.09.06

It is further recommended that the following be given full consideration:

Putting Pu in non weapons-usable form as soon as possible, compatible with protection of environment, workers and community health;

Options must in compliance with all environmental,

F-041

09 09 06

Comment Number 5

To protect public and workers' health and safety, Pu disposition facilities will be designed to comply with current Federal, State, and local laws; DOE Orders; and industrial codes and standards. This will provide a plant that is highly resistant to the effects of natural phenomena and internal events such as fire and explosion. Furthermore, the PEIS analyzed the probabilities and human health consequences of the potential accidents for proposed Pu disposition alternatives including the Vitrification Alternative.

11 00 06

Comment Number 6

Comment noted. Should DOE decide to conduct Pu vitrification at SRS, any schedule conflict would be resolved prior to implementation.

01 04 00

Comment Number 7

The determination of whether or not Pu should be considered a waste, is beyond the scope of the PEIS. Furthermore, whether or not Pu is a waste, will not change the range of disposition alternatives addressed in the PEIS. NEPA requires that the environmental impacts for all reasonable alternatives be considered for the Proposed Action. While immobilization is clearly a reasonable alternative, so are reactor burning and boreholes. The non-proliferation risks of each alternative will be carefully considered and factored into the ROD for disposition. Cost, schedule, and technical analyses have been conducted by DOE and will also be factored into the ROD.

09 09 06

Comment Number 8

To respond to potential accidents, DOE Orders specify the requirements for emergency preparedness at DOE facilities. Each DOE site has established an Emergency Management Program that incorporates activities associated with emergency planning, preparedness, and response. The emergency plans at each site would be revised to incorporate future DOE requirements and expanded to incorporate the addition of new facilities.

**CITIZENS FOR ENVIRONMENTAL JUSTICE,
DEBRA K. ABDALLAH
PAGE 4 OF 4**

health, and safety laws and regulations. It must be taken into account the reality that increased handling, processing, and transporting of Pu entails additional new environmental risks; and, that some of these new risks may offset existing risks from present methods of storage;

9/09.00.08

Technology for re-extracting Pu from glass is known; thus, there is no need to continue operating reprocessing plants to produce more Pu that is uneconomical today and will remain so for decades;

Volumes of wastes are increased greatly in reprocessing and is the most dangerous portion of waste in the short-and medium-term which consists of highly radioactive fission products and is in a liquid form which must be stored in tanks;

10/15.00.00

Environmental costs and health risks of reprocessing creates streams of radioactive materials like:

the atmospheric release of C-14 in the form of C-14 dioxide and krypton-85; and,

large volumes of liquid wastes contaminated with radionuclides that are released into the environment.

In conclusion, let us strengthen US and international fissile materials control efforts and do it with in the least costly methods that also subject us to the fewest health, and environmental health and safety risks.

Respectfully submitted:

A Citizen for Environmental Justice,

Debra K. Abdallah
Debra K. Abdallah

F-041

09 00 08

Comment Number 9

Comment noted. Analyses in the PEIS consider the potential environmental impacts of the handling, processing, and transportation of the surplus weapons-usable materials.

15 00 00

Comment Number 10

Comment noted.

CITIZENS FOR ENVIRONMENTAL JUSTICE, SAVANNAH, GA,
MUSTAFA MOHAMMED
PAGE 1 OF 1

Comment ID: P0035
Date Received: May 1, 1996
Name: Mustafa Mohammed
Organization: Citizens for Environmental Justice
Address: 818 West Carter Street
Savannah, GA

Transcription:

I am in disfavor of the storage of weapons-usable fissile materials at the Savannah River Site. I am also totally against any reform plan such as your consolidated alternative. I am against any of your storage plans. I mean your plan that have for storing this plutonium. I am also in disfavor of the consolidation of plutonium alternatives unless it's at another site. I am also in disfavor of your upgrading of any one of your multiple sites. I am also in disfavor of your no action alternative. I am in favor of actually getting the Savannah River Site out of Savannah period. Thank you.

1/08.03.01

I am a member of Citizens for Environmental Justice. I am totally against the existence of any borehole being created on the Savannah River Site, of the storage of any plutonium. I am also I think all of your programs, your alternative programs ad subalternative programs, are very primitive. I also are in disfavor of your consolidation alternatives, your upgrading facilities, and also am also not in favor for any of your anything that's dealing with the storage of plutonium at the Savannah River Site, except your consolidation of the plutonium which would hopefully be moved to one of your other five sites, of the other six sites besides the Savannah River Site. Thank you.

2/08.03.01

P-035

08 03 01

Comment Number 1

The Department of Energy acknowledges the commentor's opposition to long-term storage. Decisions on storage 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 new missions at 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.

CITY OF AMARILLO, OFFICE OF CITY COMMISSIONER,
AMARILLO, TX, HONORABLE DIANNE BOSCH
PAGE 1 OF 4

HON. DIANNE BOSCH
CITY COMMISSIONER
CITY OF AMARILLO, TEXAS

**COMMENTS ON THE STOCKPILE STEWARDSHIP AND MANAGEMENT
PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT,
STORAGE AND DISPOSITION OF FISSILE MATERIALS PROGRAMMATIC
ENVIRONMENTAL IMPACT STATEMENT AND
PANTEX SITE-WIDE ENVIRONMENTAL IMPACT STATEMENT**

THANK YOU FOR THE CHANCE TO ADDRESS THE DEPARTMENT OF
ENERGY IN THIS INTERACTIVE WORKSHOP FORMAT. AS AN
AMARILLO CITY COMMISSIONER SINCE 1989, I HAVE WITNESSED
COUNTLESS D.O.E. HEARINGS ON PANTEX. THE GIVE-AND -TAKE
BETWEEN THE AUDIENCE AND THE D.O.E. OFFICIALS IS VERY
INFORMATIVE TO EVERYONE IN ATTENDANCE. THE D.O.E. IS TO BE
APPLAUDED FOR THE USE OF AN INTERACTIVE FORMAT, AND SHOULD
CONTINUE TO USE IT IN FUTURE HEARINGS.

THE D.O.E. IS ALSO TO BE APPLAUDED FOR THE OPEN MANNER WITH
WHICH IT HAS, AND CONTINUES TO, ADDRESS LOCAL
ENVIRONMENTAL CONCERNS. WE ARE ALSO THANKFUL THAT GOOD
MANAGEMENT AT PANTEX BY THE D.O.E.'S CONTRACTORS, MASON &
HANGER AND BATTELLE, HAS PREVENTED PANTEX FROM HAVING
ENVIRONMENTAL PROBLEMS OF THE TYPE AND MAGNITUDE FOUND
AT OTHER D.O.E. SITES. AS IS EVIDENT BY THE LARGE TURNOUT
TONIGHT, THIS COMMUNITY STRONGLY SUPPORTS PANTEX, AND THIS

TX-039

CITY OF AMARILLO, OFFICE OF CITY COMMISSIONER,
AMARILLO, TX, HONORABLE DIANNE BOSCH
PAGE 2 OF 4

SUPPORT COMES IN LARGE MEASURE FROM THE D.O.E.'S
COMMITMENT TO OUR LOCAL ENVIRONMENT. THAT CONTINUED
COMMITMENT TO THE ENVIRONMENT IS CRITICAL FOR COMMUNITY
SUPPORT OF ALL CONTINUED OR NEW MISSIONS AT PANTEX.

REGARDING THE STOCKPILE STEWARD SHIP AND MANAGEMENT PEIS,
I STRONGLY SUPPORT THE CHOICE OF PANTEX AS THE PREFERRED
ALTERNATIVE FOR THE ASSEMBLY AND DISASSEMBLY MISSION. THIS
COMMUNITY IS EXTREMELY PROUD THAT PANTEX PLAYED AN
IMPORTANT PART IN WINNING THE COLD WAR, AND WILL CONTINUE
TO PLAY A CRITICAL ROLE IN REDUCING THE SIZE OF THE NATION'S
NUCLEAR ARSENAL IN THE POST-COLD WAR PERIOD. KEEPING THIS
MISSION AT PANTEX IS NOT ONLY THE RIGHT CHOICE FOR AMARILLO,
IT ALSO MAKE SENSE FROM A NATIONAL PERSPECTIVE BECAUSE IT
MAINTAINS A CONTINGENT PRODUCTION CAPABILITY, AND IT SAVES
MORE THAN 1.5 BILLION DOLLARS WHEN COMPARED TO THE COST OF
TRANSFERRING THE WORK TO THE NEVADA TEST SITE.

AS LONG AS WE ARE ON THE SUBJECT OF COST SAVINGS AND
RETENTION OF PRODUCTION CAPABILITY, THE D.O.E. MUST NOT LET
THE HIGH EXPLOSIVE (H.E.) FABRICATION MISSION BE MOVED FROM
PANTEX. PANTEX EMPLOYEES HAVE SUCCESSFULLY PERFORMED
THIS MISSION FOR MORE THAN FORTY YEARS, AND THERE IS

TX-039

CITY OF AMARILLO, OFFICE OF CITY COMMISSIONER,
AMARILLO, TX, HONORABLE DIANNE BOSCH
PAGE 3 OF 4

ABSOLUTELY NO REASON FOR THIS WORK TO BE MOVED. WHEN THE WEAPONS COMPLEX WAS ORGANIZED, IT MADE LOGICAL SENSE TO LOCATE HIGH EXPLOSIVE WORK WITH ASSEMBLY AND DISASSEMBLY. IT STILL MAKES SENSE. FURTHERMORE, THE D.O.E.'S OWN ANALYSIS INDICATES THAT THE COST OF TRANSFERRING H.E. WORK TO NEW MEXICO LABS WOULD BE FIFTY MILLION DOLLARS. IT IS INCONCEIVABLE THAT THE D.O.E. MIGHT SEEK TO JUSTIFY SPENDING FIFTY MILLION DOLLARS ONLY TO END UP WITH LESS PRODUCTION CAPABILITY IN A LOCATION THAT HAS NEVER PERFORMED THIS MISSION.

IN TERMS OF STORAGE AND DISPOSITION ACTIVITIES, I WOULD FIRST LIKE TO NOTE MY PREVIOUS COMMENTS ABOUT THE NEED TO PROTECT THE ENVIRONMENT. I AM ENCOURAGED BY THE PREVIOUS COMMENTS ABOUT THE NEED TO PROTECT THE ENVIRONMENT. I AM ENCOURAGED BY THE OUTSTANDING ENVIRONMENTAL RECORD THAT PANTEX HAS REGARDING STORAGE OF PLUTONIUM OVER MANY YEARS. I HOPE THAT THE D.O.E. WILL MAKE THE RIGHT CHOICE AND CONTINUE THE SAFE STORAGE OF SURPLUS PLUTONIUM AT PANTEX. I ALSO HOPE THAT THE D.O.E. WILL KEEP IN MIND THAT PLUTONIUM FROM DISMANTLED WEAPONS REPRESENTS A TREMENDOUS INVESTMENT AND MAY PROVE TO BE A VALUABLE ASSET IN CIVILIAN

1/08.03.01

TX-039

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.

**CITY OF AMARILLO, OFFICE OF CITY COMMISSIONER,
AMARILLO, TX, HONORABLE DIANNE BOSCH
PAGE 4 OF 4**

**USE. I URGE THE D.O.E. TO CHOOSE PANTEX AS THE SITE FOR
ENVIRONMENTALLY SOUND DISPOSITION ACTIVITIES.**

1/08.03.01
cont.

**ONCE AGAIN, THANK YOU FOR THE OPPORTUNITY TO COMMENT ON
THE D.O.E.'S PLAN FOR THE FUTURE OF PANTEX. PANTEX HAS BEEN
AN IMPORTANT PART OF OUR REGIONAL ECONOMY FOR MANY YEARS,
AND WE SUPPORT THE CONTINUATION OF ENVIRONMENTALLY SOUND
OPERATIONS AT THE PLANT. I WOULD ALSO LIKE TO THANK ALL THE
CONCERNED CITIZENS OF OUR COMMUNITY WHO HAVE MAKE THE
EFFORT TO ATTEND THIS MEETING TONIGHT.**

TX-039

CITY OF RICHLAND, OFFICE OF THE MAYOR, RICHLAND, WA,
MAYOR LARRY HALER
PAGE 1 OF 3



Comments of Richland Mayor Larry Haler
April 11, 1996 Public Meeting on Storage and
Disposition of Weapons-Usable Fissile Materials
Draft Programmatic Environmental Impact Statement

Good evening. I am Larry Haler, Mayor of Richland. I also serve as Chairman of the "Hanford Communities," an intergovernmental organization that represents the interests of cities and counties most directly affected by Hanford. As you are concluding a long day of meetings, let me extend a somewhat belated welcome to the Tri-Cities!

I have a prepared statement I would like to read and leave with you. We will be submitting written comments within the month.

The Programmatic Environmental Impact Statement, or PEIS, on Storage and Disposition of Weapons-Usable Fissile Materials is of great interest to the City of Richland and the other local governments in this area. Hanford, directly to our north, is identified as one of six DOE candidate sites for long-term storage of weapons-usable plutonium. Two of the disposition alternatives noted in the PEIS are particularly well suited to Hanford.

We would be proud to have Hanford help reduce the global nuclear weapons threat. However, we do have some misgivings. Nearly half of all Hanford workers live in Richland. I am concerned about their health and safety, as well as their economic well-being. Public safety associated with transport of radioactive materials through our communities is a factor we must consider. We must also safeguard the quality of our natural environment.

Beyond these tangible issues, we are anxious that our community not be perceived by others in the Pacific Northwest as a dumping ground for radioactive wastes. As DOE is reducing employment opportunities at Hanford, we must recruit new enterprises into this area to remain viable. Positive community image is critically important to our economic diversification efforts.

Our formal written responses to this PEIS will be carefully developed. We have appointed a technical advisory committee to explore the health and safety, transportation, and socioeconomic impacts of a new plutonium mission for Hanford. The committee began its analysis this week, and we hope to have our elected governing boards review their work and recommendations by the end of the month.

1/10.00.00

2/09.08.01

WA-016

10 00 00

Comment Number 1

Transportation safety is assured since Federal regulations require the use of packagings that cannot release dangerous quantities of radioactive material under the most severe accident conditions. During more than 40 years of DOE shipment activity, there has never been an accidental release of radioactive material that has caused injury or death. The maximum potential health risk from transporting materials associated with the Proposed Alternatives are evaluated and presented in Section 4.4 and Appendix G of the PEIS.

09 08 01

Comment Number 2

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. The disposal of radioactive wastes from other DOE sites is not within the scope of this PEIS. This PEIS analyzes the expected waste disposal for Proposed Actions at Hanford, and compared the amount to the existing environment.

Comments of Richland
Mayor Larry Haler

Page 2

Fabricating plutonium into mixed-oxide, or MOX, fuel and burning it in reactors is one of the disposal options noted in the PEIS. The Washington Public Power Supply System has made a proposal to the Department of Energy to burn a bundle of MOX fuel as a demonstration. Our City Council fully supports the Supply System in this endeavor. We also encourage DOE consider the Supply System's unfinished nuclear power plant on the Hanford Site as a second MOX fuel facility. The Fast Flux Test Facility, or FFTF, provides yet another opportunity for burning of MOX fuel. The FFTF offers additional value in the potential for production of tritium and vital medical isotopes. We also have at Hanford the "Fuel and Materials Examination Facility," or FMEF, the only facility in the country that has been designed and is available to cost-effectively manufacture MOX fuel.

3/08.03.01

As you can see, Hanford offers a complete, safe, and secure industrial complex capable of storing plutonium, manufacturing and burning MOX fuels, vitrifying waste products, and handling spent fuel. The Supply System and private companies have indicated interest in participating in this important endeavor. We have a talented and experienced work force and the industrial infrastructure necessary to perform a plutonium storage and disposal mission. Assuming we achieve necessary public understanding and support and address legitimate concerns through effective mitigative measures, I believe Hanford will prove to be well suited to play a plutonium storage and disposal mission.

In closing, I should mention that the short timeline for commenting on the PEIS has made our review particularly difficult. One problem is that there are very few copies of the PEIS currently available. We have requested additional copies for our committee and hope to receive them soon. I hope you will consider extending the comment period to give the public better opportunity to participate.

4/08.02.00

Thank you again for the opportunity to provide comments this evening. We will be carefully evaluating this opportunity for Hanford to be of service to the nation. You can expect a thoughtful written response to the PEIS from us.

WA-016

08 03 01

Comment Number 3

Liquid metal reactors were not included as alternatives for Pu disposition in the PEIS due to longer time and greater cost required to complete their construction. The FFTF, on the other hand, is an existing reactor and could be used for Pu burning. However, the limited capacity of the FFTF would limit the rate at which Pu could be dispositioned and would require a much longer timeframe for disposition than that which could be achieved with the reactor options addressed in the PEIS.

The Department of Energy is in fact considering the FFTF, pursuant to the ROD for the *Final Programmatic Environmental Impact Statement for Tritium Supply and Recycling* (TSR PEIS). The ROD (December 1995, 60 FR 63878) for the TSR PEIS addressed the FFTF for tritium production as follows:

A private group has recently suggested that it purchase the FFTF from DOE and that DOE then contract with the private group to make tritium at that facility. In the [Tritium Supply and Recycling Final] PEIS, the use of the FFTF was considered and dismissed as a long-term tritium supply option because the amount of tritium that it could produce would only meet a percentage of the steady state tritium requirements, and it was not reasonable to rely on operating the facility far beyond the end of its design life. However, DOE will evaluate the presentation made by the private group to determine whether the operation of the FFTF might be able to play any role in meeting future tritium requirements. If any changes are warranted to this ROD following that review, or further NEPA documentation is required, DOE will take appropriate action.

The Secretary of Energy has requested a review by the JASONS Panel (eminent academic scholars and scientists) as part of the evaluation of tritium production with the FFTF. Should the outcome of this evaluation lead to a DOE proposal to restart the FFTF for tritium production, additional environmental analyses would be performed, as appropriate. If the FFTF were to be restarted, a substantial portion of the surplus Pu that would be used for MOX fuel could be used to fabricate FFTF driver fuel, thereby achieving the Spent Fuel Standard for Pu disposition through irradiation in the FFTF. Further description of the FFTF has been added to Appendix N of the PEIS.

Comment Documents
and Responses

CITY OF RICHLAND, OFFICE OF THE MAYOR, RICHLAND, WA,
MAYOR LARRY HALER
PAGE 3 OF 3

The Fuels and Materials Examination Facility (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.

08 02 00

Comment Number 4

Additional copies of the PEIS were mailed within 2 days of receipt of the request. The public comment period was extended to a total of 92 days.

CITY OF WEST RICHLAND, WEST RICHLAND, WA,
COUNCILMAN KEN DOBBIN
PAGE 1 OF 3

Richland Evening
4-11-96 1 of 3

*Comments of West Richland Councilman, Ken Dobbin
April 11, 1996 Public Meeting on Storage and
Disposition of Weapons-Usable Fissile Materials
Draft Programmatic Environmental Impact Statement*

*The Fast Flux Test Facility (FFTF) will need 800 kg
to one metric ton per year of weapons return plutonium
to fuel the multi-missions it will be asked to perform.
The FFTF will use a once-through fuel system that
converts the plutonium to a spent fuel standard. It
will not be recycled.*

*These FFTF missions include tritium for national
security, medical isotopes for self-directed cancer
therapy and treatment of other major diseases, and
commercial isotopes for agriculture and industry.*

*Advanced Nuclear and Medical Systems, called ANMS,
is a consortium of companies negotiating with the
Department of Energy to operate the FFTF to privately
provide these missions for our Nation. ANMS has
widespread Congressional and professional support
for the privatization of the FFTF.*

WA-019

CITY OF WEST RICHLAND, WEST RICHLAND, WA,
COUNCILMAN KEN DOBBIN
PAGE 2 OF 3

4-11-96 2 of 3

Comments of West Richland Councilman, Ken Dobbin

ANWS has proposed an alliance with the Washington Public Power Supply System to jointly burn plutonium in the FFTF and WNP-2. That proposal provides synergism between the two facilities and will use the already constructed Fuel and Materials Conversion Facility, called the FMEF, for plutonium fuel management.

