

October 21, 2003

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

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In the Matter of

DUKE ENERGY CORPORATION

Docket No's. 50-413-OLA,  
50-414-OLA

(McGuire Nuclear Station, Units 1 and 2,  
Catawba Nuclear Station, Units 1 and 2)

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**BLUE RIDGE ENVIRONMENTAL DEFENSE LEAGUE'S  
SUPPLEMENTAL PETITION TO INTERVENE**

Pursuant to 10 C.F.R. § 2.714 and the Atomic Safety and Licensing Board's Orders dated October 1 and 3, 2003, Blue Ridge Environmental Defense League ("BREDL") hereby submits its Supplemental Petition to Intervene in the above-captioned license amendment proceeding for the proposed use of mixed oxide ("MOX") Lead Test Assemblies ("LTAs") at the Catawba nuclear power plant. Section I of this Supplemental Petition addresses a standing issue raised by Duke Energy Corporation ("Duke") and the Nuclear Regulatory Commission ("NRC" or "Commission") Staff in response to BREDL's initial hearing request.<sup>1</sup> Section II sets forth BREDL's contentions regarding the adequacy of Duke's license amendment application.

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<sup>1</sup> See Blue Ridge Environmental Defense League's Hearing Request and Petition to Intervene (August 25, 2003) (hereinafter "BREDL Hearing Request"); Answer of Duke Energy Corporation to the Petitions to Intervene and Requests for Hearing of the Nuclear Information and Resource Service and the Blue Ridge Environmental Defense League (September 9, 2003) (hereinafter "Duke Response"); NRC Staff's Answer to Nuclear Information and Resource Service and Blue Ridge Environmental Defense League's Petitions for Leave to Intervene and Request for Hearing (September 15, 2003) (hereinafter "NRC Staff Response").

## **I. STANDING**

In support of its Hearing Request, BREDL submitted the Declaration of BREDL member Gregg Jocoy. Mr. Jocoy also submitted a declaration in support of NIRS's hearing request. Both Duke and the Staff argue that Mr. Jocoy cannot be represented by two separate organizations in this proceeding. NRC Staff Response at 9. BREDL disagrees with their position. Duke and the Staff do not suggest any reason why Mr. Jocoy should not be permitted to authorize two different organizations to represent his interests, and none is apparent. Mr. Jocoy should be able to participate in the proceeding as a member of both organizations, as long as the positions taken by BREDL and NIRS are not inconsistent.

In any event, BREDL hereby amends its assertion of standing by submitting the declarations of 19 other BREDL members who have authorized BREDL to represent their interests in this proceeding. The declarations are as follows:

Declaration of Catherine Mitchell (October 13, 2003), who lives within 20 miles of the Catawba and McGuire nuclear power plants (attached as Exhibit 1);

Declaration of George L. Mitchell (October 13, 2003), who lives within 20 miles of the plants (attached as Exhibit 2);

Declaration of Katherine M. Jamieson (October 19, 2003), who lives within 20 miles of the plants (attached as Exhibit 3);

Declaration of William J. Lawrence (October 19, 2003), who lives within 20 miles of the McGuire nuclear power plant (attached as Exhibit 4);

Declaration of Calvin Sanford (October 19, 2003), who lives within 20 miles of the plants (attached as Exhibit 5);

Declaration of Michael R. Harrel (October 19, 2003) who lives within 20 miles of the plants (attached as Exhibit 6);

Declaration of Penny Kuhn (October 19, 2003), who lives within 20 miles of the plants (attached as Exhibit 7);

Declaration of E. Ann Wicker (October 19, 2003), who lives within 20 miles of the plants (attached as Exhibit 8);

Declaration of Alison Hawk (October 19, 2003), who lives within 20 miles of the plants (attached as Exhibit 9);

Declaration of Nina Layton (October 19, 2003), who lives within 20 miles of the plants (attached as Exhibit 10);

Declaration of Betsy Ewing (October 19, 2003), who lives within 20 miles of the plants (attached as Exhibit 11);

Declaration of John H. Wicker, Jr. (October 19, 2003), who lives within 20 miles of the plants (attached as Exhibit 12);

Declaration of Jan Jenson (October 19, 2003), who lives within 32 miles of the plants (attached as Exhibit 13);

