

To: Department of Energy
June 28, 1999

From: Patricia McCracken
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706-7389451
by fax to 202-586-4078

Re: Spent Fuel (MOX)

To date no one at any public meetings or at the library sources can show a comprehensive transportation alternative study regarding any of the programs. People just talk about transportation but no documents seem to exist. One would want to know more about the design and structure of the DOE truck that is displayed at various meetings. What alternative modes of transportation exist in the nuclear world?

I attended a meeting on June 24, 1999 at the Gressette Building State House Complex, Columbia, South Carolina hosted by Senator Phil Leventis. I called the Office NEPA Compliance and Outreach for a handout of the program and nothing existed in Washington or at the meeting. After the meeting, I was still not sure what we were commenting about. Questions were difficult for the representative from Cogema, as we needed an interpreter. Will the Cogema representatives who build the MOX building speak English?

I was unable to get some clarification from the DOE representatives from Washington because of the bully police type persons at the meeting, with no badges, who indicated no one could approach the group. However, other persons with some hearing devices and no badges or identification escorted around certain members of the audience. What are those gadgets in their ears and whom were they communicating with at the meeting. I did get to ask Mr. Stevenson to explain what the representative from Cogema said about his military connections and France's plutonium depletion policies. Mr. Stevenson was rushed and I did not really understand the answer.

Please indicate how we can get answers from the man from Cogema? I am particularly interested in the energy consumption comparison numbers for various alternative DOE projects including the MOX plant.

FR014

FR014-1

Transportation

In order to address security against terrorist-related incidents, all intersite shipments of plutonium for the surplus plutonium disposition program would be made using DOE's SST/SGT system as described in Appendix L.3.2. This involves having couriers that are armed Federal officers, an armored tractor to protect the crew from attack, and specially designed escort vehicles containing advanced communications equipment and additional couriers. While DOE prefers to minimize the transportation of plutonium that is still desirable for weapons use, plutonium is routinely and safely transported in the United States. As described in Appendix L.3.3, transportation of nuclear materials would be performed in accordance with all applicable DOT and NRC transportation requirements. Interstate highways would be used, and population centers avoided, to the extent possible.

Since the establishment of the DOE Transportation Safeguards Division in 1975, the SST/SGT system has transported DOE-owned cargo over more than 151 million km (94 million mi) with no accidents causing a fatality or release of radioactive material. Additional details are provided in *Fissile Materials Disposition Program SST/SGT Transportation Estimation* (SAND98-8244, June 1998), which is available on the MD Web site at <http://www.doe-md.com>.

Alternative modes of transportation exist in the commercial nuclear world and consist of specially designed trucks and rail cars. However, the universal requirement for the transportation of most nuclear materials is the NRC-licensed shipping cask. NRC requires that shipping casks be able to survive a sequential series of tests that are intended to represent severe accident stresses. The tests are a 30-foot drop onto an unyielding flat surface, a shorter drop onto a vertical steel bar, engulfment by fire for 30 minutes, and, finally, immersion in 50 feet of water.

FR014-2

General SPD EIS and NEPA Process

DOE regrets the difficulty encountered in obtaining information on the meeting hosted by Senator Leventis. This meeting was not arranged by DOE but at the invitation of Senator Leventis. DOE attended and answered questions regarding the surplus plutonium disposition program. Additional information

on the program can be found on the MD Web site at <http://www.doe-md.com> or by calling (202) 586-5368.

The MOX facility would be built at one of four candidate DOE sites in the United States by DCS should the decision be made in the SPD EIS ROD to pursue the MOX approach. Personnel involved in planning, constructing, managing and working at the MOX facility would communicate in English.

FR014-3**General SPD EIS and NEPA Process**

The meeting in Columbia, South Carolina was sponsored and coordinated by Senator Leventis' office. The senator's office was responsible for the meeting logistics, including the security arrangements. Mr. Stevenson tried to explain that there is no connection between COGEMA and the French military.