There further takes advantage of the residual security issues of all those located on the Hanford site. The FFTF and FMEF already have stockpiles of the wet plutonium security systems. Eleven metric tons of the plutonium is already located on the Hanford site.

The FFTF creates a teaming opportunity with Russia. The United States wants Russia to use a once-through fuel system and not recycle. Russia wants to burn the plutonium in their fast reactors. The FFTF would demonstrate how to convert the plutonium to a spent fuel standard without recycle. They could be persuaded to do likewise.

WA-019

Comments of West Richland Councilman, Ken Dobbin

*Converting weapons-usable plutonium to a spent
fuel standard cooperatively with the Russians
while providing needed isotopes is a win-win
for both the Hanford area and the Nation.*

*I urge the Department of Energy to include the
FFTF as a viable plutonium disposition option
in the Programmatic Environmental Impact
Statement on the Disposition of Weapons-Usable
Fissile Materials.*

Thank you,

Ken Dobbin

Councilman, City of West Richland, Washington

Member, American Nuclear Society Eastern Washington

Section, Public Information Committee

1/01.02.00

WA-019

01 02 00

Comment Number 1

Liquid metal reactors were not included as alternatives for Pu disposition in the PEIS due to longer time and greater cost required to complete their construction. The FFTF, on the other hand, is an existing reactor and could be used for Pu burning. However, the limited capacity of the FFTF would limit the rate at which Pu could be dispositioned and require a much longer timeframe for disposition than that which could be achieved with the reactor options addressed in the PEIS.

The Department of Energy is in fact considering the FFTF for the TSR PEIS. The ROD (December 1995, 60 FR 63878) for the TSR PEIS addressed the FFTF for tritium production as follows:

A private group has recently suggested that it purchase the FFTF from DOE and that DOE then contract with the private group to make tritium at that facility. In the [Tritium and Recycling Final] PEIS, the use of the FFTF was considered and dismissed as a long-term tritium supply option because the amount of tritium that it could produce would only meet a percentage of the steady state tritium requirements, and it was not reasonable to rely on operating the facility far beyond the end of its design life. However, DOE will evaluate the presentation made by the private group to determine whether the operation of the FFTF might be able to play any role in meeting future tritium requirements. If any changes are warranted to this ROD following that review, or further NEPA documentation is required, DOE will take appropriate action.

The Secretary of Energy has requested a review by the JASONS Panel (eminent academic scholars and scientists) as part of the evaluation of the tritium production with the FFTF. Should the outcome of this evaluation lead to a DOE proposal to restart the FFTF for tritium production, additional environmental analyses would be performed, as appropriate. If the FFTF were to be restarted, a substantial portion of the surplus Pu that would be used for MOX fuel could be used to fabricate FFTF driver fuel, thereby achieving the Spent Fuel Standard for Pu disposition through irradiation in the FFTF. Further description of the FFTF has been added to Appendix N of the PEIS.

CITY OF WEST RICHLAND, WEST RICHLAND, WA,
COUNCILMAN KENNETH D. DOBBIN
PAGE 1 OF 2

Kenneth D. Dobbin
1843 Blue Heron
West Richland, WA. 99353

May 4, 1996

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

COMMENTS ON THE STORAGE AND DISPOSITION OF WEAPONS-USABLE
FISSILE MATERIALS DRAFT PROGRAMMATIC ENVIRONMENTAL IMPACT
STATEMENT

Dear Sir:

I respectfully request that you include the Fast Flux Test Facility (FFTF) as a option to disposition either weapons-grade fissile material or reactor grade plutonium. It is an error to omit the FFTF from the Storage and Disposition of Weapons-Usable Fissile Materials Draft Programmatic Environmental Impact Statement. The Department of Energy (DOE) is reconsidering the use of the FFTF for defense and medical missions and this fuel material will be needed for its operation. The FFTF can be back on line in less than three years and could play a significant role to reduce what the National Academy of Sciences calls a "clear and present danger" associated with the stockpile of these materials.

1/01.02.00

The FFTF will need between 800 kg and one metric ton (MT) per year of fissile plutonium or uranium to fuel the multiple missions it will be asked to perform. It will use a once-through fuel system that converts the plutonium to a spent fuel standard. The FFTF can disposition a significant quantity of the 38 MT of surplus weapons-grade plutonium or use a portion of the 175 MT of surplus highly enriched uranium over the 30 years of life left in this reactor.

Missions being considered for the FFTF include tritium for national security, medical isotopes for cell-directed cancer therapy and treatment of other major diseases, and commercial isotopes for agriculture and industry. Advanced Nuclear and Medical Systems (ANMS) is a consortium of companies that is negotiating with the DOE to operate the FFTF and privately provide these products for our Nation. ANMS has widespread Congressional and professional support for the privatization of the FFTF.

ANMS has proposed an alliance with the Washington Public Power Supply System to jointly burn plutonium in the FFTF and WNP-2. That proposal provides synergism between the two facilities, a higher disposition rate of weapons usable material, and significant cost savings. The proposal would utilize the already constructed Fuels and Materials Examination Facility (FMEF) for plutonium fuel management.

1/01.02.00
cont.

M-168

01 02 00

Comment Number 1

Liquid metal reactors were not included as alternatives for Pu disposition in the PEIS due to longer time and greater cost required to complete their construction. The FFTF, on the other hand, is an existing reactor and could be used for Pu burning. However, the limited capacity of the FFTF would limit the rate at which Pu could be dispositioned and would require a much longer timeframe for disposition than that which could be achieved with the reactor options addressed in the PEIS.

The Department of Energy is in fact considering the FFTF, pursuant to the ROD for the TSR PEIS. The ROD (December 1995, 60 FR 63878) for the TSR PEIS addressed the FFTF for tritium production as follows:

A private group has recently suggested that it purchase the FFTF from DOE and that DOE then contract with the private group to make tritium at that facility. In the [Tritium Supply and Recycling Final] PEIS, the use of the FFTF was considered and dismissed as a long-term tritium supply option because the amount of tritium that it could produce would only meet a percentage of the steady state tritium requirements, and it was not reasonable to rely on operating the facility far beyond the end of its design life. However, DOE will evaluate the presentation made by the private group to determine whether the operation of the FFTF might be able to play any role in meeting future tritium requirements. If any changes are warranted to this ROD following that review, or further NEPA documentation is required, DOE will take appropriate action.

The Secretary of Energy has requested a review by the JASONS Panel (eminent academic scholars and scientists) as part of the evaluation of tritium production with the FFTF. Should the outcome of this evaluation lead to a DOE proposal to restart the FFTF for tritium production, additional environmental analyses would be performed, as appropriate. If the FFTF were to be restarted, a substantial portion of the surplus Pu that would be used for MOX fuel could be used to fabricate FFTF driver fuel, thereby achieving the Spent Fuel Standard for Pu disposition through irradiation in the FFTF. Further description of the FFTF has been added to Appendix N of the PEIS.

CITY OF WEST RICHLAND, WEST RICHLAND, WA,
COUNCILMAN KENNETH D. DOBBIN
PAGE 2 OF 2

The FFTF, WNP-2, and FMEF can take advantage of reduced security issues associated with all these facilities being located in close proximity on the Hanford Reservation in Washington State. Also, the FFTF and FMEF already have state-of-the-art plutonium security systems. Because Hanford is host to some of this material, it should be considered as one of the disposition locations.

The FFTF also creates a teaming opportunity with Russia. The United States wants Russia to use a once-through fuel system and not recycle. However, Russia wants to use its fast reactors which now are a part of a fuel system that includes recycle. The FFTF could demonstrate how to set up a fast reactor system to burn rather than breed plutonium and convert significant quantities of weapons-usable plutonium to a spent fuel standard without recycle. The US could provide Russia with the technology to extend the life of its BN600 reactor and convert it to a system similar to the FFTF to simultaneously burn the material in both countries.

Converting significant quantities weapons-usable fissile material to a spent fuel standard, providing the US with needed isotopes, and teaming with Russia to persuade them to accept the US stance on a once-through fuel cycle is a win-win for our Nation as well as the world. I strongly urge the DOE to include the FFTF as a viable option in the Programmatic Environmental Impact Statement on the Disposition of Weapons-Usable Fissile Materials.

Sincerely,

Kenneth D. Dobbin

Kenneth D. Dobbin

Councilman, City of West Richland, Washington
Member, American Nuclear Society Eastern Washington Section, Public Information
Committee

cc: Senator Slade Gorton
Senator Patty Murray
Congressman Doc Hastings

The FMEF was a candidate storage facility under the Upgrade Alternative for storage of weapons-usable fissile materials.

M-168

3-152

CLARTON, WAYNE, RIGBY, ID
PAGE 1 OF 1

Comment ID: P0027
Date Received: April 18, 1996
Name: Wayne Clarton
Address: 444 North State Street
Rigby, ID 83432

Transcription:

I'm calling in favor of the plutonium work in Idaho at the INEL, and I'd like to state that I'm in favor it. We have the ability to store it safely, to take care of it. It creates more jobs in the Southeastern Idaho area. We're in favor of it, and like to see it come here. Thanks.

1/08.03.01

P-027

08 03 01

Comment Number 1

The Department of Energy acknowledges the commentor's support for additional missions at INEL. 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.

COALITION 21, IDAHO FALLS, ID,
GEORGE A. FREUND
PAGE 1 OF 6

Subject:

WEAPONS-USABLE MATL DPEIS

COMMENTS ON STORAGE AND DISPOSITION OF WEAPONS-USABLE FISSILE MATERIALS
DRAFT DPEIS- 21/96-04GF

This comment document (#21/96-04GF) is the companion document referred to in Comment 13 of the Coalition 21 comment document (#21/96-03RK). The comments herein are based on a limited review; they should be considered symptomatic of more pervasive shortcomings.

GENERAL COMMENTS:

A. The Summary does not represent a thoughtful summary of the entire PEIS. It is overburdened with marginally useful details about environmental impact at the expense of better description of the alternatives and of the assumptions related to the various candidate sites (cf specific comments S-4, S-12a&b, S-18b, S-22).

B. The environmental information in the Summary is not only too detailed; it is unnecessarily repetitive leading to internal inconsistencies (comments S-17, S-18a, S-19, S-20a, S-21, S-23b, S-37b, S-46, S-50, S-122).

C. Meaningful comparisons that would allow decisions to be made on environmental factors are often lacking; some comparisons that are included are meaningless. The only comparisons that are really clear are the obvious ones, i. e. alternatives using existing facilities (ANL-W Electrometallurgical or Existing LWR) have less impact than comparable alternatives involving new facilities (comments S-26b, S-28, S-47a, b&d; S-48a, b&c; S-49b, S-53).

SPECIFIC COMMENTS:

These comments are keyed to the page number of the Summary. Multiple comments on a page are identified by a, b etc. Location on the page is keyed to the paragraph; a partial paragraph at the top of the page is considered the 1st paragraph.

S-3: By its shading, Figure S-1 calls attention only to the one material category not
- more -

1/09.00.08

12/16.00.00

F-027

09 00 08

Comment Number 1

Based on comments received, the Summary of the Draft PEIS was revised. All revisions made appear in the Summary of the Final PEIS.

16 00 00

Comment Number 2

The shading in Figure S-1 is designed for clarity and readability. The figure itself is designed only to show the relationship between the various types of fissile material categories. The figure has been modified for the Final PEIS and Summary.

3-154

**COALITION 21, IDAHO FALLS, ID,
GEORGE A. FREUND
PAGE 2 OF 6**

covered by either PEIS. It should be used as the basis for text explaining what is meant by each block on the figure.
S-4, 1st para.: Here would be the place to explain that the environmental analysis is based on 50t of Pu and to justify selection of that value.
S-5, last para.: Figure S-2 appears five pages after its first mention; too far back.
S-7(a): 1st para.: The concept of grouping the alternatives into categories is good but is not carried through consistently (see S-37a).
S-7b: The text after the three boxes does not relate to the last previous subheading on page S-8.
S-12a: Better coordination between Figure S-2 and Tables S-1, S-2 and S-3 is necessary. Table S-1 does provide appropriate additional detail on Upgrade. Tables S-2 and S-3 should show where at each site the new facilities would be built. Accompanying text should justify these selections.
S-12b: The significance of the subalternative for Consolidation and Collocation Alternatives is not clear, since this subalternative is not further identified in subsequent bar graphs (Figures S-4 etc.) or accompanying text.
S-17: The difference in emphasis (if any) between the section starting on this page and going to page S-36 and the section starting on page S-47 is not clear. The latter section, particularly since it explains the various figures, is much better. The former section seems to give unnecessary and duplicative detail, that would be better captured in a couple of carefully thought-out charts.
S-18a, 7th para: Air quality discussion not adequately related to corresponding text on page S-72. Also should make it clear that the identified sites are the only ones to which this alternative applies.
S-18b, 7th para: Comment on cultural/paleontological resources would not apply if the location at INEL were inside an existing fenced area which has been previously disturbed. From a cost and future environmental cleanup standpoint, such a location would surely be selected. This comment applies repeatedly throughout this section.
S-19, 3rd para: Page S-91 shows the impact on local road to be at Pantex not at INEL.
S-20a, 2nd para: Text on page S-88 indicates an endangered-species impact at Hanford as well.
S-20b, 2nd para. Would there be this adverse impact on waste management at INEL if the facility were built inside an existing fenced area with an established infrastructure.
S-21: Attachment A does not address Phaseout.
S-22, 5th para: Explain earlier which forms of Pu do not lend themselves to MOX fuel fabrication. Relate to 50/50 split on page S-50 (combination of alternatives) and justify selection of that split.
S-23a: Provide distinctive shadings for INEL and NTS bargraphs. Leaving it blank (as

2/16.00.00
cont.
3/01.00.00

4/16.00.00

1/09.00.08
cont.

5/09.03.08

6/09.07.03

7/09.08.08

8/09.06.01

9/09.11.03

4/16.00.00

cont.

10/06.01.08

1/09.00.08
cont.

F-027

01 00 00

Comment Number 3

Comment noted. In preparing the PEIS, DOE assumed the disposition of approximately 50 t (55 tons) of Pu. Currently, DOE's inventory of Pu for disposition consists of 38.2 t (42.1 tons) of material declared surplus by the President and identified in the Secretary of Energy's Openness Initiative in early 1996, and an additional 14.5 t (15.95 tons) of reactor-grade and fuel-grade Pu that is excess to U.S. defense needs, but which has not yet been declared surplus by the President. The PEIS identifies annual impacts based on throughput requirements identified for each technology. Therefore, if amounts greater than 50 t (55 tons) are eventually declared surplus, annual impacts would be the same but would occur over a longer period of time.

16 00 00

Comment Number 4

Comment noted. Based on comments received, the Summary has been revised for the Final PEIS.

09 03 08

Comment Number 5

In response to the comment, text was added to the Upgrade Alternative section of the Summary to clarify that the alternative does not apply to NTS, RFETS, or LANL. Text was also added to the air quality discussion of the Upgrade Alternative section in the Summary to clarify that all sites are expected to comply with the ambient air quality standards and guidelines.

09 07 03

Comment Number 6

The commentator is correct that construction on previously disturbed land would probably not affect resources that are potentially eligible for placement on the National Register of Historic Places (NRHP). However, other cultural resources could be affected by new ground disturbance. The Summary of the Final PEIS has been revised (Sections S.5 and S.8) to provide a better description of the approach to the environmental impact analysis and the comparison of alternatives.

COALITION 21, IDAHO FALLS, ID,
 GEORGE A. FREUND
 PAGE 3 OF 6

for NTS) suggests less impact than others; filling it in solid (as for INEL) suggest more impact.
 S-23b, Figure S-5: Explain why RFETS material causes a much greater employment impact at Pantex than at other facilities; and why employment impact at ORR is more without RFETS material than with it. How many other such discrepancies exist that I have not identified?
 S-28a: Change Upgrade bargraphs from solid color to shading.
 S-28b: Liquid transuranic waste is listed as a key long-term impact on page S-22. Less than one 55 gal. drum per year (and the same for all sites) does not seem to warrant a separate Figure S-11 in the Summary. INEL is dealing with about 130,000 cu meters of TRU waste.
 S-28: Decline of local road service is not mentioned in corresponding text on page S-140. The whole subject of service decline seems to be overblown for the INEL. A site that (a) has lost 2600 jobs over the last few years, (b) has recently opened an overpass/merge at its main entrance junction, (c) whose main access road was once at 70mph and has just been raised to 65mph and (d) most of whose employees ride buses, is not likely to have a new local traffic problem.
 S-37a: The top three bargraph legends on Figures S-14 to S-31 should have the word "Category" instead of "Alternative" associated with them. For the fourth legend Facility should be plural.
 S-37b: The LWR Category values in both Figures S-14 and S-15 are different from the corresponding Figures in Section 2.5.2, i.e. -1 and -2.
 S-46: 5th para: The rank order of cumulative impacts differs from the text in the previous two paragraphs. Doesn't any discussion of cumulative impacts have to include the effects of programs listed in para. 2? If so, what is the distinction between the listings in para. 5 and the statement in para. 4 that INEL is among the least vulnerable?
 S-47a, 2nd para: What is the distinction between "would be vulnerable", "could be vulnerable" (used in other paragraphs), and "could be susceptible"?
 S-47b, 4th para: What are the "key discriminators"? A number of environmental impacts more important than visual resources are not represented graphically.
 S-47c, 7th para: The text for the Comparison of Alternatives section that starts on this page appears to be verbatim from Section 2.5 of Volume I. With the exception of Figures S-21 to S-25, the figures are the same, but in this summary the references to the individual figures have been removed and put far further front, away from the explanatory text. Figure S-4 should be referenced at the end of this paragraph and other figures should be referenced in subsequent paragraphs.
 S-47d, 8th para: Figure S-5 should be referenced here, in line 5. For a true comparison of alternatives, the bar graphs (and accompanying text) for Upgrade with RFETS

1/09.00.08
 cont.
 11/09.08.08
 1/09.00.08
 cont.
 12/09.11.08
 13/09.08.08
 4/16.00.00
 cont.
 14/06.00.08
 15/09.00.08
 1/09.00.08
 cont.
 16/02.04.08

F-027

09 08 08

Comment Number 7

The Summary table in the Draft PEIS was incorrect. Construction of the consolidated facility could cause a decrease in level of service at both Pantex and INEL. The Final PEIS reflects the correction.

09 06 01

Comment Number 8

Endangered species at Hanford may be impacted by implementation of this alternative. The text was revised to reflect potential impacts.

09 11 03

Comment Number 9

Language regarding adverse impacts has been modified in the PEIS based on comments received. The Final PEIS provides the necessary information to describe the impacts for the resources analyzed. The Summary of the Final PEIS has been revised (Sections S.5 and S.8) to provide a better description of the approach to the environmental impact analysis and the comparison of alternatives.

06 01 08

Comment Number 10

Some of the Pu material for disposition is relatively pure (such as metal in weapons pits) and requires little purification to be usable in MOX fuel. However, some Pu material is mixed with contaminants (such as Pu in halide salts) and requires a considerable amount of purification before it can be used in MOX fuel. For the purpose of analysis, approximately 70 percent of the Pu material does not require extensive purification, and, thus, lends itself for use as MOX fuel. The Final PEIS discusses the 70-percent split of materials in Sections 1.6 and 4.6.

09 08 08

Comment Number 11

The number of workers required to operate the Pantex facility with RFETS material would be the same as without the RFETS material (a total of 90 workers would be used in both cases). The numbers used in the Draft PEIS have been updated, and the new numbers and analyses were incorporated into Section 4.2.4.8 of the Final PEIS.

COALITION 21, IDAHO FALLS, ID,
 GEORGE A. FREUND
 PAGE 4 OF 6

material should show the total employment impact on all six sites (the one that accepts the RFETS material plus the other five that do not). In other words, is the total employment impact greater if Pantex accepts the RFETS material than if ORR does?

16/02.04.08
 cont.