Declaration of Laurel Evans (October 19, 2003), who lives within 20 miles of the plants (attached as Exhibit 14);

Declaration of S. Patrick Carter (October 19, 2003), who lives within 10 miles of the plants (attached as Exhibit 15);

Declaration of Karyn A. Furr (October 13, 2003), who lives within 20 miles of the plants (attached as Exhibit 16);

Declaration of Phyllis F. Lyon St. Clair (October 14, 2003), who lives within 20 miles of the plants (attached as Exhibit 17);

Declaration of Dane Wadman (October 13, 2003), who lives within 20 miles of the plants (attached as Exhibit 18); and

Declaration of Mark Williams (October 19, 2003), who lives within 20 miles of the plants (attached as Exhibit 19).

All of these individuals live within 50 miles of the Catawba and McGuire plants, and most live within 20 miles. All of them express concerns about the adequacy of security measures under the proposed license amendment, as well as the adequacy of the license amendment to protect their health and safety. Therefore, in addition to Mr. Jocoy's

declaration, these declarations further demonstrate BREDL's representational standing to participate in this proceeding.

## **II. CONTENTIONS**

In accordance with the standards set forth in 10 C.F.R. § 2.714(b), BREDL submits the following contentions regarding Duke's application to test MOX lead test assemblies at the Catawba nuclear power plant.<sup>2</sup> The contentions are supported by the attached Declaration of Dr. Edwin S. Lyman In Support of BREDL's Contentions (October 21, 2003) (attached as Exhibit 20). The contentions fall into two categories: safety issues under the Atomic Energy Act and its implementing regulations, and environmental issues under the National Environmental Policy Act.

### **SAFETY ISSUES UNDER ATOMIC ENERGY ACT AND IMPLEMENTING REGULATIONS AND GUIDANCE**

#### **1. Failure to Provide Quantitative Information in Risk Impact Analysis.**

Duke's risk impact analysis is inadequate, because it presents the results of its analysis in qualitative terms only.

**Basis:** In Section 3.8 of the LTA license amendment application, Duke presents an analysis of the risk impact of the license amendment that is nominally based on Duke's probabilistic risk assessment ("PRA"). Duke claims that "the use of four MOX lead test assemblies ... will not significantly change the risk to public health and safety that is posed by the operation of Catawba and McGuire." License Amendment Application at 3-36. However, despite the fact that the PRA is obviously a quantitative

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<sup>2</sup> The application, which was submitted to the NRC on February 27, 2003, consists of a cover letter and six attachments. See Letter from M.S. Tuckman, Duke Power, to U.S. NRC, re: Proposed Amendments to the Facility Operating License and Technical Specifications to Allow Insertion of Mixed Oxide (MOX) Fuel Lead Assemblies and Request for Exemption from Certain Regulations in 10 CFR Part 50 (February 27, 2003).

study, Duke provides only qualitative arguments for its claim that the probability of a severe accident will not significantly increase. Duke does not attempt to calculate the changes in core damage frequency (CDF) and Large Early Release Frequency (LERF) associated with the proposed license amendment. By failing to provide its quantitative calculations, Duke's risk analysis fails to provide an adequate basis for the NRC to conclude that the increases in core damage frequency or risk are "small and consistent with the intent of the Commission's Safety Goal Policy Statement," an important criterion for risk-informed decision-making. *See* Regulatory Guide ("RG") 1.174, Rev. 1, An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions on Plant-Specific Changes to the Licensing Basis at 1.174-6 (2002).

## **2. Inappropriate use of SPDEIS for Estimate of Consequence Increase**

Duke has failed to support its claim that the increase in severe accident consequences associated with the MOX LTA loading will not be significant.

**Basis:** In asserting that the radiological consequences of a severe accident would increase by no more than 0.3%, Duke apparently relies on a result from DOE's SPDEIS that was based on a calculation for a 40% MOX core, and tries to scale the result to a 2% MOX core. There are two problems with Duke's approach. First, it scales incorrectly. If one assumes that the increase in consequences associated with a MOX core would scale linearly with the MOX core fraction, then the DOE results should be divided by a factor of 20, leading to a result from between (-) 0.2% to (+) 0.7%. Duke, for some reason, divides by a factor of 40, and gets an answer that is too low by a factor of two.