FR014-4**Infrastructure**

Questions for COGEMA should be directed to Ms. Christi A. Byerly. Her address is: 7401 Wisconsin Avenue; Bethesda, MD 20814. She may also be contacted by telephone at (301) 941-8367. Her fax number is (301) 652-5690, and her email address is cbyerly@cogema-inc.com.

could answer the question nor did they have any reference materials at the meeting. The representative from Cogema did spell the name of the French oil company Total that owns 20% of Cogema, 80% being the French government.

4

Does the MOX process require oil?

The first and only time I saw Mr. Nulton, he was telling an audience about how we needed British Nuclear Fuel Limited to help our country with nuclear management (MOX). Now I see Mr. Nulton again with the French company Cogema. Their new contract apparently includes constructing the MOX plant at SRS. Who else do we need to help us with a process that we developed in 1969. The DOE has many experiences with blending of nuclear materials. Out of approximately 160,000 nuclear persons twelve people decided that we needed another MOX group to help us build a building. Did we buy and import a process or a building design plan from Cogema? Did the contract reviewers know the US process from 1969. BNFL has built a plant and DOE has visited and hired BNFL. Did the twelve people who selected Cogema know that BNFL is already at SRS?

5

According to DOE/MC-0006 page 8, "In 1969, reactors at Big Rock Point ran for about a year using MOX fuel. They had no problems. This is not an experimental technology. It is 25 years old."

If we have so much extra plutonium then why have some commentaries stated that we have been buying plutonium from other countries? The comments give some broad terms for plutonium. Plutonium I am sure has various properties.

6

Why isn't the French military depleting their plutonium? The military apparently does not use Cogema to reprocess their weapons grade plutonium.

7

While the bully DOE police keep the public from asking questions at public meetings, who is policing and guarding our environmental technologies being developed at the facilities? Apparently all contractors have the ability to patent anything they develop with government money and sell the technology. Maybe the bully police should be guarding something besides the public meetings. According to the GAO/RCED-94-172 report nuclear technologies are needed throughout the world. Many opinions exist in this report.

8

FR014

FR014-5

MOX Approach

The MOX process does not use oil.

Duke Engineering & Services, COGEMA Inc., and Stone & Webster formed a team, DCS, to respond to DOE's *Request for Proposals for MOX Fuel Fabrication and Reactor Irradiation Services* (May 1998). Through this competitive procurement process, DOE awarded the contract to DCS to construct and operate the MOX facility on the basis that their proposal was determined to be the most responsive, best value offer submitted.

The commentor is correct that MOX fuel fabrication technology is not new. A small amount of MOX fuel was fabricated and tested in the United States in the late 1960s and early 1970s. DOE is not "importing" the MOX technology. However, COGEMA is one of only a few companies with recent commercial MOX fuel fabrication experience, and this experience will contribute to the success of DOE's MOX fuel fabrication effort. BNFL's contract for work at SRS is completely separate and different from its MOX fuel fabrication efforts in the United Kingdom. The team that selected DCS to build and operate the MOX facility, should the MOX approach be chosen in the SPD EIS ROD, was aware of BNFL's role at SRS.

DOE is not sharing information about U.S. weapons with COGEMA. The plutonium will have been removed from the pits and converted to an unclassified plutonium dioxide before it is transferred to the MOX facility.

Awarding the contract to DCS does not make the United States dependent on foreign entities. DCS is a U.S.-based company and the majority of the companies that comprise DCS are American.

FR014-6

Other

DOE is unaware of the source of the commentor's information that the United States is buying plutonium from other countries. The United States is not buying plutonium from other countries. If the United States were to buy any, it would only be done to keep the material from ending up in the hands of terrorists or rogue nations seeking nuclear weapons technology.

FR014-7**Other**

This SPD EIS addresses the disposition of approximately 50 t (55 tons) of plutonium that President Clinton has declared surplus to national security needs. Russia also agreed to remove the same amount from its stockpile during a Moscow summit held in September 1998. (See Appendix A of Volume II). Plutonium belonging to France is not within the scope of this SPDEIS.