S-48a, 4th para: Fatality values reported to the third significant figure are not defensible. Suggest using approximations that say they are (a) likely to be essentially zero for the 0.077 calculated value and (b) zero to one or two for the higher values. This approach worked best in the INEL EIS.

17/09.09.08

S-48b: What purpose does this comparison for the Upgrade alternative serve the decision maker? Does he have the option to upgrade some of the facilities and not others? If so, that option should be described. The reader and the decision maker will also have difficulty verifying the "least affected" claims because the corresponding Figures (S-9 to S-13) show only the highest impact of each option. In other words the figures do not show the NTS P-tunnel option under Collocation. Finally, does this generalized comparison lump apples and oranges (i. e. positive and negative impacts, and equating land use in some fashion with waste generated)?

18/02.00.08

S-48c, para 7&8 and S-49a, para 2,4,5 etc: The most important comparisons to be shown are between the Existing LWR and the other Disposition Categories because this is the choice most likely to confront the decision maker. Many of the comparisons that show the Evolutionary LWR to have the highest impact of any alternative are only marginally useful and detract from a clear and succinct comparison of likely alternatives.

19/01.00.00

S-49a, 5th para: This paragraph should be expanded to include the parameters in Figures S-21 to S-25 and should reference all Figures from S-19 to S-31.

1/09.00.08
 cont.

S-49b, 6th para: Comment S-48a applies here as well.

17/09.09.08
 cont.

S-53: Consistent with the previous comment, Figure S-35 is a meaningless comparison. The note shown on the figure should appear in the text and the Figure should be eliminated.

1/09.00.08
 cont.

S-59 and S-122: Attachments A and B should be eliminated; they appear in Section 2.5 and are much too detailed, repetitive, and often conflicting to be in a Summary.

S-66: Dividing 220 person-rem by 30 millirem suggests that 7300 site workers would be affected by No Action on a long-term INEL storage facility that for most workers would be at least several miles away. If the facility were upgraded (page S-77), the average dose would increase significantly but only 64 workers would be affected. Is this reasonable?

20/09.09.08

S-82: First entry under ORR: "does" not "dose"

S-141: First two columns, 2nd entry: "than" not "then"

21/16.00.00

S-152 & S-153: Most of the numerical values under Waste Management are annual rates and should be so indicated.

22/09.11.08

F-027

The storage options for ORR involve the storage of HEU not Pu. Hence, storage of RFETS material is not among the Proposed Alternatives for ORR.

09 11 08

Comment Number 12

Based on comments received, the Summary was revised. All revisions made are in the Summary of the Final PEIS. Specific comments on the amounts of waste being generated were addressed accordingly.

09 08 08

Comment Number 13

The level of service on some of the local roads at INEL would likely be reduced during construction and/or operation of several of the storage and disposition alternatives. Similar impacts would be expected at other DOE sites. For the PEIS, the local transportation impacts for each of the sites were modeled using the latest available traffic estimates and the number of additional workers expected to use roads into each site. The revisions made in the Final PEIS are also reflected in the Summary.

06 00 08

Comment Number 14

Based on comments received, the Summary of the Final PEIS has been revised and Figures S-14 through S-31 have been deleted because of the confusion they caused; incorrect values were mistakenly presented for some of the LWR alternatives shown in the comparison bar charts for operational land use and maximum direct employment. Sections S.5 and S.8 provide a narrative description of the approach to the environmental impact analysis and the comparison of alternatives.

09 00 08

Comment Number 15

The Department of Energy did not intend to give the perception that the sites were ranked. Specifics on how other DOE programs could affect the cumulative impacts associated with the proposed storage and disposition alternatives is addressed in Section 4.7 of the Final PEIS. The cumulative impact discussion presented in the Summary has been revised to better reflect the analysis in the Final PEIS.

Other: ROI for INEL is five counties in this PEIS, six counties in INEL WM EIS, and seven counties in WM PEIS. Numerical differences are small, but what a waste of effort not to have a single consistent ROI for INEL

George A. Freund
George A. Freund 2025 Balboa Drive, Idaho Falls ID 83404, ph:(208)522-5647

23/09.08.03

F-027

02 04 08

Comment Number 16

Typically, EISs only assess employment impacts at the local and regional levels for a given action. The Draft PEIS and Summary presented projected changes in employment that could occur at each DOE site from storage upgrade and other storage alternatives. This information provides the decisionmaker with the ability to compare a range of alternative storage actions at each of the individual DOE sites. Based on comments received, the Draft PEIS Summary was revised. Revisions made in the Final PEIS are also reflected in the Summary.

09 09 08

Comment Number 17

In order to provide information to the public and decisionmakers, the human health risks and latent fatal cancers were presented in the Draft PEIS even though they are very small numbers. To aid public understanding of the risk numbers, an explanation of how to interpret these risk numbers is also included in Section M.5. Due to the inherent uncertainties associated with risk assessment, the parameters related to human health risk assessment should be kept to two significant digits. Risk numbers more than two significant digits were modified in Chapter 4 of the Final PEIS. Presenting more significant digits does not affect the decisionmaking process, but may prevent the artificial grouping of numbers that may disguise significant discriminators.

02 00 08

Comment Number 18

The Preferred Alternative included in the Final PEIS is a combination of storage alternatives. These are covered by the environmental analyses included in the Final PEIS. The impacts shown in the Summary do not lump "apples and oranges" or positive and negative effects on land use with waste.

01 00 00

Comment Number 19

The Department of Energy did not intend to give the perception that the sites were ranked. The Final PEIS provides the necessary information to describe the impacts for the resources analyzed. The comparison of alternatives bar charts were removed, and the comparisons are now addressed in the text. It is up to the decisionmaker to determine which impacts are discriminators among sites.

09 09 08

Comment Number 20

The radiation dose for workers for the No Action Alternative was estimated for the total workforce on site. For the proposed storage alternatives other than No Action, the dose for the workers was analyzed for workers involved only in the proposed new actions. The radiation dose from No Action is the baseline for the dose of the other Proposed Actions. The calculated dose for each Proposed Alternative is presented as the incremental dose over the No Action Alternative.

16 00 00

Comment Number 21

The commentor is correct, and appropriate changes were made to the text.

09 11 08

Comment Number 22

Impacts reported in Sections 4.2 and 4.3 tables of the PEIS are clearly marked for annual values, or total lifetime of each campaign, for each of the storage and disposition alternatives. Impacts reported in Sections 2.5, 4.6, and the Summary of the PEIS are also clearly marked for annual values or for the life of each alternative.

09 08 03

Comment Number 23

The PEIS defines the region of influence (ROI) as those counties where approximately 90 percent of current DOE and/or contractor employees reside. This definition was applied consistently across all of the sites evaluated in the PEIS. The other documents used slightly different criteria, which accounts for the differences in ROI counties identified in respective documents.

**COALITION 21, IDAHO FALLS, ID,
RICHARD KENNEY
PAGE 1 OF 4**

Subject:

Coalition 21 DPEIS Comments

**COMMENTS ON STORAGE AND DISPOSITION OF WEAPONS-USABLE FISSIONABLE MATERIALS
DRAFT PEIS - 21/96-03RK**

Coalition 21 is a recently organized stakeholders group focusing on the future of technology in Idaho for the 21st century. These comments on the subject draft PEIS are submitted on behalf of our growing number of members. Our ID number for this comment document is 21/96-03RK.

1. The environmental impacts on the INEL from the various alternatives, particularly the ones likely to be implemented there, are acceptable and not likely to exceed significantly the impacts of existing/ongoing activities. This conclusion is based on the experience of our membership rather than on the PEIS Summary document, which we find seriously flawed as a clear explanation of the various alternatives and their environmental consequences (see comment 13 below).

1/08.03.01

2. Whenever environmental consequences are not a deciding factor, other factors must be considered in reaching rational decisions. Coalition 21 advocates safe, technically sound and proliferation-resistant choices that are fiscally responsible and consistent with Idaho's 1995 Nuclear Waste Agreement. Only then do we advocate their location at the INEL.

2/08.03.00

3. HEU storage should be consolidated at Oak Ridge, where HEU has been produced for many years and where about two-thirds of the current inventory is stored.

3/01.04.00

4. Some of the discussion and much of the media coverage of the April 15 public hearing in Idaho Falls focused on whether plutonium is a waste or not. Coalition 21 believes that plutonium becomes a waste only if DOE does not put it to beneficial use prior to final disposition. Accordingly we support the general concept of consolidated long-term storage at PANTEX where about two-thirds of the current inventory exists. However, we prefer the No Action alternative for INEL plutonium, if current or reasonably likely future programs at ANL-W can put it to beneficial use. If those programs do not materialize, the plutonium must be removed by the year 2018, consistent with the transuranic waste provisions of the 1995 Nuclear Waste

4/09.11.08

5/08.03.01

6/08.03.01

7/08.03.00

- more -

F-028

08 03 01

Comment Number 1

The Department of Energy acknowledges the commentor's support for additional missions at INEL. Based on comments received, the Summary of the PEIS was revised and now includes the Preferred Alternative. The bar charts (figures) providing the comparison of impacts for both storage and disposition were deleted from the Summary. The related text was revised to clearly describe the alternatives and clarify the comparison of impacts.

08 03 00

Comment Number 2

The Department of Energy acknowledges the commentor's support of new missions at INEL if they are fiscally responsible and consistent with the 1995 *Nuclear Waste Agreement* (October 17 Settlement Agreement/Consent Order).

01 04 00

Comment Number 3

Comment noted. The *Disposition of Surplus Highly Enriched Uranium Final Environmental Impact Statement* (HEU EIS) assumed that all HEU would be transferred to ORR for storage pending a decision on long-term storage. Continued storage at ORR for the "long-term" is one of the alternatives analyzed in the PEIS. Facilities at other sites are included in the PEIS analyses since they are also "reasonable" storage alternatives and, therefore, must be considered according to NEPA. The Preferred Alternative for storage is identified in Chapter 1 of the Final PEIS.

09 11 08

Comment Number 4

The Department of Energy acknowledges that, in accordance with 40 CFR 261.4, "Source, special nuclear or by-product material as defined by the *Atomic Energy Act* (AEA), as amended, 42 U.S.C. 2011 et. seq." is not a "solid waste" under RCRA. Section 1.1.1 outlines the materials that fall within the scope of this PEIS.

COALITION 21, IDAHO FALLS, ID,
 RICHARD KENNEY
 PAGE 2 OF 4

Agreement.	7/08.03.00 cont.
5. The National Academy of Sciences study established the "Spent Fuel Standard" as a criterion by which to judge disposition alternatives. One assured way of meeting that standard is to incorporate the plutonium in LWR fuel and then use that fuel to high burnup. Disposal of plutonium through such burnup use in commercial power reactors provides a real "peace dividend" for weapons usable materials. Coalition 21 therefore supports the Reactor category of disposal alternatives.	
6. Commercial reactors already produce considerable plutonium, concurrent with burning it up via the fission process. A number of commercial nuclear plants including WPPSS-2 have expressed an interest in using weapons plutonium in their plant. In this instance Coalition 21 recognizes that the environmental consequences (and financial costs) of the Existing LWR alternative are less than those of other Reactor alternatives.	8/08.03.01
7. The Evolutionary LWR alternative would allow the US to build here one or more of the advanced US designs already being built and tested overseas. It would prevent this technology and industrial base from completely escaping to our overseas competitor nations and would help to ensure a future role for nuclear power in a growing economy that is less dependent on foreign oil. We support this Reactor alternative. The INEL would be an acceptable site, but we do not advocate location at INEL because a new large commercial reactor (even half-size) should be built near load centers, and in conjunction with a utility that already operates nuclear power plants.	
8. However, INEL would benefit indirectly from the selection of any Reactor alternative through INEL's continuing technical (and possibly safety testing) support to the Nuclear Regulatory Commission. DOE should provide sufficient financial support to ensure that the underlying technology and core competencies are maintained at INEL, the primary reactor testing facility and designated engineering laboratory for DOE. This INEL mission should be clearly delineated in the Strategic Laboratory Missions Plan now being prepared by DOE. Coalition 21 is commenting separately on the draft plan.	9/08.03.01 10/15.00.00
9. Coalition 21 supports the location of the MOX fuel fabrication facility at the INEL, but we recognize that other DOE sites, such as Hanford where a commercial fuel fabrication facility already exists nearby, are likely to be stronger candidates.	11/08.03.01
10. According to the EIS, some forms of plutonium will not lend themselves to MOX - more -	12/08.03.01
F-028	

08 03 01 Comment Number 5

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

08 03 01 Comment Number 6

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

08 03 00 Comment Number 7

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. Part of the decision process takes into consideration existing agreements such as the *1995 Settlement Agreement* among the State of Idaho, DOE, and the U.S. Navy. DOE is committed to compliance with the October 17, 1995, Settlement Agreement/Consent Order.

08 03 01 Comment Number 8

The Department of Energy acknowledges the commentor's support for Pu disposition in reactors. 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 9

The Department of Energy acknowledges the commentor's support for additional missions at INEL. Decisions on storage and disposition of weapons-usable fissile materials will be based upon environmental analyses,

COALITION 21, IDAHO FALLS, ID,
RICHARD KENNEY
PAGE 3 OF 4

fabrication. For these forms the INEL, with its vast chemical processing experience, should play a major treatment role, preferably through the ANL-W Electrometallurgical Process (provided that process is successfully demonstrated) or via one of the other Immobilization alternatives. If the treated material is shipped in and out of Idaho in a timely manner, such treatment would meet the terms of the 1995 Nuclear Waste Agreement.

12/08.03.01
cont.

11. If DOE selects the Immobilization category of alternatives for disposition of all its plutonium, Coalition 21 believes that the ANL-W EM alternative (once successfully demonstrated) is the environmentally best alternative in this category and we support it for that reason.

12. Coalition 21 believes that INEL is a satisfactory location for the plutonium conversion facilities that are common activities for any of the plutonium disposal alternatives. The DEIS overstates the environmental consequences of these and any other new treatment (or storage) facility at the INEL because such facilities would logically be located inside existing fenced areas to take advantage of their infrastructure and their previously disturbed land resources.

13/08.03.01

14/09.01.03

13. The DEIS Summary falls short in its function for several reasons:
(a) Its explanation of environmental consequences is overly repetitive and detailed and thus subject to numerous internal inconsistencies.
(b) Some of its comparisons are meaningless, such as distinguishing the number of cancer fatalities to the third significant figure.
(c) Other aspects of the DEIS are not adequately explained in the Summary (cf. the various Weapons-Usable Fissile Material Categories in Figure S-1).
For more detailed comments on the Summary we refer you to a companion comment document no. 21/95-04GF submitted by one of our members.

15/09.00.08

Coalition 21 appreciates the opportunity to comment on this significant Draft PEIS. We recognize what a tremendous undertaking each such document represents.

Richard Kenney 5/1/96
Richard Kenney, President
Coalition 21
P. O. Box 51232
Idaho Falls ID 83405
Phone: 208-522-3432

F-028

technical and economic studies, national policy considerations, and public input.

15 00 00 Comment Number 10

Comment noted.

08 03 01 Comment Number 11

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

08 03 01 Comment Number 12

The Department of Energy acknowledges the commentor's support for the Electrometallurgical Treatment Alternative and other disposition alternatives at INEL. Decisions on disposition of weapons-usable fissile materials will be based upon environmental analyses, technical and economic studies, national policy considerations, existing agreements, and public input. In a different context, a limited demonstration of electrometallurgical treatment of EDR-II spent nuclear fuel is underway at ANL-W and is scheduled for completion within the next 3 years, pursuant to the *Environmental Assessment of the Electrometallurgical Treatment Research and Demonstration Project in the Fuel Conditioning Facilities at Argonne National Laboratory-West* (DOE/EA-1148, May 1996).

08 03 01 Comment Number 13

The Department of Energy acknowledges the commentor's support for the construction of the Pu conversion facility at INEL. 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.

09 01 03

Comment Number 14

Concerning the land area required during operation for the Upgrade Alternatives, the Draft PEIS was revised to identify "disturbed area" as land currently not in use and previously an undisturbed natural habitat. Previously disturbed areas, such as graveled area or any land previously graded and cleared of vegetation, were considered "already disturbed areas." All areas within the existing Protected Area (PA) are classified as "already disturbed areas." The criteria for determining disturbed and undisturbed land area during construction would be the same as for operation.

At INEL, only the Upgrade Alternative would be situated entirely on previously disturbed land ANL-W. A potential location for the Consolidation and Collocation Alternatives at INEL would be undisturbed land east of the ICPP. Section 4.2.3.1 of the Final PEIS reflects the revision.

09 00 08

Comment Number 15

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.

COLORADO COALITION FOR THE PREVENTION OF NUCLEAR WAR,
FRANKTOWN, CO, V. E. PERKINS
PAGE 1 OF 1

THE COLORADO COALITION
11151 E. Grant Rd.
Franktown, CO 80116-9221
May 2, 1996

DEPT. OF ENERGY
Office of Fissile Materials Disposition
P. O. Box 23786
Washington D.C. 20026-3786

Re: PEIS on Plutonium Storage and Disposition

Dear DOE:

The Board of the Colorado Coalition has authorized me to comment on the PEIS on Plutonium Storage and Disposition. First, we strongly oppose converting our excess PU for use as a reactor fuel. Such use will, in our view, encourage proliferation and it will increase the nuclear waste stream.


1/08.03.01

The principle to keep in mind is that the U.S. must dispose of excess PU in a way that will stop the spread of nuclear materials. In our view, that immediately removes the options of using it as a reactor fuel or putting it into deep bore holes. We think the option of vitrification is the most likely way to immobilize PU and to render it unusable for weapons purposes. We therefore believe that money should be spent on developing this technology and that the PU in question should be stored as safely as possible until this technology can be used to immobilize PU.

2/08.03.01

3/08.03.01

Sincerely,


V. E. Perkins, Ph.D., Vice-President
THE COLORADO COALITION FOR THE PREVENTION OF NUCLEAR WAR

M-134

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, nonproliferation analysis, and public input.

08 03 01

Comment Number 2

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

08 03 01

Comment Number 3

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, nonproliferation analysis, and public input.

COMMONWEALTH EDISON COMPANY, DOWNERS GROVE, IL,
WILLIAM F. NAUGHTON
PAGE 1 OF 9

Commonwealth Edison Company
1400 Ogden Place
Downers Grove, IL 60516-5711

ComEd

May 4, 1996

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

Attention: Draft Programmatic Environmental Impact Statement Comments on
Storage and Disposition of Weapons-Usable Fissile Materials

Dear Madam/Sir:

Commonwealth Edison Company (ComEd) is pleased to have the opportunity to
provide comments to DOE's Draft Programmatic Environmental Impact Statement
(PEIS). ComEd believes that incorporation of the comments contained herein will
improve the overall clarity, consistency, strength of the draft PEIS.

In the Enclosure, ComEd has categorized its comments for DOE's convenience and ease
of reference. ComEd believes that the Summary PEIS document should include and
highlight all significant findings that distinguish the various alternatives. To that end,
ComEd will identify those areas requiring special emphasis in the enclosed comments.