Second, Duke relies inappropriately on the calculation of consequences in DOE's SPDEIS, which is outdated. *See* SPDEIS, Volume II, Appendix K at K-78. Duke should

have used the most recent version of Duke's PRAs, not the SPDEIS. Third, Duke does not take into account published research that discusses flaws in DOE's analysis and demonstrates that the increase in consequences associated with using MOX fuel depends strongly on the assumed values of the actinide release fractions, which are parameters with large uncertainties. *See, e.g.*, E. Lyman, "Public Health Risks of Substituting Mixed-Oxide for Uranium Fuel in Pressurized Water Reactors," *Science & Global Security* 9 at 33-79 (2001)<sup>3</sup>; ERI/NRC 02-202, "Accident Source Terms for Light-Water Nuclear Power Plants: High-Burnup and Mixed Oxide Fuels" (November 2002).<sup>4</sup> The DOE calculation uses uniformly low values for actinide release fractions.

Finally, it is not possible to fully evaluate the risk impact of the proposed MOX LTA license amendment in the context of RG 1.174 guidelines, because the NRC staff has not completed final guidance on how RG 1.174 can be applied in the case of MOX fuel use. In the most recent version of RG 1.174, Rev. 1 (November 2002), the NRC notes that "current LERF guidelines are based on assumptions of . . . extent of the use of mixed oxide fuel" (i.e. the absence of mixed oxide fuel in currently operating reactors), and that "the staff is undertaking an evaluation of the impact, if any, of increases in these parameter [sic] on LERF." *Id.* at 1.174-18. The staff must reach a position on this issue before the risk impacts of the MOX LTA license amendment can be assessed.

In order to evaluate the overall impact on risk of the MOX LTA license amendment, it is necessary to know which accidents will be most affected, and how the increase in probability and consequences will change. In turn, in order to make that

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<sup>3</sup> This document is available on the website of the Nuclear Control Institute, [www.nci.org](http://www.nci.org), under the heading "Pu and Processing." .

<sup>4</sup> This document is available on ADAMS, # ML023500093.

assessment, Duke must use its own up-to-date PRA, and provide the results of its calculations, including the details of the consequence assessment. Even if the increase in consequences is no more than 1%, the change in risk could be significant for CDFs on the order of 50 times higher than what Duke assumed, as may be the case if sump recirculation is not available. *See* Contention 3 below.

### **3. Failure to Evaluate Containment Sump Failure**

The discussion of risk impacts of MOX fuel lead assemblies in Section 3.8 of the LTA application is incomplete, because it does not include an evaluation of the effect of containment sump failure on risk impacts of operating the Catawba nuclear power plant with four MOX fuel assemblies.

**Basis:** The attached report by the Union of Concerned Scientists, "GSI-191 Impact on Catawba and McGuire" (August 14, 2003) (Exhibit 21), demonstrates that core damage frequency will increase as a result of a previously unrecognized design flaw: failure to protect against containment sump clogging in the event of a loss of coolant accident ("LOCA"). Containment sump clogging is a particularly severe problem for ice condenser plants such as Catawba, because ice condenser plants need to go to sump recirculation in small break LOCAs, which is seldom the case for most other pressurized-water reactors. *See* Arthur Buslik, "Risk Considerations Associated with GSI-191, "Assessment of Debris Accumulation on PWR Sump Performance," Attachment 2 to Memorandum from Michael E. Mayfield to John T. Larkins, "RES's Proposed Recommendation for Resolution of GSI-191" at 6 (August 29, 2001).<sup>5</sup> Since small-break LOCAs are the most probable class of LOCAs, this means

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<sup>5</sup> The Buslik paper is available on ADAMS on the NRC website, # ML012430063.

that the potential for sump clogging has a greater impact on the LOCA CDF for ice condensers than for other PWRs. Although Duke has stated that the consequences of an accident would not increase appreciably as a result of MOX LTA fuel use, consequences must be taken together with accident probability in order to evaluate overall risk. In this case, the baseline core damage frequency may be much higher than was assumed in the Catawba PRA, thereby driving up the total risk impact associated with the increased consequences of a severe accident involving the MOX LTA core. As discussed in the attached UCS report, a recent Los Alamos study found that the LOCA CDF for many PWRs would increase by a factor of of 50 on average if sump recirculation were not available.