FR014-8**DOE Policy**

DOE's policy is to transfer technology that has been developed at its laboratories and other facilities to the private sector if these technologies are thought to benefit society. DOE encourages, supports, and enables the transfer of unclassified technologies that have applications outside the DOE programs to the private sector and in return receives royalties or other forms of payment for the rights to use Government-developed technologies.

Is this a 5% process of plutonium and what is the percentage that Cogema uses in France? 9

Historically the disposal process was developed for domestic waste and somehow this concept has broadened beyond the original scope of the legislation. 10

We stated at the meeting that we were grateful that Duke Power is participating and we wonder where the rest of the nuclear community is during this process. They have been given a lot of help and we are developing a disposal facility and working on other nuclear technologies that could help the industry and they don't even offer an advisory board or anything. Just where are they and why are they not accountable for participation? The DOE comment books do not even say who says the comments. Who at GAO made those trips around the world to see the plants? Why don't they comment during this process? How can we ask them questions? 11

The GAO report states something like this under the British Waste Program heading on page 57: "The utility plans to construct a dry storage facility to hold spent fuel for up to 100 years. Some environmental groups in the United Kingdom consider aboveground storage to be the "least-worst" option for managing high-level waste. They believe that additional study of various disposal options is needed before a method is selected." Who are these environmental groups and who are their spokespersons? We hear that the United States is already dependent on buying electricity from nuclear plants in Canada. We apparently are importing technology and importing energy from other countries. Why isn't this discussed at the public meetings? 12

The notice we received to attend a workshop on the technical documents was not conducted. 13

Page 41 of the GAO/RCED-94-172 states that because the Japanese plan to store their waste for 30 to 50 years before disposal, officials said they sense no immediate urgency to dispose of the waste. The report further states that the Japanese have not yet developed safety standards for disposing of high-level waste. So maybe somebody might sell them some technology! Other countries like Russia were mentioned as needing technology. Sweden uses ships for transporting. So where is our transportation plan, explaining all the modes used throughout the world? 14

FR014

FR014-9 **MOX Approach**

Reactor MOX fuel in Europe is fabricated to similar enrichment levels (about 5 percent plutonium 239) to the levels being proposed for the U.S. reactors that would be used to irradiate MOX fuel.

FR014-10 **DOE Policy**

DOE believes the commentor is referring to disposal of spent fuel in a potential geologic repository. Irradiated MOX fuel would be spent fuel and would be managed as such by the licensee for the reactor in which the fuel was irradiated, and so would not be beyond the scope of the legislation.

FR014-11 **MOXRFP**

As discussed in response FR014-5, DOE selected DCS, of which Duke Engineering & Services is a member, to construct and operate the MOX facility. DOE does not believe that the involvement of other members of the nuclear industry is needed to implement the proposed surplus plutonium disposition program.

As discussed in response FR014-7, this SPD EIS addresses the disposition of 50 t (55 tons) of surplus plutonium. Disposal of waste generated by other government agencies, or generated as a result of any activity other than disposition of this surplus plutonium, is not within the scope of this SPD EIS.

FR014-12 **General SPD EIS and NEPA Process**

GAO trips to review nuclear technologies unrelated to the surplus plutonium disposition program are beyond the scope of this SPD EIS. Information on these trips can be obtained from the GAO Web site at www.gao.gov.

FR014-13 **General SPD EIS and NEPA Process**

The British waste program is unrelated to the surplus plutonium disposition program and is beyond the scope of this SPD EIS.

FR014-14 **General SPD EIS and NEPA Process**

DOE is unaware of the workshop referred to by the commentor.

FR014-15**Other**

DOE acknowledges the commentor's suggestion of selling technology to the Japanese for safe disposal of their HLW.