Very truly yours,

William F. Naughton
William F. Naughton
Project Manager Fuels
Nuclear Strategic Services

enclosure

F-015

ENCLOSURE

ComEd Comments on Draft DOE FEIS
 for
 Storage and Disposition of Weapons-Usable Fissile Materials

GENERAL

- | | |
|--|------------|
| <ul style="list-style-type: none"> • MOX LWR History. Since 1963 the Europeans have manufactured, safely loaded, and burned over 400 tons of LWR MOX fuel. The manufacturing and use of MOX fuel is a fully developed and deployed industry that the U.S. can look to with confidence for information and assistance in the deployment of a similar MOX program in the U.S. for the disposition of excess weapons plutonium. | 1/08.03.01 |
| <ul style="list-style-type: none"> • Immobilization Uncertainty. In contrast, while much is known about immobilization of trace amounts of actinides in glass or ceramic, very little is known about the immobilization of plutonium in glass or ceramic, let alone the impact of the deep borehole burial option, and therefore large uncertainties have to be assumed requiring extensive research and development, with little assurance of success. These uncertainties need to be more clearly delineated both in the complete and Summary documents. | 2/04.02.00 |
| <ul style="list-style-type: none"> • Rapid Deployment. Special weight should be given to options that enable rapid implementation and encourage similar actions within the former Soviet Union. After all, the real threat of this material is not the inventory stored in the U.S., but the inventory that exists in Russia. The sooner a disposition path is chosen that is compatible with Russian methods of disposal, the more likely Russia will proceed with its own disposition. The former Soviet Union views its excess weapons plutonium as an asset that should be utilized as MOX fuel. Thus, a similar rapidly deployed program in the U.S. would provide impetus to both countries. | 3/01.03.00 |
| <ul style="list-style-type: none"> • Benign LWR Impact. The advantage to the LWR alternative is clearly the none to minimal impact to land use, visual resources, air quality, local geology, biological (which includes impacts to endangered species, etc.), historic resources, paleontological, resources, etc. as delineated in Draft FEIS pages 4-680 through 4-686. This is in comparison to constructing new facilities or substantially expanding the facilities at the up to 7 DOD sites for the various alternatives evaluated, which may have substantial impact to some if not all the aforementioned environmental concerns. | 4/08.03.01 |

F-015

08 03 01

Comment Number 1

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.

04 02 00

Comment Number 2

Further information on the technical viability of alternatives was provided in the Technical Summary Report and related alternative summary reports published beginning in July 1996. These documents are referenced in the Final FEIS and were made available to the public.

01 03 00

Comment Number 3

Comment noted.

08 03 01

Comment Number 4

The Department of Energy acknowledges the commentor's support for the Existing LWR 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.

COMMONWEALTH EDISON COMPANY, DOWNERS GROVE, IL,
 WILLIAM F. NAUGHTON
 PAGE 3 OF 9

- | | |
|--|--|
| <ul style="list-style-type: none"> • CANDU Must Be Evaluated. Evaluation of environmental impacts must not be limited to inside the U.S. borders unless some normalizing factor can be applied to U.S. options to account for the differences. In particular, the inclusion of the CANDU Reactor alternative with virtually no environmental assessment implies that there are no environmental impacts associated with that alternative. At the Washington, D.C. public meeting DOE indicated that such an impact will be required of the Canadian government. If so, that should be unequivocally stated both in the Summary and detailed PEIS Documents. Additionally, prior to issuance of a final PEIS, the U.S. public should also have an opportunity to comment on the Canadian EIS for the CANDU alternative. | 5/06.05.09 |
| <ul style="list-style-type: none"> • Timely Action Impact. The draft PEIS should evaluate the need for timely action and the potential environmental consequences for delays in terms of the increased proliferation risk. Also, appropriate benefits should accrue to those options that can be implemented immediately. Thus, the implementation timelines of the various disposition alternatives should be evaluated and compared for their overall environmental impacts. | 6/08.02.00
7/01.00.00
8/08.03.00 |
| <ul style="list-style-type: none"> • The No Action and Storage options fail to even acknowledge the increased possibility for clandestine diversion and usage of the highly visible nuclear weapons materials by terrorist groups or hostile governments especially since these options most likely will be chosen based on Russian actions. In fact, these essentially are the status quo options from which the "clear and present danger" concerns stemmed. This aspect clearly needs to be addressed in the Final PEIS. | 9/13.00.00 |
| <ul style="list-style-type: none"> • Decommissioning Environmental Impacts. Environmental impacts of decommissioning of all facilities have not been included in the PEIS. Only the LWR option is currently planning/accounting for this aspect. The LWR and CANDU are only alternatives that are not impacted in the PEIS as they will be decommissioned whether or not weapons material is disposition in their facilities. All other alternatives require further review to account for the environmental impacts of decommissioning. These impacts need to be addressed in the Final PEIS. | 10/01.02.00 |
| <ul style="list-style-type: none"> • Finally, Western European's extensive experience in LWR MOX fuel provides overwhelming evidence that the LWR MOX options under consideration in the draft PEIS are superior to the other options, not only in terms of environmental, health, and safety aspects, but also in terms of cost/benefit, ability for rapid deployment, and compatibility with the former Soviet Union's objectives. | |

F-015

06 05 09

Comment Number 5

The PEIS states that the environmental impacts in Canada for the CANDU Reactor Alternative are not included, but that such impacts would be addressed in Canada in accordance with Federal law.

08 02 00

Comment Number 6

The Canadian Government has informed the United States that they will not start their environmental analysis until the United States has completed its actions and has stated that the CANDU Reactor is the Preferred or one of the Preferred Alternatives. The means by which U.S. citizens can comment on a Canadian environmental analysis process is beyond the scope of this PEIS.

01 00 00

Comment Number 7

Analyses of the cost, schedule, and proliferation impacts are discussed in separate documents to support DOE's ROD. The documents related to technical, cost, and schedule analysis were available for public review beginning in July 1996. The nonproliferation analysis was made available to the public beginning in October 1996. A series of public meetings to discuss the proliferation analysis were conducted by DOE prior to issuance of the Final PEIS.

08 03 00

Comment Number 8

Schedule information, including the time required to start and complete all of the alternatives, will be provided to the decisionmaker as part of the overall process of making decisions on implementation of alternatives. However, the environmental impacts are not dependant upon the schedule or time required for implementation.

13 00 00

Comment Number 9

Analysis of the No Action Alternative is required by NEPA to serve as a baseline. As stated in Chapter 1 of the PEIS, the purpose of the Proposed Action is to provide safe, secure, and cost-effective storage for the uninsurable weapons-usable fissile materials and for the surplus Pu pending disposition, since the disposition process would take time. The intent is to conduct the disposition, maintaining appropriate levels of security until all

MOX FABRICATION FACILITIES

- **May Not Be Needed.** The Draft PEIS states on pages S-15, S-22, and S-32 that a dedicated facility would have to be built at a U.S. site to implement the LWR alternative. ComEd agrees that a facility or facility expansion will be required for the CANDU alternative, but disagrees with DOE that it must be built for the LWR alternative. A MOX fabrication facility may have to be built, but for the PEIS it should not be required. Since existing European facilities would be used to meet the interim fuel needs of the existing LWR alternative, DOE should also explore the environmental impacts/benefits of using existing excess European capacity or elasticity in plant capability to meet the LWR weapons disposition alternative. Both alternatives should be analyzed and evaluated in the Final PEIS. However, the use of excess European capacity and elasticity should be explored first. Let the ultimate decision be based on an integrated examination and comparison of all the issues associated with a foreign versus domestic MOX fabrication supply. Note that by providing a dual fabrication facility option that:
 1. For the LWR alternative, the Environmental impact is significantly reduced without a required MOX fabrication facility, not to mentioned the reduced cost of the option;
 2. There is no change for the CANDU alternative as a MOX fabrication facility will be needed for either case, and
 3. A U.S. MOX fabrication facility on a DOE site may negatively impact the Russians from a trust and integrity perspective, as a strong case can be made that such a facility would not be economically justified in the commercial sector. Hence, a Russian perspective could include a hidden agenda, siphoning off weapons plutonium, etc.
- **Adjusts to LWR Alternative.** Requiring the construction of a MOX fabrication facility may add substantially to the perceived risk of the LWR alternative as the environmental impacts of constructing and operating the MOX facility are currently included in the LWR alternative. Thus, alternative or comparative analyses that include both utilization of existing capacity as well as a new facility need to be included in the PEIS to ensure accurate and unbiased comparisons.

11/06.01.09

12/06.02.08

F-015

surplus Pu materials are taken care of. Security and proliferation are further discussed in the nonproliferation analysis (*Nonproliferation and Arms Control Assessment of Weapons-Usable Fissile Material Storage and Plutonium Disposition Alternatives*), which was issued for public comment in October 1996 and will be considered in the ROD.

01 02 00

Comment Number 10

Environmental impacts of decommissioning the disposition facilities will be addressed in the next tier NEPA documents, as appropriate, once the sites for these facilities have been determined.

06 01 09

Comment Number 11

Europe is moving toward a balance between the capacity to fabricate MOX fuel and the capacity to utilize MOX fuel in reactors. Additionally, Europe has excess separated Pu stores that they intend to use as MOX fuel as the fuel fabrication infrastructure and reactor infrastructure permits. Therefore, use of European reactors for consumption of U.S. Pu-source MOX fuel would merely displace the use of separated European Pu and result in no net reduction in world inventories of separated Pu. Hence, the statement that Europe has no excess MOX capacity. Additionally, facility utilization projections indicate that, while some excess MOX fuel fabrication capacity may exist in Europe for the next few years, current capacity is soon expected to be fully utilized for commercial MOX fabrication. Therefore, the United States may not be able to rely on the use of existing European MOX fabrication capacity for the entire disposition campaign. However, as a part of efforts to develop weapons-grade Pu MOX fuel, DOE is consulting with European Fuel Fabricators to benefit from their experience in MOX fuel fabrication and may have some MOX Lead Test Assemblies and/or initial core loads fabricated in Europe. Also, participation in the construction and operation of a MOX Fuel Fabrication Facility in the United States will be open to European fuel vendors.

06 02 08

Comment Number 12

It is envisioned that excess MOX fuel fabrication in Europe will be insufficient to satisfy DOE's Office of Fissile Materials Disposition need for

COMMONWEALTH EDISON COMPANY, DOWNERS GROVE, IL,
 WILLIAM F. NAUGHTON
 PAGE 5 OF 9

NON-LIGHT WATER REACTOR ALTERNATIVES

• **CANDU**

- | | |
|--|----------------------|
| 1. MOX fabrication facility will be required for this option. | 13/06.05.08 |
| 2. Virtually no environmental impacts were assessed incrementally which is a must to ensure a balanced evaluation. | |
| 3. Comparison of current uranium based CANDU should be assessed with MOX based impact in all aspects. | |
| 4. Extension of designated CANDU plants life should be included as shutdown of the units proposed for the disposition has been considered if the CANDU MOX alternative is not chosen. The plants are already beginning a three-year license renewal (April 11, 1996 Nucleonics Week). Therefore, in the Final PEIS DOE should evaluate this situation as being equivalent environmentally with the building of a "new" plant (same as Evolutionary LWR) with respect to MOX usage. | 14/06.05.08 |
| 5. The CANDU alternative would require fabrication of a much larger quantity of MOX fuel to dispose of the same quantity of plutonium than the LWR alternative. | 13/06.05.08
cont. |

• **BOREHOLE**

- | | |
|--|-------------|
| 1. Unproven Technology. This technology is not proven. The risks calculated are estimated based on modeling of an undetermined site, hence there are large uncertainties in the analysis. A more balanced comparison should be made to the risks at existing facilities which are much better defined, being based primarily on extrapolations of existing conditions, which have much less uncertainty. | 15/04.00.00 |
| 2. Major Uncertainty. Since for this alternative:
No site has been specified;
No previous EIS; and
No previous licensing experience,
the siting/licensing of the facility would be time consuming resulting in extended interim storage. Based on the previous DOE experience in a similar arena, specifically the fact that the U.S. has been unable to finalize siting of the HLW facility and the LLW facilities by the various state compacts, the degree of uncertainty of this alternative even being viable within the timeframe of the "clear and present danger" envelope is a major point that needs to be addressed. | 16/04.03.00 |
| 3. The mixing facility will require eventual decommissioning, adding to the burden at both the HLW and compact LLW sites. | |

F-015

MOX fuel fabrication; thus, a domestic MOX fuel facility would likely be required. Pending operation of the domestic facility, DOE is considering using foreign fuel facilities to make MOX fuel for the initial stage of the Pu disposition campaign.

06 05 08

Comment Number 13

Comment noted.

06 05 08

Comment Number 14

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 concerning the CANDU Reactor Alternative. In addition, according to the Canadian Government, implementation of the CANDU Reactor Alternative would be subject to Canadian Federal and Provincial policies and regulations and would require health, safety, and environmental assessments before issuance of a Canadian license. (See the letter from the Canadian Embassy in Washington, DC, dated June 6, 1996, reproduced in this CRD.) Should the CANDU Reactor Alternative be chosen for Pu disposition, further negotiations between the U.S. and Canadian Federal and Provincial Governments will be required before implementation, as well as business negotiations with reactor owners.

04 00 00

Comment Number 15

Since no sites have been selected for a deep borehole and because there are no existing deep boreholes utilized for waste disposal, DOE chose to analyze a generic borehole site for environmental impacts. Some of the other disposition technologies require facilities which are similar to existing facilities in the United States. Therefore, DOE chose to pick representative sites for some of the other disposition alternatives.

04 03 00

Comment Number 16

Further information on the technical viability of alternatives was provided in the Technical Summary Report and related alternative summary reports made available for public review beginning in July 1996.

• VITRIFICATION

1. This technology is not proven with a high content of plutonium and should require extensive and lengthy research, development, and testing in a prototype facility before it could be viewed as an alternative for the LWR alternative from an industrial perspective. DOE needs to address this aspect fully in the final PEIS.
2. This technology, contrary to the LWR alternative, does not reduce the plutonium inventory and does not degrade the plutonium isotopic composition from military grade to reactor grade level. Thus, it is not comparable to the LWR alternative from a non-proliferation perspective.
3. This technology is not contemplated by the Russians and would therefore, not bring any advantage in terms of compatibility with the former Soviet Union's objectives.

17/05.01.08

18/08.03.01

F-015

05 01 08

Comment Number 17

Further information on the technical viability of alternatives was provided in the Technical Summary Report and related alternative summary reports made available for public review beginning in July 1996.

08 03 01

Comment Number 18

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

06 02 09

Comment Number 19

To get the MOX fuel to the Spent Fuel Standard as soon as possible and then remove it from the reactor, we would necessarily shorten the refueling cycles and cause more spent fuel to be removed from the reactor over the program life. Since the amount of spent fuel, radioactive waste, security, and radiation

COMMONWEALTH EDISON COMPANY, DOWNERS GROVE, IL,
WILLIAM F. NAUGHTON
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LIGHT WATER REACTOR ALTERNATIVE

- **LWR Work Force Unchanged.** The proposed increase of 40-105 workers per single unit at the LWR facilities (Figure on S-141) is totally unrealistic. Other than minor increases to the security force, there would be no incremental change to the site labor force required for MOX utilization. This aspect needs complete revision including the modifications to all the other environmental impacts impacted, e.g. worker carcinogenic risks, etc.
- **Unrealistic LWR Fuel Cycles.** The PEIS (page 4-692) assumes yearly fuel cycles with single cycle MOX fuel assembly usage. This scenario is unrealistic for the commercial LWR alternative, especially for the necessity of operating and producing a stable and reliable product for its customers. The assumption that LWRs would always be unloading once burned MOX fuel and replacing with fresh MOX does not consider the implications on the remaining fuel in the reactor and the necessary complications and substantial additional wasted resources from the uranium portion of the fuel cycle that would be necessary to effect such a scheme. Some observations about the once through scheme:
 1. Spent fuel pools would fill up faster with the once through scheme. The disposition issue then becomes a high level waste issue which currently shows no indication of being resolved in the intermediate future;
 2. Once burned MOX assemblies will retain higher residual reactivities when discharged and will impose new safety and licensing issues on existing Spent Fuel Pool licensing bases, especially in light of the quantities of assemblies being discharged each cycle.
 3. Once burned MOX assemblies with their higher residual reactivities and heat load will impact HLW transportation and disposal within the repository as current requirements on reactivity and heat loads assumes nearly depleted spent fuel.
 4. The environmental impacts are significantly increased for the once through scheme versus the current LWR two to three eighteen month fuel cycles.
 5. **Impact on MOX Fabrication.** The requirements for the once through scenario will certainly tax whatever fabrication facility or capacity that is to be used. Additionally, it is questionable that DOE can convert the weapons material rapidly enough into LWR compatible fabrication material to meet such capacity requirements. DOE needs to evaluate their proposed schemes in concert with reasonable fabrication capability. The environmental impacts are directly proportional. A balance needs to be analyzed.
- **For current LWR operations:**
 1. There will be NO increase in spent fuel storage needs; and
 2. All waste forms (HLW, LLW, and Intermediate Waste) will be the same for MOX or uranium fuel cycles.

19/06.02.09

20/06.02.09

21/01.00.00

22/06.02.09

F-015

protection personnel requirement would increase, there would be a need for additional personnel. Also, the addition of a new fuel handling building would require additional personnel for security. A ratio, derived from a 14-percent increase in the amount of spent fuel generated, would probably impact personnel by approximately 10 percent of that amount, or about 1.4 percent. A four unit BWR normally necessitates about 2,819 people, and 1.4 percent of 2,819 is 39 people. These are conservative considerations used for the environmental analysis. Optimization of the fuel cycle would reduce the personnel requirements.

06 02 09 Comment Number 20

The PEIS fuel cycle was an idealized case selected for analyses. Any real fuel cycle would be designed to closely match reactor operating cycles, typically 18 to 24 months.

01 00 00 Comment Number 21

Comment noted.

06 02 09 Comment Number 22

A real fuel cycle would require a transition from low-enriched uranium (LEU) fuel to MOX fuel in a staged manner where the LEU would be replaced as it is burned out. The PEIS case is an idealized fuel cycle prepared for analyses of environmental impacts.

09 09 08 Comment Number 23

Comment noted. Section 4.9 of the PEIS has been modified to further describe avoided impacts.

- **The LWR alternative:**

1. Destroys plutonium to below weapons grade;
2. Is consistent with the plans of the Russians and other nuclear weapons countries;
3. Is an irreversible process and therefore favored by non-nuclear states;
4. Is based on existing, proven technology; and
5. Has a portion of the cost offset by revenues from energy production

4/08.03.01
cont.

- **Environmental Benefits.** The PEIS does not contemplate the environmental benefits associated with lower mining and milling levels for uranium, less energy consumption for conversion and enrichment, and materials and energy necessary for fabrication through the avoidance of purchasing uranium based fuel. Assuming the replacement of 4.5w/o fuel for 40 Mt of Pu, avoids the need for 5 million SWUs and 21.6 million lbs U3O8. The energy required per SWU is 2,150-2400 KWH per SWU from coal fired stations for USEC gaseous diffusion production. This would result in a substantial decrease in tails production, and, in fact, would result in current tails be used as the blend material to make the MOX. Additionally, the avoided risks associated with not producing traditional uranium fuel assemblies, i.e. mining and milling accidents, transportation of fuel assemblies and materials, worker impacts in all phases including fabrication, etc. need to be credited to the LWR alternative.

23/09.09.08

- **LWR Offsets.** Additionally, the LWR alternative should be credited with the huge energy and environmental "offset" values as compared to the other alternatives

Energy Value - assuming that all 40 Mt of excess weapons grade plutonium were manufactured into MOX fuel, a new fuel worth of \$1.6-2.1 billion would result with approximately 45 GW years of electricity worth approximately \$32 billion in revenues; and

Waste Generated - Since MOX fuel displaces uranium fuel that would otherwise have to be obtained by mining, milling, converting, enriching, and fabricating uranium, the wastes that the vitrification option would generate would have to be considered because of the need for new uranium fuel. Thus, vitrifying ~40 MT of Pu would not only generate repository waste volumes in the form of approximately 360 cubic meters of extra HLW glass, the vitrification of this Pu would result in 5.6 million additional cubic meters of mill tailings and 3800 cubic meters of enrichment tails caused by the mining of uranium to displace the plutonium as new reactor fuel.

- **Offset of Uranium Fuel Transport.** The PEIS indicates an incremental increase in the number of transportation fatalities associated with MOX fuel transport, primarily due to increased number of vehicles used to provide safe transport. Utilization of standard transportation accidents and resulting fatal injuries statistics per number of vehicles may not be accurate when one considers the intent of the increased vehicles, i.e. to ensure safe and secure transport. Presumably, the transport teams would have a significantly lower overall potential accident rate and thus, fatality rate than just that

24/10.02.00

F-015

10 02 00

Comment Number 24

Standard transportation accidents and resulting fatal injuries statistics, per number of vehicles, were used because they are conservative and documented. The number of fatalities is based on several factors including the radiation environment of the package, type of package used, type of vehicle, number of miles to be traveled, and type of roads to be traveled. The standard approach is applied to all alternatives and sites. This is appropriate at the programmatic level.

