

66 FR 13794

3/7/01

49

Sunflower Consulting
 1324 Williamson St. #1
 Madison, WI 53703
 PH (608) 260-8355
 Fax (608) 260-8355- call first

5/19/01

Michael T. Lesar
 Acting Chief, U.S. Nuclear Regulatory Commission
 Rules & Directives Branch, Division of Administrative Services
 Office of Administration
 Mail Stop T6D59,
 Washington, DC 20555.

RE: MOX EIS

Dear Michael T. Lesar,

Please support the "No Action Alternative" in this EIS, which would mean that NRC denies a license for the construction of the MOX fuel factory. This would throw it back to DOE as to what to do, since NRC has no jurisdiction over plutonium disposition. The immobilization track has been de-funded, but not officially canceled. Since DOE's Record of Decision states that the reason for a "dual track" is in case one track fails, it could be argued that the NRC no-action is a 100% immobilization route. It is also possible, however, that DOE would consider export of the surplus plutonium to Canada under the "Parallax Program," so it would be well to specify what alternatives you think they should analyze as part of their "No Action," and then tell them NO to MOX fuel!

Please reject any further consideration of the Duke Power ice condenser reactors. These reactors have an unacceptable risk level with the use of uranium fuel. Use of even more risky MOX should not even be contemplated!

Please show the data on which NRC is calculating any of their projected impacts from the handling and use of weapon's grade plutonium as a reactor fuel. Where there is no data, please provide all assumptions and a statement of the degree of uncertainty associated with calculations intended to "model" weapons grade plutonium.

The evaluation of plutonium fuel use and reactor impacts must be site specific, not generic. NRC is proposing to do a generic analysis of reactor impacts, even though the contract states clearly which reactors will be used. They also did a generic "standard review plan" for the fuel factory license review and have revised 10 CFR part 70 to accommodate plutonium fuel production anywhere, any time. You must ensure that this NEPA process is NOT transferable to the entire fleet of US reactors. The Duke ice condenser reactors are not appropriate as "reference reactors" for other types, nor is a more generic "reference reactor" a legitimate base for analysis of these unique systems.

A Supplemental EIS (SEIS) should be done at the time that Duke or any other utility seeks a license amendment to use plutonium fuel. This SEIS should be specific to that reactor, and also include all of their ancillary contracts (again site-specific) such as nuclear laundry, so-called "low-level" waste storage, transport, incineration and disposal, high-level waste storage (on and off-site) transport and repository impacts--MOX high-level waste is hotter in temperature and will have 2--4 times as much residual plutonium than uranium

Template = ADM-013

E-RIDS = ADM-03
 Call = T. HARRIS (TEH)

waste, so there can be less per container, causing more storage space, more shipments, more space in a repository.

If a generic approach is taken to reactor use of plutonium fuel, the EIS should also include the impacts of a return to the reprocessing of nuclear fuel, since it is likely that the chosen location of the new factory--the F Area at SRS which has a "canyon" for plutonium recovery and high-level waste tanks--make it an ideal set up the reprocessing of civilian reactor waste. This should also include a "Mobile Chernobyl" scenario for nationwide irradiated fuel transport to South Carolina.

The environmental records and operating histories of Duke, COGEMA, Stone and Webster must be made publicly available, and openly cited in NRC's analysis. To date, DCS has submitted the operating and environmental record of Savannah River Site, which is not relevant.

Making reactor fuel would require many more steps for purification than immobilization would. One of these steps, called "plutonium polishing," would generate millions of gallons of high-activity alpha-emitting liquid waste. DCS has no plan for what to do with this waste other than put it in one of SRS's tanks, many of which are already leaking. NRC must include the disposition of all process wastes in their analysis.

The contract for the MOX fuel factory only specifies "de-activation" at the end of 20 years. Other NRC licenses require provisions for decommissioning. If NRC licenses this facility, they should have regulatory responsibility for it through decommissioning.

A complete environmental justice analysis must include not only the communities adjacent to Savannah River Site, but also communities down wind and down river, including subsistence fish consumers, and transport routes for both the source material and the fuel transport, as well as the reactor communities. Further consideration should be given to the fact that this entire program has been located in the Southeastern United States and whether it fits a pattern of "dumping on Dixie."

If an analysis of MOX use is undertaken in this EIS, it must include diminished reactor control due to the smaller number of delayed neutrons rendering control rods less effective, and plutonium fission's characteristic coefficient of heat where the hotter the reactor gets, the easier it is to split plutonium, where uranium is the opposite. There must also be assessment of acceleration in reactor component aging due to more hard, fast neutrons. Higher levels of heat and fission products should be assessed in terms of routine releases to air and water, thermal impacts, worker exposure and all waste streams. All these analysis should be straight reporting of real consequences, not modified by "risk" factors. Risk analysis should be reported clearly and separately.

The source term (amount and type of radioactivity including persistence) used in the analysis of a plutonium core accident must be accurate, and the doses reported from projected accidents not modified by risk factors. The DOE has validated the NCI finding by Dr. Ed Lyman that there is an increased potential for cancer deaths from a core breach accident with plutonium fuel in use. A possible doubling in fatal cancers associated with use of 100% MOX fuel, and the projected 25% or more increase in cancer deaths associated with the DCS plan for a 40% core is unacceptable and should be the basis for NRC to select the no-action alternative and reject MOX license.

Plutonium fuel increases all nuclear liabilities. The Price-Anderson Act liability limits and insurance package must be evaluated, especially with regard to increased taxpayer exposure.

Substitution of plutonium for uranium in reactors is such a complex prospect that the list goes on and on...NRC's own credentials for regulation and oversight of weapons' grade plutonium are nil. This alone should be the reason for them to select the No Action alternative!

Sincerely,

Billy Stern

Billy Stern
President, Sunflower Consulting