DOE will continue to discourage Russia from reprocessing its spent nuclear fuel and starting a plutonium cycle but this issue, and the issue of Japan building a reprocessing facility are beyond the scope of this SPD EIS. U.S. policy dating back to the Ford Administration has prohibited the commercial, chemical reprocessing and separation of plutonium from spent nuclear fuel. The use of U.S. surplus plutonium in existing domestic, commercial reactors does not involve reprocessing (reprocessing is a chemical separation of uranium, transuranic elements [including plutonium], and fission products from spent reactor fuel and the reuse of the plutonium and uranium to produce new fresh fuel). The proposed use of MOX fuel is consistent with the U.S. nonproliferation policy and would ensure that plutonium which was produced for nuclear weapons and subsequently declared excess to national security needs is never again used for nuclear weapons.

For the record nobody at the North Augusta Scoping meeting explained fully why we were going to send plutonium to Britain for reprocessing because we didn't plan for our own facility.

16

One comment stated that mixed oxide fuel is dirty. It involves four technologies used in Western Europe, some countries have been doing it for 30 years. What does dirty mean? Does it mean impurities as opposed to a higher grade of material?

17

Surely with so much money involved, we would try to develop some technologies to better manage the negative impacts of this process rather than importing somebody else's known problems. Why doesn't the French government put up some of the money? What is the procurement process for this deal?

18

SRS has a cooling tower (billions of dollars) that nobody knows what to do with and can it be incorporated in any of the plans?

19

Why are we telling a French oil company all about our weapons? The French government is apparently not discussing their weapons plutonium with our group.

5

Is this process a once through fuel cycle, with no reprocessing and subsequent reuse of the spent fuel? Can the fuel be blended again? Will this reduce waste from the spent MOX fuel? Would several cycles reduce the weapons grade of the material?

20

If Russia is already reprocessing material, then how does that fit in those stockpile reduction agreements. I read where the DOE couldn't even get a set of fire suits for the nuclear plants in Russia without them being stolen. How do we know if they are blending up or down?

21

Will Cogema be asking for amendments to the NPDES permit and other permits for SRS? Does France have the same regulatory reviews? I thought Bechtel was the construction contractor? What is BNFL doing with the MOX process? Who is the MOX process boss? Which one of the 81 outfalls, and 41 stormwater outfalls will be addressed by the new facilities? What is the water usage rate for the new facilities at SRS and where will the withdrawal be located?

22

FR014

FR014-16

MOX Approach

DOE does not have any plans to send surplus plutonium to Britain for reprocessing. There are no plans to reprocess MOX spent fuel if that is what the commentor is referring to.

FR014-17

MOX Approach

DOE is not aware of a comment referring to MOX fuel as dirty. It could be that the comment refers to the fact that reprocessed spent fuel is used in the production of European MOX fuel, and so has more impurities than the surplus plutonium that would be used in U.S. reactors under the MOX approach. DOE is not "importing" problems, but rather taking advantage of the recent European expertise.

FR014-18

MOXRFP

The surplus plutonium belongs to the U.S. Government. There is no need for the French government to contribute financially to this domestic, U.S. Government activity. France and the other G-8 nations (Group of Eight industrialized nations: Canada, France, Germany, Great Britain, Italy, Japan, Russia, and United States) are, however, contributing to Russia's surplus plutonium disposition activities.

The procurement process for U.S. MOX fuel fabrication activities was a competitive process. DOE issued a *Request for Proposals for MOX Fuel Fabrication and Reactor Irradiation Services* in May 1998. Responses were submitted in August 1998, after which a DOE source selection board reviewed the submitted proposals and awarded DCS the contract.

FR014-19

Alternatives

None of the proposed surplus plutonium disposition processes or facilities generates enough heat to require a cooling tower like the one referred to at SRS.