COMMONWEALTH EDISON COMPANY, DOWNERS GROVE, IL,
WILLIAM F. NAUGHTON
PAGE 9 OF 9

associated with number of vehicles on the road. In this field as well, the extensive
experience of MOX transport in Europe without incident may be viewed as an asset.

24/10.02.00
cont.

F-015

CONFEDERATED TRIBES OF THE UMATILLA INDIAN RESERVATION,
PENDLETON, OR, JAMES R. WILKINSON
PAGE 1 OF 1



30 April 1996

David Nelson
Director, NEPA Compliance and Outreach
Office of Plutonium Disposition
U.S. Department of Energy
MD-4 Purcell Building
1000 Independence Avenue SW
Washington, D.C. 20545

Subject: EXTEND COMMENT PERIOD ON PLUTONIUM DISPOSITION EIS

Dear Mr. Nelson:

Technical staff of the Confederated Tribes of the Umatilla Indian Reservation, Special Sciences and Resources Program (CTUR/SSRP), formally request a minimum 30-day extension of the public comment period for the Plutonium Disposition Environmental Impact Statement. The current comment period is set to close as of 7 May 1996, and we would request that this be extended until at least 7 June 1996.

The basis of this request is DOE's failure to consult with American Indian tribes over this critical issue with profound, far-reaching, and long-term impacts to Tribal communities, particularly in the Western states. Based on the meeting on plutonium disposition held in Seattle this week, it is clear that Tribal representatives have not had the time nor opportunity to adequately review the EIS and other relevant information associated with this increasingly complex problem. Tribal communities are likely to be disproportionately affected by whatever plutonium disposition decision eventually results, and therefore, must be fully included throughout the decision process, as required under DOE's American Indian Policy and President Clinton's Executive Order on Environmental Justice.

Thank you very much for your consideration of this request. CTUR/SSRP staff would like to receive written confirmation of your action. If there are any further questions, please do not hesitate to contact either me, or Tom Oliners, SSRP Research Coordinator, at 541-376-0185 (phone) or 541-376-5180 (fax).

Sincerely,

James R. Wilkinson

James R. Wilkinson
Program Manager
Special Sciences and Resources Program
CTUR/Department of Natural Resources

TREATY JUNE 9, 1855 • CAYUSE, UMATILLA AND WALLA WALLA TRIBES

M-202

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.

1/08.01.00

Comment Documents
and Responses

COOPS, MELVIN S., SANTA ROSA, CA
PAGE 1 OF 2

MELVIN S. COOPS
6 Valley Lakes Place
Santa Rosa, CA 95409-6238
Telephone 707-538-1440

June 6, 1996

David Nulton, MD-4
U.S. Department of Energy
Forrestal Building
1000 Independence Ave SW
Washington, DC 20585

Dear Mr. Nulton,

At this time I would like to provide additional comments relating to the PEIS on the "Storage and Disposition of Weapons-Usable Fissile Materials".

I have previously expressed strong recommendations to store, and make available to the U.S. Naval Nuclear Propulsion Program, *all* weapons-surplus highly-enriched uranium-235 (93%) for eventual utilization as naval reactor fuel; and to create a special reserve supply of lesser enriched uranium fuels (average 50 % enrichment) for use in development of modern sodium-cooled fast reactor systems that certainly will be needed in the U.S. for electrical power generation in the near future, as was recommended by the National Academy of Sciences as their top priority item in their recent evaluation of U.S. national energy development requirements. (Please see my letter to Greg Rudy, MD-1, dated December 22, 1995).

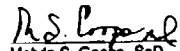
The current international situation relating to weapons development activities by *many* foreign countries, demands that the U.S. maintain its nuclear options in an intelligent and judicious manner. In particular, the apparent reversal of political trends in Russia, and the continuing economic and military buildups in China, Pakistan, Iran, and other potential world trouble-spots, requires that the U.S. *not* unilaterally discard its nuclear options and capabilities. I believe that we should proceed with dismantlement of our surplus old weapon systems, but that we must retain in readily available form, the critical nuclear material recovered from the dismantlement program for possible use for an indefinite period. The cost to accomplish this is practically nothing, since storage of plutonium in metal form for long periods of time is well understood, simple, and quite inexpensive (all facilities and equipment exists), compared to other options being proposed. Attempting to convert plutonium to a permanently-useless form, (short of destruction by fission) is naive, unintelligent, and downright dangerous to future generations. Storing this material for future use, hopefully as fast-reactor fuel, is a wise and prudent investment both for the U.S. economy, and as insurance against undesirable military eventualities.

F-054

I strongly urge the USDOE, and Congress, that the DOE should recover all existing military plutonium in the form of metal castings, sealed under vacuum in welded stainless-steel containers, for long-term storage. This option is absolutely practical for at least 50 years, and probably suitable for hundreds of years more. This option will permit a long-term evaluation of the status of world politics over the next decade and permit a truly realistic evaluation by our own next generation. The Russian state will pursue this approach whether we do or not, and it is in our best national interest to do the same. Any other option at this time, would be gambling with the future of this country and possibly the future of many of the democracies of our current world.

1/08.03.01

Sincerely yours,


Melvin S. Coops, ScD
Retired Nuclear Chemist

F-054

08 03 01

Comment Number 1

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

COUNTY OF ST. CLAIR, OFFICE OF EMERGENCY MANAGEMENT,
PORT HURON, MI, JEFFREY A. FRIEDLAND
PAGE 1 OF 1



OFFICE OF EMERGENCY MANAGEMENT

Phone (810) 987-1710
FAX (810) 985-5102

County of St. Clair, Michigan

204 BARD STREET, PORT HURON, MICHIGAN 48060

JUDITH KEEGAN, Chairperson, St. Clair County Board of Commissioners
JEFFREY A. FRIEDLAND, Coordinator

June 4, 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 with concern regarding the options presented in the reactor category of
disposition alternatives in the above Programmatic Environmental Impact Statement.

It is apparent that the Canadian Deuterium Uranium (CANDU) reactors located near
Kincardine, Ontario is a facility that would utilize the plutonium based mixed oxide fuel that could
result from the proposed refinement facility in the Washington state. This would create a lengthy
transportation route through densely populated areas.

St. Clair County would be included in this transportation route as both Interstates 69 and
94 merge near the Blue Water International Bridge to Ontario. As the emergency management
coordinator for the county, I have serious concerns regarding the volumes of traffic on these
interstates and the ability of local emergency response units to handle an emergency situation
involving the proposed product movement. The current volume of hazardous materials has
overwhelmed these units without even considering the proposed hazard.

If the CANDU option is one that is seriously being considered, I would strongly urge your
Department to consider a transportation route through Canada from a point further west of
Michigan as the route through St. Clair County is unacceptable in my opinion.

I thank you for the opportunity to comment on this important issue.

Sincerely

Jeffrey A. Friedland

U.S. Government of Service



1/10.00.00

M-257

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 CANDU reactors is one of
nine different disposition alternatives analyzed in the PEIS. Six specific sites
and a generic site are evaluated for fabricating MOX fuels for Pu disposition.
As a result, the transportation analyses performed in the PEIS consider
multiple routes from potential MOX fuel fabrication sites to potential reactor
sites. Although the Port Huron/Sarnia border crossing is mentioned in the
PEIS as a convenient point for the CANDU fuel shipments to pass from the
United States to Canada, our analysis also reflects other possible routes.

The Draft PEIS did not identify a Preferred Alternative for Pu disposition. A
Preferred Alternative is identified in the Final PEIS and a disposition decision
is expected to be made by the end of the year. The decision will take into
account environment, safety (including transportation), and health factors, as
well as technical, cost, schedule, and nonproliferation considerations. After
the ROD (which will include technology approaches), which is expected in
late 1996, follow-up analyses, negotiations, and specific agreements over
several years will be required before implementation.

CRAMER, JERRY
PAGE 1 OF 1

My name is Jerry Cramer and I reside at 3650 West 42nd Avenue.

I'm here to speak in favor of Plutonium Disposition Project. I can't think any better way to reduce our stockpile of plutonium than making fuel out of it to produce electric power for the Pacific Northwest. Burning plutonium is also very compatible with DOE's Hanford cleanup mission.

I feel the Supply System deserves this project because they have worked very hard to reduce the cost of power and operating the power plant more reliably. I don't think anyone can argue that they succeeded on both counts. Burning plutonium will reduce the cost of power for the Supply System, and ratepayer even more.

Plutonium disposition is a win - win situation for the Tri-City economy. This will make the Supply System a long term asset to our area instead of a big questions mark. If this venture has a positive result it could also pave the way for completion of #1 for the same purpose.

Another asset is the FMEF facility that is already built that will be used process the fuel, and create many additional jobs.

The Plutonium Disposition project would be a great start in showing the rest of the world, especially Russia, that the United States is serious about reducing their plutonium stock pile to make our world a safer place and hopefully someday no one will need to fear destruction or complete annihilation from an awful bomb made from plutonium.

1/08.03.01

2/08.03.01

3/08.03.01

WA-015

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.

08 03 01

Comment Number 2

Comment noted.

08 03 01

Comment Number 3

The Department of Energy acknowledges the commentor's support for new missions at Hanford. 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.

DANIEL, LOUISE, AMARILLO, TX
PAGE 1 OF 1

3805 Overlook Dr.
Amarillo, TX 79109
May 28, 1995

United States Department of Energy
Office of Fissile Materials Disposition
P.O. Box 23785
Washington, D.C. 20026-3785

To Whom It May Concern:

After reviewing the Draft Programmatic Environmental Impact Statement regarding the Storage and Disposition of Weapons Usable Fissile Materials, I continue to have the same concerns which have troubled me since this decision-making process began.

Though I am interested in the disposition and disposal options for the entire nuclear complex, my particular interest is in the future of the Pantex Plant.

The Ogallala aquifer is the life-blood of this region and any potential threat to its quality or quantity is unacceptable. Past operations at Pantex have contaminated groundwater under the plant in the parched aquifer and what is now being referred to as the "upper Ogallala". That contamination has seeped off-site and it is only a matter of time before its seepage reaches the Ogallala itself. There is still much to be learned about how the aquifer is recharged and about the geology of the playes and firegarden layers. Though the plant is making a valiant effort to clean the groundwater and pull back the contaminated plume, pump-and-treat operations are widely believed to be of limited effectiveness.

While I have become fairly comfortable with interim storage of a limited number of plutonium PITS, I am opposed to the designation of Pantex as a permanent repository and to storing plutonium in any form other than PITS. I believe that permanent storage will inevitably involve the processing and/or reprocessing of plutonium. Historically, such operations have led to environmental disasters at the plants which have housed them; therefore, any further processing of plutonium should be restricted to sites that are already contaminated beyond hope of clean-up.

The DOE should reevaluate the existing nuclear weapons storage facilities at Kirtland Air Force Base or build a storage location in a place that is not a prime agricultural area.

With regard to disposition alternatives, I understand that the current decision will be confined to the technology and will not include siting. However, I believe the two to be so interdependent that it is difficult to separate them. In any case, no facility which will use large amounts of water should be located at Pantex. Water is a finite resource in this arid region. No amount of economic development or gain can offset its depletion.

Thank you for this opportunity to comment and for your attention.

Sincerely yours,

Louise Daniel

Louise Daniel

M-245

09 04 04

Comment Number 1

The Department of Energy acknowledges the commentors concern about the Ogallala Aquifer. The PEIS assesses the impacts to the Ogallala Aquifer from the various alternatives, should such activities be located at Pantex.

Waste/hazardous material treatment/handling operations are regulated to minimize the potential for releases of hazardous substances to the soil or surface water that could then migrate to the groundwater.

08 03 01

Comment Number 2

The Department of Energy acknowledges the commentor's opposition to long-term storage of Pu pits and other forms of Pu at Pantex. Decisions related to future missions at Pantex will be based upon environmental analysis, technical and economic studies, national policy considerations, and public input.

01 05 00

Comment Number 3

Combined storage of pits and non-pit Pu at the Manzano WSA was originally eliminated as a reasonable alternative in the Draft PEIS. After considering separate storage of pits from non-pit Pu, the option to store these pits at the Manzano WSA no longer appears unreasonable. The Manzano WSA was evaluated in the Pantex EIS and Section 2.1.3 of the Final PEIS. The Final PEIS was revised to clarify consideration of the Manzano WSA for combined storage, and a description of the WSA was included in Appendix P.

1/09.04.04

2/08.03.01

3/01.05.00

1/09.04.04
cont.

May 1, 1996

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

Dear PEIS Committee Members:

There are two ways to cause true nonproliferation, both of which require destruction of all excess materials that can be used by terrorists and rogue nations to manufacture nuclear weapons. One way is to blow up all of the world's excess weapons-usable materials, and that is unthinkable. The other method, a beneficial method, is to destroy the weapons-usable material while creating electricity. Incidentally, all sources of weapons-usable material, including spent nuclear fuel, must be considered in your deliberations, otherwise we are wearing blinders.

Technological facts must prevail in our decisions. Political decisions can be disastrous.

We citizens have been told repeatedly that solutions like the Integral Fast Reactor cannot be considered because accomplishment cannot be achieved in 10 years. That, of course, is illogical and unrealistic because you routinely talk of placing "waste" in Yucca Mountain, which is scheduled to open in 2010, and may never open. When we are talking environmental impacts, we must be realistic. When we are dealing with dangerous materials that can last for tens of thousands of years, even millions of years, it is illogical to limit our evaluation of solutions to 10 years. This is particularly true when terrorists and rogue nations are involved.

Your efforts are governed by environmental impact logic. Environmental impact does not end in 10 years, it goes on far beyond our ability to predict. Therefore, the following factors must be included in your decision making process:

1. Fossil fuels will be essentially depleted in the 21st Century and their cost will increase dramatically with time.
2. Fossil-fuel fired power plants are spewing huge quantities of radioactive and hazardous contaminants into our atmosphere.
3. The world's supply of uranium will be consumed in today's nuclear reactors in about three decades.

M-127

01 00 00

Comment Number 1

Converting surplus Pu into MOX fuel for use in reactors is a reasonable disposition alternative that would generate electricity. Fissile materials present in spent nuclear fuel are not considered weapons-usable since separation of the relevant isotopes from these highly radioactive materials requires significant remote chemical processing.

01 04 00

Comment Number 2

The Integral Fast Reactor concept was considered in the Screening Report and was disqualified based on technical maturity and other factors.

1/01.00.00

2/01.04.00

DARNELL, G. ROSS, IDAHO FALLS, ID
PAGE 2 OF 2

4. America and the world want and need an ultimately safe, clean, abundant, inexpensive, and ~~inexhaustible~~ electrical energy source. But so far, the combination of specifics disqualifies coal, crude oil, natural gas, solar, hydro-power, geothermal, wind, wood, and dung.
5. Spent nuclear fuel still contains some 99% of its original energy, and it also contains plutonium that could be used by terrorists. It is not waste.
6. The Integral Fast Reactor cannot melt down, even if left unattended, even with safety equipment failure, even with sabotage. It is configured so it cannot create plutonium, yet it can consume large quantities of plutonium and actinides in each fuel loading. It can extract the 99% of remaining energy in spent nuclear fuel. Its waste is much smaller than that of current nuclear reactors and the waste is thousands of times safer than spent nuclear fuel. The Integral Fast Reactors will be so incredibly efficient that they can provide all of the world's electricity for nearly 10,000 years with existing fuel. Logically, the Integral Fast Reactor will be ultimately safe and inexpensive when compared to the known alternatives for the future.

3/14.00.00

We can't plan for the future in the future, we must plan for the future now. Considering the foregoing facts and the need for true nonproliferation, there is one logical solution for the PEIS, the Integral Fast Reactor.

NOTE: Because the Integral Fast Reactor can extract the 99% of remaining energy in spent nuclear fuel, we must ensure that spent fuel remains in a form that can be recovered and sent directly to Integral Fast Reactors for consumption at some future date.

In summary, when we can consume these weapons-usable materials in the Integral Fast Reactors of the future while generating electricity, saving precious fossil fuels, improving the environment, and saving tax payers money, we must seriously consider that course of action.

Thank you for accepting my response to this most important issue.

Sincerely,



G. Ross Darnell
Retired (Lockheed Idaho Technologies Corporation)

M-127

14 00 00

Comment Number 3

During the screening of alternatives for inclusion in the PEIS, a Reactor-Burning concept was evaluated involving a variation of the Integral Fast Reactor concept. However, this concept, which would use a reactor fuel cycle design still requiring development, would be more costly and require a longer timeframe than other mature reactor options. The development program was terminated by the Administration and Congressional action. Since Pu disposition can be accomplished using existing technologies, there is no justification for developing this advanced technology for Pu disposition.

Leslie C. Davenport
Senior Engineer, Nuclear Safety (Retired)
1922 Mahan Avenue
Richland, WA 99352

May 7, 1996

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

Gentlemen:

Please include the following in the record of public comments for the "Storage and Disposition of Weapons-Usable Fissile Materials Draft Programmatic Environmental Impact Statement." It summarizes what I feel should be done to partially solve this problem. If there are questions, please phone/fax me at (509)-946-4409

STORAGE OBJECTIVE

The objective should be to minimize cost and risk (by upgrading multiple sites and/or constructing new facilities, by converting to stable forms, by promptly disposing of unusable scrap and waste, and by providing acceptable safeguards & security and environmental health & safety). Consolidate all Safeguards Categories I, II and some III quantities of plutonium and highly enriched uranium (whether to be disposed as surplus, or kept as needed for specific national programs) at a minimum number of sites. Construction of new storage facilities versus upgrading current facilities should be decided on the most effective cost and timeliness basis to achieve the goals of safeguards & security, and environmental health & safety. The cost to package Pu for 50-year safe storage should be minimized by consolidating this work in one location (where the plutonium oxide is to be stored long term) as long as Pu can be safely transported to this site for such ultimate repackaging. For national security, the primary long-term storage site (two for unirradiated Pu, and one for unirradiated HEU) should not be collocated. The handling and storage of Safeguards Categories I and II surplus materials should be to the "Stored Weapons Standard." Only Hanford, Pantex, and Y-12 at Oak Ridge should be considered as candidate sites for the long-term storage of all Safeguards Category I and II weapons-usable plutonium and high enriched uranium.

Interim Storage of Surplus Plutonium (Pu)

About 55% of the currently surplus Pu is at Pantex as metal (primarily as Pits), and should be kept there in interim storage in upgraded facilities (until it can be finally disposed). However interim storage should not be extended longer than necessary because of the negative political signals for nonproliferation and arms reduction. Pu metal at the other sites should be prepared in acceptable form for shipment to, and interim storage at, Pantex (or possibly Hanford if not in Pit form). The Pu metal at Rocky Flats and small amounts at Idaho, LLNL, LANL, and "Other Sites" should receive priority for shipment to Pantex or possibly Hanford before the Pu metal at Savannah River is shipped. In any event, all Pu metal should be prepared for interim safe storage promptly.

1/08.03.01

2/08.03.01

3/08.03.01

4/08.03.01

5/15.00.00

M-170

08 03 01

Comment Number 1

The Department of Energy acknowledges the commentator's support for the Collocation Alternative. Decisions on storage alternatives 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 commentator's support for the Consolidation Alternative. Decisions on the storage 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

The Department of Energy acknowledges the commentator's concern with the Collocation 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.

08 03 01

Comment Number 4

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

15 00 00

Comment Number 5

Comment noted.

3-182

DAVENPORT, LESLIE C., RICHLAND, WA
PAGE 2 OF 3

Oxides, unirradiated fuel, and other forms of plutonium should be put into stable forms as quickly as possible for interim safe storage at and shipment between sites, with usable resulting oxides shipped to Hanford, metal shipped to Pantex or Hanford, and unirradiated fuel kept at or shipped to an upgraded site(s). Unusable scrap and waste should be stabilized and disposed of promptly, probably by vitrification (or safe storage until vitrification), because a vitrification facility is to be constructed at Hanford (e.g., a facility that is already planned for construction and to which a parallel line designed for criticality control could be added, rather than developing new technology and building a new facility at another site). The Waste Isolation Pilot Plant (WIPP) could provide disposal for these smaller quantities of vitrified waste containing Pu.