In a letter to the NRC dated August 7, 2003, Duke has stated that all the Westinghouse licensees are committed to dealing with the containment sump failure issue by the end of March 2004. Until the issue is resolved satisfactorily, however, the application remains incomplete.

## ISSUES OF NONCOMPLIANCE WITH NATIONAL ENVIRONMENTAL POLICY ACT

### 4. Failure to Evaluate Future Use of MOX Fuel

The Environmental Report for the LTA application (Attachment 5) is deficient because it completely fails to address the environmental impacts of using batch quantities of MOX fuel in the Catawba and McGuire reactors. Duke's failure to address the impacts of MOX use in its Environmental Report is inconsistent with Council on Environmental Quality ("CEQ") regulations and judicial and NRC decisions interpreting NEPA, which require consideration of connected actions, as well as cumulative impacts.

**Basis:** In Section 5.3.7, Duke states that "[t]he environmental impacts of batch use of MOX fuel will be evaluated as part of any future batch license amendment requests." *Id.* at 5-4. The postponement of these considerations constitutes illegal segmentation of the decision-making process with respect to MOX fuel. The testing and use of MOX fuel are "connected" actions as defined in the Council on Environmental Quality ("CEQ") regulations implementing NEPA, and therefore should both be covered in the scope of the environmental analysis. *See* 40 C.F.R. § 1508.25.<sup>6</sup> They are "closely

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<sup>6</sup> The text of 40 C.F.R. § 1508.25 provides as follows:

. . . To determine the scope of environmental impact statements, agencies shall consider 3 types of actions . . . They include:

(a) Actions (other than unconnected single actions) which may be:

(1) connected actions, which means that they are closely related and therefore should be discussed in the same impact statement. Actions are connected if they:

(i) Automatically trigger other actions which may require environmental impact statements.

(ii) Cannot or will not proceed unless other actions are taken previously or simultaneously.

(iii) Are interdependent parts of a larger action and depend on the larger action for their justification.

related” in the sense that testing of the LTAs at Catawba is a necessary precursor to batch use of MOX fuel at Catawba. 40 C.F.R. § 1508.25(a)(1)(ii).

Moreover, the testing and batch use activities are “interdependent”, because, in the course of seeking approval for LTA use, Duke is also making modifications to its operation that will govern the batch use of MOX fuel. 40 C.F.F. § 1508.25(a)(1)(iii). For instance, on September 15, 2003, Duke applied for an license amendment that would allow it to make changes to its security plans for the operation of the McGuire and Catawba nuclear plants. Letter from M.S. Tuckman, Duke Energy Corporation, to Document Control Desk, NRC, re: Revision 16 to Duke Energy Corporation Physical Security Plan and Request for Exemption from Certain Regulatory Requirements and 10 CFR 11 and 72 to Support MOX Fuel Use.<sup>7</sup> In the same letter, Duke also applied for an exemption from certain NRC security regulations that govern the storage of plutonium. Nothing in the letter limits the requested license amendment application to the period of MOX fuel testing. Rather, the letter refers generally to “MOX fuel use,” thus indicating that the proposed changes to the security plan will apply to batch MOX fuel use as well as LTA testing. Moreover, with respect to the exemption, the letter is quite explicit on this point:

Duke requests that these exemptions be granted to both McGuire and Catawba to support the use of MOX fuel lead assemblies (in either McGuire or Catawba) and the eventual use of batch quantities of MOX fuel in both facilities.”

*Id.* at 3. Although BREDL is not privy to the proposed security plan revisions or exemption request, it is very possible that these documents will propose major changes to the physical design and operation of the Catawba and McGuire nuclear power plants,

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<sup>7</sup> This document is available in ADAMS, on the NRC website, # ML032670641.

which will apply to MOX fuel use for the indefinite future. These modifications reflect an interdependence between LTA testing and the future batch use of MOX fuel.<sup>8</sup>

The proposed security plan changes and regulatory exemption also satisfy the Commission's two-part test for determining when actions are related enough to be covered in the same EIS. In *Duke Energy Corporation* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-14, 55 NRC 278 (2002), the Commission set forth the test as follows:

To bring NEPA [the National Environmental Policy Act] into play, a possible future action must at least constitute a 'proposal' pending before the agency (i.e., ripeness), and must be in some way interrelated with the action that the agency is actively considering (i.e., nexus).