FR014-20

MOX Approach

MOX fuel, similar to traditional LEU fuel in the United States, would be used once. Technically, the fuel could be reprocessed and reused, but the United

States has a policy against reprocessing its spent fuel, and therefore does not reuse any of its spent fuel. MOX fuel is proposed for only two cycles versus three reactor cycles for some of the LEU fuel in the reactor. Two cycles would allow sufficient time for the MOX fuel containing the weapons-origin plutonium to be irradiated to a point that the plutonium cannot readily be extracted from the spent fuel and returned to weapons use.

FR014-21**Nonproliferation**

The *Joint Statement of Principles* signed by Presidents Clinton and Yeltsin in September 1998 provide general guidance for achieving the objectives of a future bilateral agreement to disposition surplus plutonium in the United States and Russia. Sensitive negotiations between the two countries have indicated that the Russian government accepts the technology of immobilization for low-concentration, plutonium-bearing materials, but that the MOX approach would be considered for higher-purity feed materials. DOE will continue to discourage Russia from reprocessing its spent nuclear fuel and starting a plutonium cycle but this issue is beyond the scope of this SPDEIS.

FR014-22**Water Resources**

If the proposed surplus plutonium disposition facilities necessitate modifications to the SRS NPDES Permit, the DOE SRS Office, working with the SRS environmental personnel and DCS, would request the modifications. At this time, the potentially affected outfalls have not been identified. None of the MOX activities, or any other surplus plutonium disposition activities, including construction, would be subject to French regulatory reviews. Bechtel is the SRS site construction support contractor, but construction of large, new structures are contracted for competitively. Major capital projects are not within the scope of the Bechtel contract. BNFL is not involved in this surplus plutonium disposition effort. As discussed in Section 4.26.4.2, the maximum amount of water used during construction of the proposed facilities is estimated to be 126 million l/yr (33.3 million gal/yr); during operations, the maximum water usage is estimated to be 216 million l/yr (57.1 million gal/yr). As discussed in Section 3.5.11.2.3, the source of this water is groundwater. If the proposed facilities are built at SRS, they would be located in F-Area. Sanitary water at SRS is supplied through the central domestic water system, and process and service water is supplied through deep-well systems within individual site areas.

The EIS indicates that Hanford has Pu residues with less than 50 percent Pu. That information was not technically explained as the text was deleted. If the percentage is not very great, then why it is listed for no further action? What is the difference in percentage of that and the MOX spent fuel? Many sites had Pu waste that was said to insignificant in quantity. Is quantity the criteria for risk?

23

How will Duke Power be protected, if Cogema's government orders them home? Will Duke Power get all the patents? We hope that Duke Power and North Carolina get the technology rights rather than the French. We are cheering for our team. We hope our country retains some technology and people in case of an emergency situation. I don't think other governments or oil companies will be working on any clean-up problems. The GAO/RCED-99-173 report stated that the Department of Energy receives much of its royalty incomes from inventions created in its laboratories by contractors, even though the inventions themselves are not government-owned. Where is the list of payers to the Department of Energy? Who got the MOX technology of 1969? Did SRS give the land for the MOX plant and other projects? The original withdrawal of land maps do not match the present maps given out at the public meetings.

24

Will Duke Power be given the same modification money as apparently was going to be given to those Canadian groups in the technical material?

Why does SRS import so much energy? I thought the national policy was to export. We have all these nuclear power companies in our area and we import. This policy does not go along with NEPA at all. We are terminating nuclear persons. Are we going to train them to be coal mine workers or work at oil terminals?