Pu in irradiated fuel should eventually be stored above ground in dry storage casks, possibly being consolidated at Hanford where this is already planned.

Interim Storage of Surplus High Enriched Uranium (HEU)

About 49% of the currently surplus HEU is at Oak Ridge, primarily at the Y-12 plant. I agree with the proposals in "PEIS Data Report: Upgrading the Y-12 Plant for Long-Term HEU Storage," Y/ES-043/R2, February 1996, and feel that Y-12 should be the US repository for storage of both unirradiated HEU needed for specific national programs, and that awaiting disposal as surplus HEU. Beyond upgrades currently in progress to increase storage capacity, improve infrastructure, and convert HEU to stable forms, the primary remaining capital project is to improve the resistance of some Y-12 storage facilities to design basis seismic events and tornadoes (Natural Phenomena Hazard Upgrades).

6/01.04.00

All unirradiated HEU at other sites should be put into stable forms as quickly as possible for safe storage at and shipment between sites, with the resulting materials shipped to Y-12 as quickly as is reasonable. An exception could be short-term storage of HEU from newly dismantled Pits at Pantex. As stated above, unusable scrap and waste should be stabilized and disposed of promptly, probably by vitrification (or safe storage until it can be vitrified), because a vitrification facility is already running at Savannah River and another is to be constructed at Hanford.

As stated above, HEU in irradiated fuel should eventually be stored above ground in dry storage casks, possibly being consolidated at Hanford where this is already being planned.

6/01.04.00
cont.

DISPOSITION OBJECTIVE

The options for long-term disposition of usable surplus plutonium should seek to meet the "Spent Fuel Standard," and for usable surplus HEU should seek to blend the HEU down to low enriched uranium (LEU) usable in civilian power reactors. For the usable Pu, I prefer Pit disassembly and/or Pu conversion followed by MOX fuel fabrication and use in an existing reactor or partially completed LWRR. For the unusable Pu and HEU that can not be used in civilian power reactors, I would like to see the material vitrified and disposed of as promptly as possible. Vitrification at Hanford would allow adding cesium-137 and/or high-level waste to provide a radiation barrier for nonproliferation purposes.

7/08.03.01

8/08.03.01

Disposition of Surplus Pu

I support the spent fuel option that would use the surplus Pu in fabricating mixed oxide (MOX) fuel for once-through use in commercial nuclear power reactors. This could be done by disassembling Pits at Pantex, shipping in approved Pit containers to Hanford, converting Pits and other source material to usable oxides at Hanford, fabricating into MOX fuel at Hanford, and using as fuel in reactors. The resultant spent fuel would then be disposed of in a high-level waste repository.

7/08.03.01
cont.

M-170

01 04 00

Comment Number 6

The analyses of cost, schedule, technical, and Nonproliferation Policy impacts of the various reasonable alternatives for the Proposed Action are presented in separate documents to support DOE's ROD. These documents were available for public review beginning in late July 1996.

08 03 01

Comment Number 7

The Department of Energy acknowledges the commentor's support for Pu disposition in reactors. 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 8

The Department of Energy acknowledges the commentor's support for new missions at Hanford. 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.

DAVENPORT, LESLIE C., RICHLAND, WA
PAGE 3 OF 3

The Fuels & Materials Examination Facility (FMEF) at Hanford is a DOE owned facility that was constructed for safe storage of Safeguards Category I or II quantities of Pu and HEU, and has a remote fabrication line usable for producing MOX fuel. Although this facility has never been used for fissile material work, this was its original purpose and the facility exists with very little need for changes to meet current safeguards & security and environmental health & safety requirements. I would like to see Washington Public Power Supply System's WNP-2 reactor at Hanford, and possibly the three Palo Verde reactors in Arizona, used to burn up this MOX fuel. I believe all four reactors were designed so that they can burn MOX fuel and would take less licensing effort through the NRC to permit this. If additional reactors are deemed necessary, I support completion of construction of WNP-1 at Hanford. The two WNP reactors, the FMEF facility, and appropriate storage vaults are physically all on the Hanford reservation, which would reduce risk and security problems during transport. I do not support the evolutionary LWR alternative due to the long time delay in starting actual disposition. However, acceptable methods include the CANDU reactor alternative, selling the Pu to Japan, France, or the United Kingdom; or in the short-term fabricating MOX fuel assemblies in an existing European MOX fuel fabrication facility.

Disposition of Surplus HEU

Approximately 80% of the surplus HEU (103 of 174 metric tons) is in forms that may allow it to be usable for down blending to LEU. Additional surplus HEU that can be converted to usable LEU on a cost effective basis should also be included. This blending to LEU should be started as soon as possible, but at no slower rate than can be sold at a reasonable return price for commercial use.

Sincerely,

Leslie C. Davenport

Leslie C. Davenport,
Senior Engineer, Nuclear Safety (Retired)

7/08.03.01
cont.
8/08.03.01
cont.
9/08.03.01
10/08.03.01

08 03 01

Comment Number 9

The Department of Energy acknowledges the commentor's opposition to the Evolutionary LWR Reactor 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 10

Comment noted.

M-170

3-184

DAVIS, ISABEL, CANYON, TX
PAGE 1 OF 1

Raima Isabel Davis
Rt. 1 Box 213-Z2
Canyon, TX 79015
(806) 499-3509

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

I am concerned about the disposal and storage of nuclear wastes at a site within 30 miles of my home and directly over my water supply. We live in a area which is not served by a water supply provided by a municipality. We have our own well which is tapped directly into the Ogallala Aquifer. It is frightening to think that in a few years I may be drinking contaminated water without even knowing it.

1/09.04.04

Even if the possibility of contamination did not exist, the accelerated draining of the aquifer necessitated by the processing of nuclear wastes is a threat not only to agriculture, but to the quality of life in the Texas Panhandle. The aquifer is being drained at an alarming rate by irrigation of crops. We must find a way to use less water, not more.

Surely there is a site available which is not over an aquifer that supplies water to 8 food producing states. The Chamber of Commerce of Amarillo and the Department of Energy are using faulty logic to protect current jobs at the expense of our very survival in the future.

Please do not store surplus plutonium at Pantex. Please do not process plutonium at Pantex, and please do not store hazardous wastes at Pantex.

1/09.04.04
cont.

Sincerely,

Isabel Davis

Isabel Davis
A Citizen of Randall County, Texas

M-193

09 04 04

Comment Number 1

The Department of Energy acknowledges the commentator's concern about the Ogallala Aquifer. The PEIS assesses the impacts to the Ogallala Aquifer from the various alternatives, should such activities be located at Pantex. Waste/hazardous material treatment/handling operations are regulated to minimize the potential for releases of hazardous substances to the soil or surface water that could then migrate to the groundwater.

My Name is Danny Detten and I'm a neighbor
to Pantex having lived all 52 years of my life there. My
wife Bernice and I have four children and 9 grandchildren
three of our children close to live, farm and ranch around the
north and east side of Pantex. We are all very opposed to the
processing & storage of plutonium.

Water is more important than oil or gold to the area
Pantex. Agriculture & the cattle industry are far more important
than Pantex. So why are we even considering storage &
processing plutonium? We are told if we support it, this will
protect some jobs & keep Pantex from being phased out
completely. In the real world if a product is not needed
it normally isn't produced.

Our water supply needs to be protected and by storing &
processing plutonium over the Ogallala aquifer is ridiculous.

We first supported Pantex out of patriotism and to some
extent the final assembly of nuclear warheads because of
patriotism but people patriotism works both ways. America
& D.D.E. you better wake up and start supporting us.

Our family has been here approximately 70 years at this
location & I assure you it was not Pantex that made
this area what it is today but it sure may destroy
it in the future.

Thank you
Danny Detten

09 04 04

Comment Number 1

The Department of Energy acknowledges the commentor's concern about the Ogallala Aquifer. The PEIS assesses the impacts to the Ogallala Aquifer from the various alternatives, should such activities be located at Pantex.

Waste/hazardous material treatment/handling operations are regulated to minimize the potential for releases of hazardous substances to the soil or surface water that could then migrate to the groundwater.

1/09.04.04

TX-057

DEVORAK, JUDITH
PAGE 1 OF 1

Comment ID: P0017
Date Received: April 18, 1996
Name: Judith Devorak
Address:

Transcription:

I'm calling to say keep that stuff out of Idaho. The Governor was wrong to let you start bringing any of it in. It should have stayed in court longer. Keep it out of Idaho.

1/08.03.01

P-017

08 03 01

Comment Number 1

The Department of Energy acknowledges the commentator's opposition to new missions at INEL. 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.

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

Name (optional): Robert J. Dorwart
Address (optional): 4422 NE 65th St
Seattle, WA 98115

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.

We should immobilize fissile materials in the form of material
occurring naturally. There is no way to prevent mining uranium ore, so
it will eventually (eventually) end up in the ground. There
will be no other adequate energy source except solar.

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.

A good place for fissile materials, but we should explore other
geological sites that may be the only energy source remaining by
making them totally unavailable.

2/08.03.01

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.

I believe we should do some of this work. We are
rapidly consuming abundant fuels (which will not be made up
again) by nuclear processes (production of hydrogen). Maximizing the
production of nuclear power will put off an energy crisis for
which we should prepare us.

3/08.03.01

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-224

08 03 01

Comment Number 1

The Department of Energy acknowledges the commentator'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.

08 03 01

Comment Number 2

The Department of Energy recognizes the commentator'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.

08 03 01

Comment Number 3

The Department of Energy acknowledges the commentator'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.

DRYER, TED, PORTLAND, OR
PAGE 1 OF 1

Comment ID: P0004
Date Received: April 16, 1996
Name: Ted Dryer
Address: 7037 SW 54th
Portland, OR

Transcription:

I'd like to suggest that the Department strongly consider putting the nuclear waste into glass.
None of the other options seems safe enough to me. Thank you very much.

1/08.03.01

P-004

08 03 01

Comment Number 1

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.

**DUKE POWER, CHARLOTTE, NC,
ROBERT VAN NAMEN
PAGE 1 OF 2**

By Fax (1-800-820-5156) and by Mail



DUKE POWER

May 6, 1996

Department of Energy
Office of Fissile Materials Disposition
c/o SAIC- PEIS
P.O. Box 23786
Washington DC 20026-3786

Subject: Comments on DOE document "Storage and Disposition of Weapons-Usable Fissile Materials Draft Programmatic Environmental Impact Statement (DOE/EIS-0229-D)"

This letter is provided to the Department of Energy to give comments on the subject document. Duke Power appreciates the opportunity to participate in the process and looks forward to the timely resolution of all outstanding issues so that the task of disposing of the excess plutonium may begin. The use of plutonium as LWR MOX fuel is a proven technology which is readily adaptable to the US light water reactors and will ensure a timely and cost effective disposition program. The following comments are offered for consideration by DOE as it prepares the Final Environmental Impact Statement and progresses to a Record of Decision.

- The use of MOX fuel as the primary disposition mechanism is the only option which meets the non-proliferation goals of the program and, at the same time, extracts the great energy potential associated with the material.

- The Final Environmental Impact Statement should fully account for all benefits associated with burning the plutonium as MOX fuel including the avoided mining and enrichment (power intensive) requirements which would be required if MOX fuel were replaced by UO2 based fuel.

- Timely and predictable disposition plans should be laid out and followed. Any scenario delaying the disposition should be penalized due to the potential adverse environmental consequences associated with storage.

- All potential environmental impacts should be considered in evaluating the alternatives, not just those within the US borders.

- Use of existing MOX fabrication capacity in Europe should be seriously considered by DOE. Building from the existing European experience and capacity ensures the most rapid and most reliable start to the program.

1/08.03.01

2/09.00.08

3/07.00.00

4/08.00.00

5/06.01.08

M-181

08 03 01 Comment Number 1

The Department of Energy acknowledges the commentator's support for the Existing LWR 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.

09 00 08 Comment Number 2

Based on comments received, several sections of the Final PEIS include additional analyses. These sections (in Section 4.9) include Impacts on Uranium Mining and Nuclear Fuel Cycle Industries, Avoided Environmental Impacts of Using MOX Fuel Instead of Traditional Low-Enriched Uranium Fuel in Nuclear Power Plants, and Avoided Environmental Impacts of Using Nuclear Power Plants Instead of Fossil Fuel Power Plants. The Avoided Environmental Impacts of Using MOX Fuel Instead of Traditional Low-Enriched Uranium Fuel in Nuclear Power Plants section in the Draft PEIS includes the health impacts avoided to the public and workers for the mining and milling industries. Other avoided impacts to air quality and waste generated were added to the Final PEIS.

07 00 00 Comment Number 3

Generally, the goal is to complete disposition within 25 years after the ROD. The storage decision will be for long-term storage, up to 50 years. Schedule data, along with technical and cost data, were provided in Technical Summary Reports of both storage and disposition in late July 1996.

08 00 00 Comment Number 4

In accordance with Executive Order 12114, DOE guidelines implementing that Order, the Department of State's Unified Procedures (10 CFR 1021.102), the PEIS considers impacts to the global commons from potential European fuel fabrication and the CANDU Reactor Alternative. In addition, according to the Canadian Government, implementation of the CANDU Reactor Alternative would be subject to Canadian Federal and Provincial policies and

3-190

**DUKE POWER, CHARLOTTE, NC,
ROBERT VAN NAMEN
PAGE 2 OF 2**

Duke would also like to take this opportunity to request that DOE involve all potential licensees (the utilities) in discussions, plans and projects leading to the licensing of MOX fuel with the Nuclear Regulatory Commission. Capitalizing on the abilities of the commercial sector in implementing the MOX option will result in the most stable, reliable and timely progress on this important program.

6/06.06.08

Robert Van Namen

Robert Van Namen, Manager
Fuel Management, Nuclear Engineering

M-181

regulations and would require health, safety, and environmental assessments before issuance of a Canadian license. (See the letter from the Canadian Embassy in Washington, DC, dated June 6, 1996, reproduced in this CRD.) Should the CANDU Reactor Alternative be chosen for Pu disposition, further negotiations between the U.S. and Canadian Federal and Provincial Governments will be required before implementation, as well as business negotiations with reactor owners.

06 01 08 Comment Number 5

Comment noted.

06 06 08 Comment Number 6

Comment noted.

6125 Country Club Parkway
San Jose, CA. 95138

May 6, 1996

U.S. Department of Energy
Office of Fissile Materials Disposition
P.O. Box 23786
Washington, D.C. 20026-3786
(FAX) 1-800-820-5156

Subject: *Storage and Disposition of Weapons-Usable Fissile Materials Draft
Programmatic Environmental Impact Statement (February 1996)*

Dear Director Nulton:

Each time my wife or I read a magazine or newspaper article which discusses the vast amounts of weapons grade materials currently being stored in the former Soviet Union, we cringe at the thoughts of how easily those materials could be diverted to enemies of the United States (Libya, Iran, Iraq, N. Korea, etc., etc.). Within months of reading of the black-market smuggling of plutonium from one of the new Russian republics, the U.S. government would be faced with the detonation threats of a Saddam Hussein or other militant madman bent on humiliating the American public. This is a totally possible but unacceptable scenario.

In reviewing the draft FEIS, there is only one (1) option that can be implemented in a timely manner in both the United States and Russia. This is also the only option based on proven technologies, thus minimizing technical risks. It is also the only option that could logically be accepted by both involved governments - the existing light water reactor option. Fabrication of mixed oxide fuels is known technology. Operation of commercial nuclear reactors is known technology. The conversion of weapons grade plutonium to spent nuclear fuel is the only true "disposition" option discussed in the FEIS. Involvement of a third country, Canada, should not be considered in solving this American/Russian problem.

The "do nothing" option (current Clinton administration position on most critical issues) is totally UNACCEPTABLE. Likewise, options involving long term storage/burials or conversion/immobilization into forms which could be reversed or leave the materials potentially recoverable (e.g., vitrification) should NOT be on the negotiations table.

F-023

08 03 01

Comment Number 1

The Department of Energy acknowledges the commentor's support for the Existing LWR 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 continuing or long-term storage. Decisions on storage 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

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.

1/08.03.01

2/08.03.01

3/08.03.01

3-192

DUTTON, HERB AND LYDIE, SAN JOSE, CA
PAGE 2 OF 2

The DOE is urged to proceed immediately with the existing LWR option. The time for R&D programs has long past. Stop wasting taxpayer money in funding "voodoo" technologies and responding to "Anti-Everything" organizations. The threat and impact of the loss or theft of Russian (or American) weapons materials is far too great!

1/08.03.01
cont.

Sincerely,



Mr. & Mrs. H. A. Dutton

F-023

March 14, 1996

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

Gentlemen:

It is my opinion that the possible shipment to, and storage of, weapons-usable fissile material at the INEL site in Idaho is and would jeopardize the public health and safety. The transporting of such material to Idaho as recently shown by the catastrophic train accident is not as safe as one would originally think 1/10.00.00

1. In simple terms, the INEL is situated upon a high seismic activity geographical area. The attempts of the Department of Energy to show that that is not the case are not well founded. The scientific and geological wisdom is that it is a highly seismic area. 2/09.05.03

2. The INEL site sits directly over the Snake River Aquifer which supplies water to the Snake River, the rural areas of Idaho, and subsequently to the Columbia River drainage which affects most of Idaho and the States of Oregon and Washington. 3/08.03.01

3. To store or dispose of radioactive matter at the INEL which is directly above the Snake River Aquifer is clearly not the best alternative to be chosen by the Department of Energy.

I strongly urge the Department of Energy to open a permanent storage repository as had previously been planned and that the storage and disposition of Weapons-Usable Fissile Materials would be more appropriately stored at that site. 4/12.00.00

In the interim, transporting such material causes unnecessary dangers to the public safety and welfare, which far outbalances any delay which may be incurred in opening a permanent repository. 1/10.00.00 cont.

Simply put, storing or handling radioactive material above the Snake River Aquifer is not a viable alternative from the safety standpoint. The present contamination at the site, the high runoff of surface waters, the continued polluting of the aquifer are a reality. To compound that by bringing more materials to the site simply is not acceptable. 3/08.03.01 cont.

M-003

10 00 00

Comment Number 1

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.

09 05 03

Comment Number 2

Idaho National Engineering Laboratory is situated on the Eastern Snake River Plain, an area of low seismicity. The plain is bordered by the seismically active Centennial Tectonic Belt to the north and the Intermountain Seismic Belt to the east and southeast. Historical and recent seismic data cataloged by the National Oceanic and Atmospheric Administration (NOAA), the National Earthquake Information Center (NEIC), the University of Utah, and the INEL Seismic Network, indicate that earthquakes in the region occur primarily in the Intermountain Seismic Belt and Centennial Tectonic Belt (including the mountains and valleys of the Basin and Range province which bound the plain on the north and south). The seismic characteristics of the plain and the adjacent Basin and Range province are different; earthquakes and active faulting are associated with the Basin and Range tectonic activity, whereas the plain has historically experienced few and small earthquakes. Based on the seismic history and the geologic conditions, earthquakes greater than magnitude 5.5 (and associated strong ground shaking and surface fault rupture) are not likely to occur on the plain.

08 03 01

Comment Number 3

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

12 00 00

Comment Number 4

Comment noted.

EIDEN, MAX A.
PAGE 2 OF 2

U.S. Department of Energy
Office of Fissile Materials Disposition
March 14, 1996
Page 2

I appreciate your consideration of these comments. For more scientific data, please refer to prior Environmental Impact Statements involving the INEL, and scientific materials submitted thereon.

Very truly yours,

Max A. Eiden

MAE:jp

M-003

ELLIS, JENNIFER L.
PAGE 1 OF 1

CALL-IN COMMENTS ON DOE'S PEIS

MS. ELLIS: Jennifer L. Ellis, 222 Cherokee Trail, 37043.

Neither.

A mailing that I have from 2/20 Vision.