55 NRC at 295. Here, Duke has proposed changes the Catawba and McGuire security plans and has requested a regulatory exemption, not just for LTA testing, but for batch MOX fuel use. By seeking to put important measures in place for batch MOX fuel use, Duke has demonstrated that its plans to use MOX fuel are "concrete." *Id.* Thus, Duke has, effectively, made a proposal for batch MOX fuel use.

Moreover, as discussed above, Duke's actions establish a "nexus" between LTA testing and batch MOX fuel use. Given the commitment that Duke has made to MOX fuel testing, and given its commitment to plant modifications necessary for batch MOX fuel use, it would be "unwise or irrational" not to go through with MOX fuel use after LTA testing. *Id.*, 55 NRC at 297, citing *Webb v. Gorsuch*, 699 F.2d 157 (4<sup>th</sup> Cir. 1983).

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<sup>8</sup> BREDL is concerned that the proposed changes to the security plans and the proposed regulatory exemption may warrant the preparation of an Environmental Impact Statement ("EIS"), depending on the magnitude of the proposed changes. BREDL anticipates that, if and when it is permitted access to the security plan revisions and exemption request, it may file a contention regarding the need for an EIS to address significant risks posed by Duke's proposed changes. BREDL recognizes that it may be necessary to perform such a NEPA analysis under restrictions on public disclosure of the information.

**5. Failure to Consider New Information Showing Viability of Alternatives.**

The Environmental Report is deficient because it fails to consider alternative nuclear power plants for testing and batch MOX fuel use, other than Catawba and McGuire.

**Basis :** In Sections 5.2.2 and 5.7, Duke states that no alternatives other than the proposed action or no-action alternatives are viable. Duke does not explain the reason for this assertion. In any event, it is incorrect. New information, not considered in the SPDEIS, demonstrates that McGuire and Catawba are not appropriate choices for MOX fuel batch use, because of two significant previously unidentified design flaws that make them particularly vulnerable to accidents, including containment breach. This new information compels a re-evaluation of conclusions previously reached in the SPDEIS.

*Warm Springs Dam Task Force v. Gribble*, 621 F.2d 1017, 1023-24 (9<sup>th</sup> Cir. 1980) (federal agency “has a continuing duty to gather and evaluate new information relevant to the environmental impact of its actions”); *Marsh v. Oregon Natural Resources Council*, 490 U.S. 360, 374 (1989) (new EIS must be issued if there remains “major federal action” to occur, and if there is new information showing that the remaining action will affect the quality of the human environment “in a significant manner or to a significant extent not already considered.”)

First, as discussed in NUREG/CR-6427, Assessment of the DCH [Direct Containment Heating] Issue for Plants With Ice Condenser Containments (April 2000), Sandia National Laboratories has evaluated the robustness of the Catawba and McGuire containments, and concluded that in the event of an accident involving hydrogen ignition, the containments will fail with near certainty. Of the hundred-plus operating nuclear

power plants in the United States, there are only a handful for which that statement can be made. Moreover, measures to increase protection against hydrogen ignition, proposed by the NRC Staff in GSI-189, have not been implemented. Under the circumstances, it would be foolhardy to use fuel that will increase the radiological harm in a containment breach accident in plants that have such vulnerable containments. Yet this issue has not been addressed in any EIS: while the Department of Energy did evaluate severe accident risks at Catawba and McGuire in the SPDEIS, it did not consider the results of NUREG/CR-6427. *See* SPDEIS, Section 4.28.2.5.2.

Second, plants with ice condenser containments, such as Catawba and McGuire, are particularly vulnerable to reactor sump clogging accidents. *See* discussion in Contention 2, above. Because this vulnerability was identified only recently by the NRC, its impact on accident risk for Catawba and McGuire is not addressed in the SPDEIS.

The new information described above, regarding the heightened vulnerability of the Catawba and McGuire containments to breach or rupture, and the heightened vulnerability of plant cooling systems to clogging, could significantly increase the overall risk of an accident over other nuclear power plants if MOX fuel were used. Therefore, before LTA testing is allowed, the new information should be considered in a supplemental EIS.