25

Certain regional nuclear facilities seem to have an excess capacity to bid on DOE projects but failed to participate with this project. I assume they want the disposal benefits but do not want to help with figuring out other processes. Apparently they do not even help with the disposal facility. Have they ever visited the disposal site that the American people are building for them? Do they do anything besides go to court? In other countries the operators have responsibility for the repository programs. Where are the proposals or preferred

11

FR014

FR014-23

Alternatives

Section 2.2 describes the materials that have been declared surplus and are being analyzed in this SPD EIS. In general, if the plutonium residues are greater than 50 percent they are considered part of the surplus plutonium disposition program. In some cases, residues with less than 50 percent plutonium are of concern because the plutonium could be easily concentrated to higher percentages. MOX spent fuel would have a relatively low percentage of plutonium; less than 10 percent. Other plutonium-bearing materials are beyond the scope of this EIS, but are addressed in other NEPA documents such as the *Final Environmental Impact Statement on Management of Certain Plutonium Residues and Scrub Alloy Stored at the Rocky Flats Environmental Technology Site* (DOE/EIS-0277F, August 1998).

FR014-24

MOX RFP

MOX fuel fabrication technology is being transferred from the MELOX plant in France to the United States. Because the MOX approach would be relying on the French technology, a clause was added to the special considerations of the contract to ensure that the U.S. Government, or anyone the Government hires to replace COGEMA, should a termination occur, has the right to use all proprietary data and restricted computer software necessary for the design, construction, operation and use of the MOX facility and provision of the MOX fuel irradiation as specified in the contract. Duke Power would negotiate a subcontract with DCS, the prime contractor to the Government. That subcontract would contain the rights Duke Power would have to retain patents developed under their subcontract with DCS. Although the GAO report is beyond the scope of this SPD EIS, in general, royalties are not paid to DOE for contractor-owned inventions and hence, there is not a central DOE list of such "payers."

The land identified for the proposed surplus plutonium disposition facilities at SRS is currently owned by DOE and will remain within the ownership of DOE.

alternatives of the nuclear industry? Has anybody seen any scientific proposals from the Department of Defense outlining their preferences for their waste? How about NASA proposals?

11

The GAO report *Nuclear Waste Foreign countries' Approaches to High-Level Waste Storage and Disposal* states on page 30 that because France has adequate capacity for storing its wastes, developing a repository is not urgent. You may want to discuss this issue further with Cogema.

This report further states that Japan plans to increase its reliance on nuclear power over the next few decades in a continuing attempt to improve the country's energy dependence. "As part of their move toward energy independence, the Japanese plan to build a facility for reprocessing spent fuel from their nuclear power plants so that the recovered uranium and plutonium can be used as fresh reactor fuel."

15

We also heard from the DOE panel meeting with Mr. Nulton that Russia is now reprocessing nuclear fuel.

Will the MOX plant be based on the NRC's move to an approach termed risk-informed regulation that considers relative risk in conjunction with engineering analyses and operating experience to ensure that plants operate safely. We reference the GAO/RECED-99-95.

26

Let recap this picture. Our government has imported British and French technology for our nuclear needs. We also are importers of energy for the projects. That policy should make our country totally depend on others. And didn't I read in the news that we sold off all our oil reserves. What are the education institutions doing that have contracts with DOE? Just to make things even better, the contractors we hire and pay can take all the technology and patent the science and sell it to others.

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Please someone explain this picture to me.

Thank you for the opportunity to comment.

FR014

FR014-25

Infrastructure

As discussed in Sections 3.5.11.1.2 and 3.5.11.1.3, SRS purchases its electricity locally, and generates process and heating steam at onsite coal- and oil-fired steam plants. U.S. policy on oil and energy production, and the nuclear industry and its workers are beyond the scope of this SPD EIS.

FR014-26

MOX Approach

The MOX facility would be licensed by NRC under 10 CFR 70. The application would be accompanied by detailed engineering information and safety analyses that would have to demonstrate that the MOX facility could operate safely and not pose a significant health and safety risk to the workers, the general public, or the environment.

June 14, 1999

To Whom this concerns:

I live in Richmond County, Georgia. Plant Vogtle in 30 miles South and East of me. Due east is infamous SRS.