I am calling to comment about the Programmatic Environmental Impact Statement. As a medical doctor specializing in preventive medicine, I believe strongly that community and worker safety should be paramount. In order to minimize the dangers related to plutonium and its byproducts, the Department of Energy should look forward to adopting a plan for production of the least amount of new radioactive waste.

I therefore disagree with the three options outlined by the Department of Energy for the disposal of weapons-usable materials. I believe that all three options are dangerous and obsolete.

I encourage the Department of Energy instead to invest in vitrification which, unlike the outlined options, would immobilize plutonium and its dangerous byproducts, and thus also reduce proliferation by removing it from circulation.

Thank you.

1/08.03.01

P-047

08 03 01

Comment Number 1

The Department of Energy acknowledges the commentor's support for the Vitrification (Immobilization) Alternative. 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.

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ENERGY PROBE RESEARCH FOUNDATION, TORONTO, ON,
NORMAN RUBIN
PAGE 1 OF 7



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June 7, 1996

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

BY FAX: 202-586-2710 (Original following by mail)

Re: Storage and Disposition of Weapons-Usable Fissile Materials Draft Programmatic Environmental Impact Statement (PEIS).

To whom it may concern,

Attached please find a submission from Energy Probe on the topic of the proposed use of mixed-oxide (MOX) fuel, containing plutonium from dismantled U.S. nuclear warheads, at the Bruce "A" Nuclear Generating Station. The MOX-CANDU reactor proposal is noted in the Department of Energy (DoE) document *Storage and Disposition of Weapons-Usable Fissile Materials Draft Programmatic Environmental Impact Statement (PEIS)* as one of the options under consideration by the DoE for plutonium disposition.

Energy Probe is a project of Energy Probe Research Foundation, a non-profit environmental organization founded in 1980, dedicated to raising public awareness about energy and environmental issues. Energy Probe Research Foundation has approximately 50,000 supporters, roughly half of them in the province of Ontario.

We have reviewed the relevant sections of the DoE PEIS. We have also reviewed the submission sent to you by Nuclear Awareness Project (Box 104, Uxbridge, Ontario L9P 1M6), and we generally endorse its arguments and conclusions, with some relatively minor exceptions and some additions noted below.

In brief, Energy Probe urges the DoE to rule out the option of using CANDU reactors located in Canada for plutonium disposition purposes unless and until the following conditions are met:

- The undertaking must not impose uncompensated costs — financial, environmental, or social — on people in Ontario or elsewhere in Canada;
- The undertaking must not retard Ontario's progress in achieving an open, competitive, and diversified electricity system, characterized by open access for electricity suppliers, and free choice for electricity consumers;
- The undertaking must not proceed without the full, public application of Ontario's

Energy Probe Research Foundation

225 BRUNSWICK AVENUE, TORONTO, ONTARIO M5S 2M6 Phone (416) 964-8223 ext. 228 Fax (416) 964-8239

08 03 01

Comment Number 1

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 concerning the CANDU Reactor Alternative. In addition, according to the Canadian Government, implementation of the CANDU Reactor Alternative would be subject to Canadian Federal and Provincial policies and regulations and would require health, safety, and environmental assessments before issuance of a Canadian license. (See the letter from the Canadian Embassy in Washington, DC, dated June 6, 1996, reproduced in this CRD.) Should the CANDU Reactor Alternative be chosen for Pu disposition, further negotiations between the U.S. and Canadian Federal and Provincial Governments will be required before implementation, as well as business negotiations with reactor owners.

1/08.03.01

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ENERGY PROBE RESEARCH FOUNDATION, TORONTO, ON,
NORMAN RUBIN
PAGE 2 OF 7

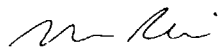
Environmental Assessment Act, or an equivalent testing of its environmental acceptability;

- The undertaking must not proceed without a clear indication that it has the informed consent of the people of Ontario, especially those who will be most directly affected by it.
- If the U.S. government chooses to dispose of its nuclear-weapons plutonium in Canada, rather than within the United States, it must be clearly demonstrated that its decision is in no way motivated by Canada's relative lack of citizen safeguards and rights — both legislated and common-law — that might make implementation easier in Canada than within the U.S..

1/08.03.01
cont.

For reasons outlined below and in the submission of Nuclear Awareness Project, we believe that these conditions are unlikely to be met. We therefore urge the U.S. government to focus its attention on plutonium-disposition options that can be carried out within the United States.

Sincerely yours,



Norman Rubin
Director, Nuclear Research
and Senior Policy Analyst

attachment

M-285

ENERGY PROBE RESEARCH FOUNDATION, TORONTO, ON,
 NORMAN RUBIN
 PAGE 3 OF 7

Energy Probe's Notes Regarding the
Storage and Disposition of Weapons-Usable Fissile Materials
Draft Programmatic Environmental Impact Statement

by
 Norman Rubin
 Director, Nuclear Research
 and Senior Policy Analyst

June 6, 1996

Canadian impacts "do not apply"!

In the *Draft Programmatic Environmental Impact Statement* (henceforth, "the PEIS"), the "environmental impacts" of the Canadian CANDU option are almost universally described with a single phrase: "Does not apply". The specific areas in which impacts "do not apply" include the following: Land Resources, Site Infrastructure, Air Quality and Noise, Water Resources, Geology and Soils, Biological Resources, Cultural and Paleontological Resources, Socioeconomics, Public and Occupational Health and Safety — itself subdivided into Normal Radiological Impacts, Hazardous Chemical Impacts, and Facility Accidents — and Waste Management.¹

In the two areas where impacts are acknowledged to apply — Intersite Transportation of Fissile Materials and Environmental Justice — those impacts end at the Canadian border.

Of course, most Canadians would consider the impacts, in Canada, of the Canadian CANDU option for the disposition of U.S. nuclear-weapons plutonium to be just as real, significant, and "applicable" as the impacts of the other options in the U.S. And informed Canadians — including Energy Probe — would be concerned that the Canadian and Ontario governments may not give much more attention to these real impacts than this U.S. PEIS does. For example, Canadian federal government officials, up to the Prime Minister himself, seem to have publicly concluded — without any recourse to public process, public opinion, or environmental assessment — that the MOX-CANDU proposal is the best option for disposition of both U.S. and Russian nuclear-weapons plutonium.²

In short, we are concerned that the Canadian public (especially Ontario residents) may be treated like citizens of a "banana republic", with neither our own officials nor those of the United States respecting our rights to participate in this important decision. We urge the U.S. government not to take advantage of the weakness of Canada's, and Ontario's, political and legal safeguards in making this decision.

Indeed, we believe that it is consistent with the spirit, and perhaps even the letter, of the U.S. National Environmental Protection Act, that adverse impacts outside the United States be considered before an option is chosen.

2/01.03.00

2/01.03.00
 cont.

M-285

01 03 00

Comment Number 2

After considering public comments, the PEIS has been revised with respect to the CANDU Reactor Alternative. The PEIS includes an appropriate level of analysis, consistent with Executive Order 12114, DOE guidelines, the State Department's Unified Procedures, and DOE regulations at 10 CFR 1021.102 concerning NEPA.

In addition, according to the Canadian Government, implementation of the CANDU Reactor Alternative would be subject to Canadian Federal and Provincial policies and regulations and would require health, safety, and environmental assessments before issuance of a Canadian license. (See the letter from the Canadian Embassy in Washington, DC, dated June 6, 1996, reproduced in this CRD.) Decisions on disposition of weapons-usable fissile materials will be based upon environmental analyses, technical and economic studies, national policy considerations, and public input. Should the CANDU Reactor Alternative be chosen for Pu disposition, further negotiations between the U.S. and Canadian Federal and Provincial Governments will be required before implementation, as well as business negotiations with reactor owners. Should the CANDU Reactor Alternative be selected, agreement with the Canadian Government would be reached on the Pu disposition process.

Energy Probe's Notes, page 2

Regardless of the legal issue, we do not see how you can hope to choose an option that minimizes adverse impacts, without comparing all the impacts of all the options.

3/09.00.08

Energy Probe's comments on the submission by Nuclear Awareness Project:

It is even clearer than NAP indicates that Ontario Hydro does not plan to retube the 4 reactors of Bruce-A station.

Nuclear Awareness Project writes (Submission, p. 1):
Capacity Factors and Reliability of CANDU Reactors

The Atomic Energy of Canada Limited (AECL) proposal assumes that the four Bruce "A" Nuclear Generating Station reactors will be retubed regardless of whether or not the mixed-oxide (MOX) fuel scheme is implemented, and that these reactors will operate at an average capacity factor of 80% for a further 25 year period. These assumptions are inappropriate, given current debates about the future of the electricity sector in Ontario, and given operating experience at CANDU reactors.

The AECL Final Report Plutonium Consumption Program - CANDU Reactor Project notes:

"It is assumed for the purposes of this study that the Bruce NGS A units will be retubed because there is a demand for electricity."

Retubing is the rebuilding of a CANDU reactor core where all fuel channels are replaced at a cost now estimated by Ontario Hydro at about \$350 million per reactor. The DOE should note that the Bruce reactor 2 was shut down in 1995 to avoid this cost and other major repairs, primarily to steam generators. The other 3 reactors are scheduled for retubing starting in 2000, but could instead be shut down at that time. The Bruce "A" Station began operations between 1977 and 1979. It is unlikely that Ontario Hydro will be able to justify the expense of retubing its aging reactors when faced with increasing competition in the electricity sector. [emphasis added; endnotes omitted.]

In fact, according to Ontario Hydro documents and sworn testimony, the other 3 reactors of the Bruce-A station are *not* scheduled for retubing starting in 2000, or at any other time. Rather, they are

M-285

09 00 08

Comment Number 3

A comparison of impacts of all alternatives and options associated with each alternative is contained in Section 4.6 of the PEIS. A cumulative impact analysis has been conducted in Section 4.7, as well, for both storage and disposition. For the CANDU Reactor Alternative, the spent fuel resulting from using MOX fuel in these reactors would be the responsibility of Ontario Hydro, and would be stored and disposed of in accordance with procedures established by the Canadian Atomic Energy Control Board. Interactions with the Canadian public regarding the receipt and use of MOX fuel in Canada will be conducted by the Canadian Government and Ontario Hydro.

ENERGY PROBE RESEARCH FOUNDATION, TORONTO, ON,
NORMAN RUBIN
PAGE 5 OF 7

Energy Probe's Notes, page 3

scheduled to be shut down when they reach the end of pressure-tube life, starting in 2000. Ontario Hydro, of course, retains the option of changing its mind and retubing one or more of these reactors. But AECL's assessment of the likelihood of that outcome must be viewed in the context of AECL's historical record of forecasting future events, which can best be described as "laughable". Indeed, it is just as hard in Ontario as in the U.S. to find competent, informed experts who expect to see major capital refits to aging nuclear stations, especially as our electricity system becomes more market-oriented and competitive. Ontario Hydro⁴

In the early 1990s, Ontario Hydro spent a considerable sum — \$203 million in Canadian dollars — on its plans to retube two of the reactors of the Bruce-A station — units 1 and 2, in reverse numerical order. In 1993, Ontario Hydro officially "wrote off" that investment, on the grounds that it was not expected to accrue to the benefit of electricity customers.⁵

Furthermore, on March 21, 1994, Ontario Hydro Nuclear submitted its "Strategic Plan for Future Operation of Bruce A Nuclear Generating Station" in writing to the Atomic Energy Control Board.⁶

That document is quite clear in assuring the Atomic Energy Control Board that all four units of Bruce-A will actually reach a premature end of life. Consider, for example, the following specific passages:

- In paragraph 1.0 — "Strategic Plan Overview" — of Attachment 1 of the package and the corresponding chart — "Bruce 'A' Operating Strategy" — Ontario Hydro told the Atomic Energy Control Board that Bruce Unit 1 would "SHUT DOWN JANUARY" in the year 2000, and gave the explanation "P/T [i.e., pressure tube] LIFE LIMIT". For Bruce Unit 3, the notice "SHUT DOWN APRIL" appears in the year 2008, accompanied by "P/T LIFE LIMIT". For Bruce Unit 4, the notice "SHUT DOWN APRIL" appears in the year 2006, accompanied by "P/T LIFE LIMIT", but it is followed by the following Note: "ADDITIONAL SLAR IN THE 1990'S WILL ENABLE UNIT TO EXTEND PRESSURE TUBE LIFE LIMIT TO APRIL 2011."
- Attachment 4, Section 1, first paragraph, says "... the elements required to ensure safe operation of Units 1 and 2 to their planned end of life (which have now been firmed up) have been incorporated into their operating strategies." Same section, page 2, first complete paragraph says "For Unit 1, an end of life in 2000 is now planned, based on fuel channel creep induced elongation."

These passages make absolutely clear how firm and unambiguous Ontario Hydro has been in assuring the Atomic Energy Control Board that it actually plans to shut down Bruce A Units 1, 3, and 4 in January 2000, April 2008, and April 2011, respectively. Any assurances to the contrary — especially from AECL — should be given little credence.

The fear of exemption from environmental assessment in Ontario is even more well-founded than NAP indicates.

Nuclear Awareness Project writes (*Submission*, p. 4):

ENERGY PROBE RESEARCH FOUNDATION, TORONTO, ON,
NORMAN RUBIN
PAGE 6 OF 7

Energy Probe's Notes, page 4

There is no guarantee that the plutonium fuel scheme will undergo an environmental assessment at either the provincial or federal level. An exemption was granted to the Bruce "A" Station in 1976 under the Ontario Environmental Assessment Act, and the use of MOX fuel may come under this exemption.

Indeed, Energy Probe has direct and painful experience in this matter: A legal attempt by Energy Probe to force an Ontario EA of another serious change at an exempted nuclear station — specifically the decision to build an Ontario-wide Tritium Removal [and storage] facility at the Darlington station — was rejected by the Ontario courts. The courts found that the proposal to build the nuclear station, which was exempted from the Ontario Environmental Assessment Act, was extremely vague and general. Therefore, the exemption from Environmental Assessment even covered the later decision to construct an Ontario-wide waste-extraction and -storage facility — on a part of the property that was shown as an open space on the maps drawn when the exemption was granted!⁷

Moreover, the Federal Environmental Assessment Panel on High-Level Waste Disposal (see p. 3 of NAP's submission) has already repeatedly indicated its unwillingness to enter into discussions of the potential implications of this proposal on the quantity or nature of high-level nuclear waste in Canada, because it views the proposal as still hypothetical.

As one indication of the treatment of this issue before the Federal Environmental Assessment Panel, following is an intervention on the second day of the hearing by Dr. P. Brown of Natural Resources Canada, explaining why there is no need for that panel to review this proposal:

THE CHAIRMAN: Microphone number 3?

DR. P. BROWN: Thank you, Mr. Chairman. Your indulgence, please. This is more of a comment rather than a question.

The CANDU option -- I just want to clarify one point, and that is that the CANDU option for burning MOX fuel is only a proposal for consideration; it is not a confirmed project. And any project that was there would not start until the year 2000, and, in any event, it would have to meet all applicable Canadian environmental and regulatory requirements before a decision to proceed with the option was indeed given.

So it is not a fait accompli at this point. Thank you.

THE CHAIRMAN: Thank you, Dr. Brown.⁸

These recent developments give further credence to NAP's concerns in regard to any federal Environmental Assessment of this undertaking.

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ENERGY PROBE RESEARCH FOUNDATION, TORONTO, ON,
 NORMAN RUBIN
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Energy Probe's Notes, page 5

End-Notes

1. See, for example, PEIS, Summary volume, Attachment B: "Summary Comparison of Environmental Impacts for Plutonium Disposition Alternatives", pp. S-122—S-155.
2. See, for example, Mark Nichole, "Debating the CANDU option: Should Canada process plutonium?" in *Maclean's*, May 6, 1996, pp. 46-47; "Plutonium plan to go before GT" in *The Financial Post*, April 17, 1996, p. 2.
3. Nuclear Awareness Project, *Submission to the U.S. Department of Energy Regarding the Storage and Disposition of Weapons-Usable Fissile Materials Draft Programmatic Environmental Impact Statement*, June 6, 1996.
4. This morning's release of *A Framework for Competition: The Report of the Advisory Committee on Competition in Ontario's Electricity System to the Ontario Minister of Environment and Energy*, can only be seen as reinforcing and accelerating this widespread trend.
5. Testimony at the Ontario Energy Board, HR22 hearing, esp. Transcript volume 16, pp. 3174-3178.
6. The document bears Ontario Hydro file number BQA 00531 (P). It was distributed by AECB staff to its Board and to the present author as Board Member Document BMD 94-65A, dated 1994-03-30. This document was also filed (by Energy Probe) as Exhibit 4.2.17 at the Ontario Energy Board on June 8, 1994. As far as we know, this document remains in force and has not been superseded by any subsequent documents.
7. Specific citations on request. First the Ontario lower court dismissed our action;⁴ the Court of Appeals declined our Application for Leave to Appeal, without giving any reasons.
8. ENVIRONMENTAL ASSESSMENT REVIEW AGENCY, *NUCLEAR FUEL WASTE MANAGEMENT AND DISPOSAL CONCEPT*, PUBLIC HEARINGS, MARCH 12, 1996, VOLUME 2, p. 114.

April 30, 1996

Linda Ewald
949 Ponder Road
Knoxville, TN
379123

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

I am writing to comment on the
Programmatic Environmental Impact
Statement that lays out options
for disposing of excess plutonium
and Highly Enriched Uranium
from dismantled nuclear weapons

I am opposed to option #1, the
conversion of plutonium ^{and now} for use
as nuclear ~~reactor~~ reactor fuel.
Nuclear reactors produce more
dangerous waste - to dispose of,
it encourages the use of weapons
usable materials as fuels, thus
increasing the chances of prolif-
eration world-wide and
building and maintaining reactors
will cost billions of dollars.

1/08.03.01

M-205

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.

EWALD, LINDA, KNOXVILLE, TN
PAGE 2 OF 2

Options #2 and #3 ~~are~~ are also not viable because these wastes are so unstable and long lasting traditional methods for disposal are not applicable.

2/08.03.01

DOE needs a "nuclear waste standard" to adopt a plan to produce the least amount of new radioactive waste.

3/15.00.00

Disposal of nuclear materials should limit the amount of processing and transportation.

I encourage investment in worker and community safety and innovative disposition ideas ~~such~~ such as vitrification.

4/08.03.01

Please listen to academics and independent scientists who have community interests in mind. Thank-you very much.

Sincerely,
Linda Ewald

M-205

08 03 01

Comment Number 2

The Department of Energy acknowledges the commentor's opposition to the disposition alternatives. 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.

15 00 00

Comment Number 3

Comment noted. Waste minimization is an ongoing goal of DOE and will be considered to the extent practicable in the selection and implementation of the alternative(s).

08 03 01

Comment Number 4

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.

F.A.C.T.S., KENMORE, NY,
JAMES RAUCH
PAGE 1 OF 3



F.A.C.T.S.

(For A Clean Tonawanda Site)

"PUTTING THE PIECES TOGETHER"



Box 566
Kenmore, NY 14217-0566

Phone: (716) 876-9552
Fax: (716) 876-9552

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

May 27, 1996

Subject: Comments on Storage and Disposition of Weapons-Usable
Fissile Materials Draft Programmatic Environmental Impact
Statement

1) Fissile materials, plutonium and highly enriched uranium (HEU), can be easily assembled into nuclear weapons. Fissile materials are also very long-lived radioactive materials which are toxic, especially plutonium, to living things. Therefore, it should be apparent that fissile materials pose both grave security and environmental/public health threats, respectively. Because the costs of maintaining both security and environmental isolation of these materials are extremely high, they also represent an enormous economic liability. More than ten years ago, the U.S. government recognized these liabilities and stopped production of plutonium for weapons and commercial use of plutonium.

However, five countries, Britain, France India, Japan and Russia, continue to reprocess spent commercial nuclear power plant fuel, in anticipation of a day when uranium fuel may become scarce or relatively expensive. In the next decade, the amount of commercially separated plutonium in these and additional countries may exceed the amount of plutonium from dismantled weapons.