**6. Failure to Provide Quantitative Information in Support of Assertions re Environmental Impacts.**

Duke fails to provide quantitative support for its assertion that the consequences of a severe accident involving use of LTA MOX fuel assemblies will increase 0.3% at most.

**Basis:** In Section 5.6.3.2 of the Environmental Report, Duke asserts that use of MOX LTAs will have no significant impacts. As in Section 3.8, while Duke's assertions are obviously based on probabilistic risk calculations, Duke provides only qualitative arguments in support of this claim. Duke does not attempt to calculate the changes in core damage frequency (CDF) and Large Early Release Frequency (LERF) associated with the proposed license amendment. By describing environmental impacts in purely qualitative terms, when it also has the information in quantitative terms, Duke violates the requirement of 52.45(c) that the analysis in an Environmental Report must quantify the various factors considered "to the extent possible." In order to document the risk analysis on which Duke relies for its conclusions regarding environmental impacts, Duke must provide all the details of its consequence assessment, including a full description of core inventory, release fractions, consequence modeling, techniques used, and a full accounting of uncertainties.

**7. Inappropriate use of SPDEIS for Conclusion that Impacts are Insignificant.**

Duke has failed to support its claim that the increase in severe accident consequences associated with the MOX LTA loading will not be significant.

**Basis:** In asserting that the radiological consequences of a severe accident would increase by no more than 0.3%, Duke apparently relies on a result from DOE's SPDEIS that was based on a calculation for a 40% MOX core, and tries to scale the result to a 1% MOX core. Duke's attempt to scale the SPDEIS is incorrect, as discussed above in Contention 2. Duke thereby misrepresents the environmental impacts of the proposed license amendment.

In order to evaluate the significance of the impacts of MOX LTA testing, it is necessary to know which accidents will be most affected, and how the increase in probability and consequences will change. In turn, in order to make that assessment, Duke must use its own up-to-date PRA, and provide the results of its calculations, including the details of the consequence assessment. Even if the increase in consequences is no more than 2%, the change in risk could be significant for CDFs 100 times higher than what Duke assumed, as may be the case if sump recirculation is not available.

#### **8. Failure to address environmental impacts of plutonium shipments**

The Environmental Report is deficient because it fails to address the environmental impacts of shipping plutonium oxide to France, and the impacts of shipping the LTAs from France back to the United States.

**Basis:** In Sections 5.3.2 and 5.3.4, Duke concedes that shipment of polished PuO<sub>2</sub> powder to France, and the return shipment of MOX fuel lead assemblies to the United States, are related actions whose environmental impacts must be considered. *Id.* at 5-3. But Duke fails to provide such an analysis. Instead, it states that the analysis will be prepared by the U.S. Department of Energy (“DOE”). *Id.* at 5-3. The DOE has not issued any such analysis, however. Until the DOE prepares a supplemental EIS that adequately addresses the environmental impacts of shipping the plutonium to and from Europe, the requested license amendment may not be issued. *Robertson v. Methow*, 490 U.S. 332, 349 (1989) (the environmental consequences of a proposed federal action must be considered *before* it goes forward, not afterwards).

#### **9. Failure to identify the quantity of plutonium to be shipped to France.**

The LTA license amendment application fails to identify the quantity of plutonium that will be shipped to France for processing. This is a significant omission, in light of the significant discrepancy (40 kg) between the amount of plutonium oxide that the DOE seeks to ship to France and the amount of plutonium needed to make four lead test assemblies. This discrepancy and its environmental impacts should be addressed before the LTA use permit is issued.

**Basis:** According to the SPDEIS, it takes about 100 kg of plutonium to make four MOX lead test assemblies. *Id.* at 2-63. Yet, the Department of Energy's export application to the NRC asks for permission to export up to 140 kg of weapon grade plutonium oxide powder to France. Letter from Edward J. Siskin, Assistant Deputy Administrator, Office of Fissile Materials Disposition, DOE, to Deputy Director, Office of International Programs, NRC (October 1, 2003) (hereinafter "DOE export license application"). Thus, it appears that DOE is seeking to ship 40 extra kilograms of plutonium to France, without explaining what will happen to it. The potential environmental impacts of 40 stray kilograms of plutonium falling into the wrong hands are enormous. The DOE should be required to explain this discrepancy before any permit is issued for LTA use.

Respectfully submitted,

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