On February 24, 1999 at a MOX meeting sponsored by Nuclear Information & Resource Service in Augusta, GA I heard Mr. David Lochbaum tell us about his 17 years experience with commercial reactors. Mr. Lochbaum is now employed by Union of Concerned Scientists. Mr. Lochbaum says Plant Vogtle nor any of the other reactors in our still beautiful country are not designed to burn plutonium. Mr. Lochbaum says plutonium would damage the reactors. Also he says plutonium is 10 times more expensive than uranium.

My light bill is already high enough. And y'all want it to go up!?!

No. Just No.

I want you all to know, I am highly insulted. A critical issue as this and no meeting hosted by you here in the Southeast? Humph!

This is the last straw. Only through a dear friend am I getting a chance to write.

There are many of us here in the Southeast who are going to unite. We are not going to just sit idly by any more.

Just as sure as gravity of the Sun is holding the planets in orbit, you will feel our presence.

Yours Renewably

Peter Fox Sipp

DCR004

DCR004-1

MOX Approach

Although no U.S. commercial reactors are licensed to use plutonium-based fuel, several are designed to use MOX fuel, and others can easily and safely accommodate a partial MOX core. These commercial reactors are capable of safely using MOX fuel. Section 4.28 was revised to discuss the environmental impacts of operating the reactors that would use MOX fuel.

Use of MOX fuel in domestic, commercial reactors is not proposed in order to generate electricity. Rather, the purpose of this proposed action is to safely and securely disposition surplus plutonium by meeting the Spent Fuel Standard. The Spent Fuel Standard, as identified by NAS and modified by DOE, is to make the surplus weapons-usable plutonium as inaccessible and unattractive for weapons use as the much larger and growing quantity of plutonium that exists in spent nuclear fuel from commercial power reactors. DCS, the team contracted to fabricate and irradiate the MOX fuel, would not have to continue to use MOX fuel to support the surplus plutonium disposition program if it determined that it was uneconomical to operate the reactors. This would ensure that the taxpayers were not underwriting otherwise uneconomical electricity-generating assets.

DCR004-2

General SPD EIS and NEPA Process

DOE acknowledges the commentor's request for a hearing in the Southeast to discuss the use of MOX fuel in reactors. It should be noted that meetings were held in North Augusta, South Carolina on the SPD Draft EIS. After careful consideration of its public involvement opportunities, including the availability of information and mechanisms to submit comments, DOE decided not to hold additional hearings on the *Supplement to the SPD Draft EIS*. In addition to the public hearing on the *Supplement* held in Washington, D.C., DOE provided other means for the public to express their concerns and provide comments: mail, a toll-free telephone and fax line, and the MD Web site. Also, at the invitation of South Carolina State Senator Phil Leventis, DOE attended and participated in a public hearing held on June 24, 1999, in Columbia, South Carolina. Moreover, interested parties would likely have the opportunity to submit additional comments during the NRC reactor license amendment process should the MOX approach be selected.

The *Supplement* was mailed to those stakeholders who requested it as well as to those specified in the DOE *Communications Plan* (i.e., Congressional representatives, State and local officials and agencies, and public interest groups around the United States) and the utilities' contact lists. The utilities, Duke Power Company and Virginia Power Company, would operate the proposed reactors (located in North Carolina, South Carolina, and Virginia) should the MOX approach be pursued per the SPD EIS ROD.

WILCOX, ROBERT H.
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Thank you for sending me this document. I have no substantive comments on it. As a taxpayer, I object to the need to devote the government's money to documents of this nature. It really serves little useful purpose. The DOE and CEQ should find a simpler way of fulfilling NEPA and/or should suggest that Congress amend that Act.

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WR004

WR004-1

General SPD EIS and NEPA Process

DOE acknowledges the commentor's suggestion that the NEPA process be improved. DOE works carefully to strike a balance between keeping the public informed about potential impacts from its proposed actions and controlling cost of the NEPA process.