If the Clinton Administration is serious about the fissile material threats identified above, it must also address, without delay, the growing global commercial production of plutonium, which is bound up with the increased use of nuclear power in economies outside the U.S. The U.S. government can best address this problem by: 1) declaring fissile materials a liability, 2) by exerting influence on the reprocessing countries to phase out both reprocessing and the use of nuclear power, through a frank portrayal of the downside of nuclear energy -- the uneconomic cost of sound, long-term waste management and plant safety issues -- in addition to the weapons proliferation threats and, 3) by encouraging the maximization of energy efficiency and conservation measures in conjunction with the large scale development and production of safe, alternative, renewable power supplies (solar, biogas and wind power). The subsidized transfer of these technologies to the

1/01.03.00

M-255

01 03 00

Comment Number 1

Comment noted. The President's Nonproliferation Policy states the United States will not recycle Pu. Burning weapons-usable Pu in reactors does not utilize the recycling process because the Pu in the spent fuel from this process will not be extracted for reuse in new fuel. This is consistent with U.S. policy since no Pu is being recycled. After a once-through fuel cycle, the Pu would be converted to a nonproliferation form as spent reactor fuel.

Although it may be possible to make a nuclear weapon from spent commercial reactor fuel, it can only be done with a great deal of difficulty by individuals with extensive experience in handling and processing nuclear materials. The disposition of weapons-usable Pu through the use of MOX fuel in LWRs creates a radiological barrier that makes the Pu as difficult to retrieve and reuse in weapons as Pu in spent commercial reactor fuel. The use of this technology approach would allow for the Pu to be disposed of in a geologic repository the same as commercial reactor fuel. Implementation of the disposition alternatives will serve as an example and encourage other countries to disposition surplus Pu, without reprocessing.

F.A.C.T.S., KENMORE, NY,
JAMES RAUCH
PAGE 2 OF 3

developing countries will reduce the attraction of nuclear enterprises in most cases.

2) We are vigorously opposed to any mixed oxide fuel (MOX) option because: 1) the cost of the MOX fabrication venture is over \$2.2 billion, and 2) it will encourage the development of a plutonium fueled reactor economy, an outcome at odds with current U.S. policy.

The draft EIS presents a sketchy description of a MOX fuel option using the Canadian CANDU reactors at Bruce A. The EIS states that "spent fuel [from this project]... would be accommodated within the Canadian spent fuel program." In effect we would be dumping responsibility for long-term waste management on the Canadians. This would be very unfair. But it would be typical of the irresponsible and slipshod approach to managing nuclear wastes, both commercial and military, taken by past DOE administrations up to and including the current Clinton Administration DOE.

The Canadians are currently reviewing the issue of spent fuel disposal. This review does not include management of spent MOX fuel. In fact, Atomic Energy Canada Limited (the originator of the CANDU MOX proposal) has boasted that a provincial Environmental Assessment can be avoided under an environmental assessment exemption granted to Bruce A in 1976. So, if this option were to be selected, it would probably not be subject to any public review process by Canadian citizens. This would be exceedingly irresponsible, being even less than the routinely political, instead of scientific, sham environmental review processes conducted by DOE in the U.S.

3) At this time, we believe the vitrification of the fissile materials to be the only acceptable option. It would probably cost no more, and perhaps less than the MOX options, without having the fatal flaw of the MOX option, encouragement of a plutonium reactor economy. The cost of expensive shielding could be avoided by vitrifying the fissile material with depleted uranium instead of highly radioactive reactor spent fuel. The glass logs could then be stored in metal canisters made with a gamma-emitter such as cesium-137 to deter theft.

Sincerely,

James Rauch
James Rauch

1/01.03.00
cont.

2/08.03.01

3/08.03.01

4/08.03.01

M-255

08 03 01

Comment Number 2

The Department of Energy acknowledges the commentor's opposition to the Reactor Alternative using MOX fuel. Cost considerations were included in the Technical Summary Report for disposition, which was made available to the public in July and November 1996.

The President's Nonproliferation Policy states the United States will not recycle Pu. Burning weapons-usable Pu in reactors does not utilize the recycling process because the Pu in the spent fuel from this process will not be extracted for reuse in new fuel. This is consistent with U.S. policy since no Pu is being recycled. After a once-through fuel cycle, the Pu would be converted to a nonproliferation form as spent reactor fuel.

Decisions on disposition of weapons-usable fissile materials will be made based on environmental analyses, technical and economic studies, national policy considerations, and public input.

08 03 01

Comment Number 3

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. After considering public comments the PEIS has been revised concerning the CANDU Reactor Alternative. The PEIS includes an appropriate level of analysis concerning the CANDU Reactor Alternative, consistent with Executive Order 12114, DOE guidelines, the State Department's Uniform Procedures, and DOE's regulations at CFR 1021.102 implementing NEPA. In addition, according to the Canadian Government, implementation of the CANDU Reactor Alternative would be subject to Canadian Federal and Provincial policies and regulations and would require health, safety, and environmental assessments before issuance of a Canadian license. (See the letter from the Canadian Embassy in Washington, DC, dated June 6, 1996, reproduced in this CRD.) Should the CANDU Reactor Alternative be chosen for the Pu disposition, further negotiations (which would include the disposition of the MOX spent fuel)

Canadian Federal and Provincial Governments will be required before implementation, as well as business negotiations with reactor owners.

08 03 01

Comment Number 4

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. The PEIS analyzes vitrification of Pu along with high-level waste or Cs to provide a radiation barrier. The radiation barrier is necessary to provide proliferation resistance and vitrification with depleted uranium would not provide such proliferation resistance; use of HLW or Cs would require shielded facilities.

FAGER, CAL, ARVADA, CO
PAGE 1 OF 1

04 02 00

Comment Number 1

Comment noted.

United States Department of Energy

NAME: (Optional) CAL FAGER
 ADDRESS: 6285 W 60th Ave, ARVADA, CO 80003
 TELEPHONE: (303) 491-5158 (HOM) 914-5740 (W)

After extensive review of the alternatives, the
top level, unmodified disposition alternative
is the most satisfactory option for the following
reasons:

1. Meeting treaty requirements - This is met in
unified and accessible and demonstrable to other
countries.
2. Technological feasibility - Current technology is
available to accomplish this method reasonably
and parametric and with high level of safety.
3. Accessibility of stored material - Security of
site after inspection & sealing can be maintained
by following sophisticated administration procedure -
of activities, inspection, searching, recording &
very close supervision & security. This is very low-
level, minimum type of security - However, degree
of the maintenance of the material stored, see guide,
environmental control is possible.
4. Minimal environmental impact - The low level
are relatively small - minimal exposure and
disposition - maximum environmental monitoring
of the surface (data can actually be taken by
complete surface survey) Despite, the possibility
of a return of the material to the surface in event,
as it occurs within a significant geological event,
or millions of years.

1/04.02.00

CO-002

3-209

[illegible]

President: Martin Shuster
1995 McGraw-Hill Education
ISBN 0-02-304404-0

Van Nostrand Reinhold Company
200 West Street
New York, NY 10038

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January 2000
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Washington, D.C. 20004



Comment Documents and Responses

FEDERATION OF WESTERN OUTDOOR CLUBS, IDAHO FALLS, ID,
MARTIN F. HUEBNER
PAGE 2 OF 4

GENERAL COMMENTS

First, some general comments. I am one of many Americans who have seen the bright promise of post WWII nuclear technology become mired in over-regulation, the un-constructive efforts of journalists, the misplaced concerns of some environmental groups, (and I consider myself a hard-core environmentalist!), and the deliberate sabotaging of nuclear technology by alleged "watch-dog groups who can't or won't (like most journalists) distinguish between military nuclear weapons and commercial nuclear power.

A significant detractor from being able to capitalize on the beneficial use of nuclear technology for our country's benefit, is from what I will refer to hereinafter as the Proliferation Paranoids (PPs). Though probably well-intentioned, these misguided people have infested our government and have done more than any other group to hamstring our country's once-leadership in nuclear technology. If PPs had been involved in analogous acts to hamper our national defense rather than hamper civilian nuclear power, some have said they would consider such PPs as traitors to our country. If you have any PPs in your shop, I request you find them employment elsewhere!

Although no attribution was given as to the origin of the various proposals/alternatives discussed at the Idaho Falls hearing, I suspect the PPs had a hand in the proposals for Immobilization (by e.g. by vitrification) and Deep Borehole Disposition. I will first discuss how ludicrous these proposals are, from a financial, ethical/moral, and a technical perspective.

TECHNICAL COMMENTS

1) The DOE representatives at the hearing could not/would not respond to my direct question on how much American taxpayer money had been spent to provide these "surplus" materials, (stated to be 175 MT HEU and 38 MT plutonium), or what weapons-grade plutonium or HEU cost per gram to produce. I made the same request for this information from the local DOE office, and from information officers at DOE Headquarters, to no avail. So, based on what I remember about the cost of the weapons-production facilities from past mining on the Colorado plateau, the Feed Materials Production Centers like Fernald, through the diffusion plants and production reactors etc., through weapons fabrication, I estimate that to protect our country through the Cold War, the American taxpayer willingly forked over about \$ 1000/gram to support HEU and Pu production.

So, the HEU that's being considered for disposition is estimated to be worth:

$$\text{\$ } 1000/\text{gram} \times 1000 \text{ grams/Kg} \times 1000 \text{ Kg/MT} \times 175 \text{ MT} = \text{\$ } 175,000,000,000$$

If the Plutonium costs a like amount

$$\text{\$ } 1000/\text{gram} \times 1000 \text{ grams/Kg} \times 1000 \text{ Kg/MT} \times 38 \text{ MT} = \text{\$ } 38,000,000,000$$

07 00 00

Comment Number 2

The historical (approximately 50 years) acquisition costs for the HEU and Pu are sunk costs for which no single separate financial accounting system was utilized.

2/07.00.00

M-256

FEDERATION OF WESTERN OUTDOOR CLUBS, IDAHO FALLS, ID,
MARTIN F. HUEBNER
PAGE 3 OF 4

Thus, if either the borehole or the immobilization alternative were (heaven forbid) be chosen, this would result in an unproductive, irretrievable loss to the American taxpayer of a fifth of a trillion dollars.

3/08.03.01

The Immobilization Alternative This calls for the American taxpayer to pay a great deal MORE money (a large but unspecified amount) to change these materials so they aren't attractive to the Bad Guys who would like to do very bad things to our beloved country.

The ONLY feasible application of the Immobilization strategy is on plutonium items that can't (for reasons not clear to me) be converted into potential reactor fuel. The rest of such immobilization proposals are a lot of hyper-expensive bunk conjured up by PPs, or their in-house equivalents.

Stated at the Idaho Falls hearing was that the on-going Electro-Metallurgical Project at Argonne National Laboratory-West could be a facility for dealing with non-reactor feasible plutonium. If so, I would recommend that this technical Argonne innovation be vigorously pursued.

4/08.03.01

Deep Borehole Disposition Environmentalists are deeply opposed to inoculating the skin of Mother Earth with any foreign substance, no matter if it is industrial, agricultural, or municipal in origin, or comes from nuclear R & D. The idea of the taxpayers having had to fork-out over \$ 200 billion to manufacture these weapons-grade materials, and then spending huge more amounts to bury it in the ground somewhere at mere taxpayer expense is downright immoral. It would further squander the financial resource of American citizens, who already have a tough time making ends meet. The Borehole concept borders on the ludicrous and would be downright funny if it weren't apparently a sober suggestion, and is even made more ludicrous by the additionally expensive suggestion to "Immobilize" the Plutonium first.

5/08.03.01

The absolutely most ridiculous statement made at the hearing was the Russians, too, are considering "Deep Borehole" disposition. It's surprising that a remark like this wasn't treated to out-loud hoots of derision. One does not have to be a member of the State Department to know that Russia is in deep financial difficulty, and would no-way bury this supremely expensive materials in the ground. Only in profligate America could something as bizarre as Deep Hole disposal be advanced. Such moneys should be spent in CLEAN-UP of weapons manufacturing facilities!

The Federation suggests that persons responsible for such providing such "Alternatives" as Immobilization and Deep Borehole disposal be frequently checked for controlled substances. It makes us wonder if they are truly adhering to whatever oath they took when taking office to benefit, guard and protect our country and its citizens.

2) It is apparent that unless weapons-usable HEU and plutonium are to be used for useful (electricity production) purposes, they are properly safeguarded where they now are stored, and it should be

6/01.06.00

M-256

08 03 01

Comment Number 3

The Department of Energy acknowledges the commentor's opposition to the Borehole and Immobilization Alternatives. 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 4

The Department of Energy acknowledges the commentor's support for 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, existing agreements, and public input.

08 03 01

Comment Number 5

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 6

Comment noted. DOE is considering, and the PEIS analyzes, both Reactor Alternatives (which would convert surplus Pu to MOX fuel to generate electricity), and the No Action Alternative (which would leave the surplus Pu in safe, secure storage), as the commentor suggests. For surplus HEU, DOE has already decided to blend-down up to 20 percent of the HEU to commercial fuel as decided in the HEU ROD.

FEDERATION OF WESTERN OUTDOOR CLUBS, IDAHO FALLS, ID,
MARTIN F. HUEBNER
PAGE 4 OF 4

feasible for such materials to remain where most of the related materials now are, such as HEU at Oak Ridge. In contradiction to the JPPA, in-country shipments of such special materials have been proven not to be a legitimate proliferation concern.

3) The ONLY legitimate role for the surplus HEU/plutonium is to put it to use for the benefit of U.S. citizens who have already paid dearly to manufacture this material. Several reactor proposals were discussed in the hearing. The Federation is not equipped to make a selection among.

Using the weapons-usable materials as fuel in existing U.S. light water cooled reactors,

Using it in partially completed U.S. light water reactors, or

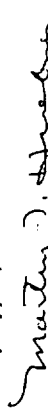
Using it in evolutionary U.S. light water reactor(s) to be designed/built, or

Using it in Canadian CANDU reactors.

It would appear most beneficial for the long-term interests of the country to design/build some commercial power plant reactor of advanced design, and let the U.S. citizens get a "peace benefit" when these materials are in-reactor burned to provide useful power.

The Federation notes that some U.S. electrical utilities have already expressed interest in using these materials in their reactor. This factor is another good reason ignoring the Immobilization and Deep Borehole proposals. We would rather GIVE these materials to the Canadians or the British than see it designated for such stupid and useless purposes.

Very truly yours,



Martin F. Huebner
President
Federation of Western Outdoor Clubs
1995 McKinnis Drive
Idaho Falls, Idaho 83404

Copies to:

- o Idaho State Congressional Delegation
- o Idaho State Legislators and State Officials
- o DOE-Office of Fissile Materials Disposition
% SAIC-PEIS PO Box 23786, Washington DC

08 03 01

Comment Number 7

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.

6/01.06.00
cont.

7/08.03.01

M-256

FENMORE, CAROL, POCA TELLO, ID
PAGE 1 OF 1

Comment ID: P0008
Date Received: April 18, 1996
Name: Carol Fenmore
Address: 365 Skyline Drive
Pocatello, ID

Transcription:

I'm 100% against bring over 1000 tons of plutonium, the most dangerous element known to man, and possibly storing it over the Snake River Aquifer. It is absolutely insanity and should not even be considered at any cost, jobs or otherwise. It makes me livid. Thank you. My number is (208) 203-0788 and thank you.

1/08.03.01

P-008

08 03 01

Comment Number 1

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

FITZGERALD, KARA
PAGE 1 OF 1

Comment ID: P0018
Date Received: April 18, 1996
Name: Kara Fitzgerald
Address: none given
Phone: 208-785-0235

Transcription:

I think it'd be a good thing to have the plutonium come to Idaho. Thank you. | 1/08.03.01

P-018

08 03 01

Comment Number 1

The Department of Energy acknowledges the commentor's support for additional missions involving Pu at INEL. 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.

FITZGERALD, PETE, BLACKFOOT, ID
PAGE 1 OF 1

Comment ID: P0007
Date Received: April 18, 1996
Name: Pete Fitzgerald
Address: Blackfoot [ID]

Transcription:

I think we should get that plutonium. It'd bring more jobs for the INEL. We need more jobs in this area. Thank you very much, bye. | 1/08.03.01

P-007


08 03 01

Comment Number 1

The Department of Energy acknowledges the commentor's support for additional missions involving Pu at INEL. 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.

3-216

FLANGAS, WILLIAM A., LAS VEGAS, NV
PAGE 1 OF 1


United States Department of Energy

NAME: (Optional) William A. Flangas
ADDRESS: 4205 El Cedral Las Vegas NV 89122
TELEPHONE: (702) 871-1730

1. I have attended a great many of these public meetings in recent years & it is painfully obvious that -

- o Meetings are attended by a large by the same people grinding out their own agendas - obviously not interested in facts
- o Too many participants suggesting they're representing the public - often this amounts to a public of 1 or 2
- o Meetings provide a forum for many negative anti-establishment & emotional vitriolic attacks on any good work efforts

2. In my opinion DOE officials need to do a better job addressing the fact that the nuclear deterrent is necessary & a fact of life for some more decades

- o we cannot unilaterally disarm & rely on the generosity of others re: our national security
- o we must always be in the position to enforce peace, not beg for it.

3. we must do a better job of pointing out that our country is making a good faith effort to disarmament, dismantling, storage, disposal of material, etc. we have nothing to apologize for.

4. Perhaps it's time to question the continuation of these meetings. Is the cost & effort really worth it?

08 02 00

Comment Number 1

Comment noted.

01 06 00

Comment Number 2

Comment noted.

1/08.02.00

2/01.06.00

1/08.02.00
cont.

NV-002

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

Name (optional): MARK FLOMENHOFT
Address (optional): 3411 E. MERCER ST
SEATTLE WA 98112

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 molten, or ceramics.
Immobilization from the environment & human access are positive. Immobilization/vitrification directly supports these goals. This is the best alternative path to deep disposal.

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.
Deep disposal after immobilization is the best combination for permanent disposal.

2/08.03.01

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.
Increasing the utilization of nuclear waste, presently under an accepted trend in the U.S., is furthering the no action alternative.

3/08.03.01

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.
This alternative provides nuclear waste generation but does not accomplish permanent removal from society. Not a good alternative.

4/08.03.01

M-129

08 03 01

Comment Number 1

The Department of Energy acknowledges the commentor's preference for the Immobilization/Vitrification Alternative. 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.

08 03 01

Comment Number 2

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 03 01

Comment Number 3

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 4

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

FLOMENHOFT, MARK, SEATTLE, WA
PAGE 2 OF 2

Please use this space to write down any additional comments on the Storage and Disposition
of Weapons-Usable Fissile Materials Draft Programmatic Environmental Impact Statement.

There are 3 priorities:


1. Permanent isolation from the public
 2. Permanent isolation from terrorist &
military applications
 3. Avoidance of nuclear waste generation.
- Only immobilization with long disposal needs
all these objectives.

Mark Flomenhoff

2/08.03.01
cont.

M-129

FOREMAN, BOB D., RICHLAND, WA
PAGE 1 OF 1

 <h2>Comment Form</h2>	
These comments apply to the following documents: Storage and Disposition Draft EIS Stockpile Stewardship and Management Draft EIS Pantex Site-Wide Draft EIS	
United States Department of Energy	
NAME: (Optional)	BOB D. FOREMAN
ADDRESS:	1221 GAWEN AVE., RICHLAND WA. 99352
TELEPHONE:	(509) 943-0393
<p> I FEEL THIS PROPOSAL WOULD GREATLY BENEFIT THE CITIZENS OF THIS COUNTRY, THIS STATE, THIS COMMUNITY, AND THIS PROJECT (SITE), AND I FULLY SUPPORT THIS UNDERTAKING WITH THE FULL & COMPLETE BACKING OF MY FAMILY AND FRIENDS. </p>	
<p style="text-align: right;">r. c. Aul</p>	

1/08.03.01

WA-002

08 03 01

Comment Number 1

The Department of Energy acknowledges the commentator's support for new missions at Hanford. 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.

1/08.03.01

Comment Documents
and Responses