WOMEN'S ACTION FOR NEW DIRECTIONS
JOAN O. KING
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STATEMENT FOR THE DOE HEARING ON MOX NUCLEAR FUEL

June 15, 1999

I am Joan O. King. I am a member of WAND, Women's Action for New Directions. I work on nuclear issues for WAND and with other organizations in the Southeast. There is a wide network of individuals and NGOs in our area who are deeply disturbed by the DOE's plan to turn weapons-grade plutonium into nuclear fuel and burn it in commercial reactors.

There are a number of reasons for our concern. We are not reactionary. We have studied the issue in some depth, but there is little point in going over the details. You are aware of the facts. The problem is, you don't appear to be paying much attention to them.

Everything we read indicates that some form of immobilization is a cheaper, faster way to handle the plutonium disposition problem. The excuse we hear from the DOE is that the Russians don't trust immobilization....that they want a MOX solution. But we talk to the Russians too.

Their activists have been in Atlanta and the Southeast, and they tell us the Russian people don't want any more nuclear problems, the kind of problems that come with government nuclear programs and the ever increasing accumulation of polluting radioactive waste.

In the U.S. not one out of a thousand people has any idea what MOX stands for, but when they find out, they don't like it either. One indication of this is what happened at a recent Duke Energy Stockholders meeting when a stockholders initiative was introduced opposing the utility's plan to use MOX fuel in Duke reactors.

The initiative got close to eight percent of the vote, more than twice that needed to keep it on the ballot in the coming year. Since very few people even look at stockholder's petitions when they sign their proxy, and even fewer oppose the boards

DCR010

DCR010-1

MOX Approach

DOE acknowledges the commentor's concern regarding the use of weapons-grade plutonium in MOX fuel and irradiating it in commercial reactors. DOE has identified as its preferred alternative the hybrid approach which includes both immobilization and MOX fuel. As shown in the cost report, *Cost Analysis in Support of Site Selection for Surplus Weapons-Usable Plutonium Disposition* (DOE/MD-0009, July 1998), it is expected that the hybrid approach would be more expensive than the immobilization-only approach. However, pursuing the hybrid approach provides the United States important insurance against potential disadvantages of implementing either approach by itself. The hybrid approach also provides the best opportunity for U.S. leadership in working with Russia to implement similar options for reducing Russia's excess plutonium in parallel. Further, it sends the strongest possible signal to the world of U.S. determination to reduce stockpiles of surplus plutonium as quickly as possible and in a manner that would make it technically difficult to use the plutonium in nuclear weapons again.

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

Although the people of Russia may oppose any further nuclear programs, this issue is beyond the scope of this SPD EIS. Since the inception of the U.S. fissile materials disposition program, DOE has supported a vigorous public participation policy. It has conducted public hearings in excess of the minimum required by NEPA regulations at various locations around the country, not just near the potentially involved DOE sites, to engender a high level of public dialogue on the program. The office has also provided the public with substantial information in the form of fact sheets, reports, exhibits, visual aids, and videos related to fissile materials disposition issues. It hosts frequent workshops, and senior staff members make presentations to local and national civic and social organizations on request. Additionally, various

recommendations, the Duke vote is very significant. I can just about guarantee you stockholder opposition will grow.

1

For forty years nuclear engineers have tried to close the nuclear fuel cycle. It is an article of faith with them that eventually the problem of radioactive waste will be solved and somehow nuclear power can be made economically sustainable. MOX is just one more attempt. It is another step by the nuclear industry toward a plutonium economy, but the public isn't buying. That should be obvious by now.

Nuclear technology has NOT produced "...energy too cheap to meter." Instead it has produced energy too expensive to use, and NO solution to radioactive waste. The DOE doesn't have a very good track record, and the public doesn't want to see them expand into a new and very expensive nuclear program, one that will produce even more radioactive waste.

2

MOX is just one more subsidy to a failed industry. Our government owes the public something better than this.

DCR010

means of communication—mail, a toll-free telephone and fax line, and a Web site (<http://www.doe-md.com>)—have been provided to facilitate the public dialogue.

DCR010-2

DOE Policy

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

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

