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**To:** <teh@nrc.gov>  
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**Subject:** EIS on MOX at SRS

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RE: EIS on MOX fuel fabrication plant at SRS

I would like to request an extension on the comment deadline for this very important decision. More time is needed for reflection on all the consequences and possible consequences of such a milestone decision. Twenty five years ago President Carter saw the wisdom of keeping Pu out of commercial fuel cycles. To change this policy now, for what seem to be flimsy reasons, could be a mistake with disastrous consequences.

In addition to requesting a comment period extension, I would like to express my opposition to building a MOX fuel fabrication plant at SRS. I would also like to express my opposition to loading MOX fuel of any sort into the Catawba and McGuire reactors.

Here are my reasons against building a MOX fuel fabrication plant at SRS:

1. MOX fuel fabrication generates large amounts of liquid radioactive waste. SRS already has large amounts of liquid radioactive waste. All of this waste needs to be cared for constantly lest it explode catastrophically as did the Russian liquid radioactive waste tank. Power outages to these tanks in the case of a serious power emergency caused by some sort of national disaster (flood, hurricane, earthquake, terrorist attack) could cause a tank, or many tanks, to explode. Radioactivity would be dispersed over a large area and millions of people from such explosions. This would be very bad for the environment.

2. Taking Pu from weapons and putting it into reactor fuel is not economical. As you know, this process will only happen if taxpayer dollars are used to subsidize the making of MOX fuel. These taxpayer dollars should be spent more wisely. Sufficient much lower cost reactor fuel can be made from blended down HEU (much of Russian origin which is a real plus), mined uranium, and even uranium processed from the sea. Processing uranium from the sea is considerably cheaper than making MOX fuel. There is no uranium shortage at present or in the foreseeable future. It would be better for the environment to use taxpayer dollars wisely, perhaps on remediating the environmental disaster that is SRS!

3. Making MOX fuel from weapons grade uranium is an experimental process that does not need to be attempted. Removing the stabilizing gallium from the weapons grade Pu is challenging and generates a large amount of liquid radioactive waste even before ordinary MOX fuel fabrication begins. Pu is a tricky metal, existing in many different states according to temperature and other environmental circumstances. In several of its states it is highly flammable. Fires like those at Rocky Flats could occur spontaneously and perhaps become uncontrollable. Humans working with this Pu would be engaged in dangerous work that is unnecessary. Unnecessarily risking the well being of human beings (fathers, mothers, loved ones) is making their

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environment unacceptable. There is no reason to run these kinds of environmental risks to human beings.

4. MOX fuel should not be made for the reasons that President Carter put forth. Letting Pu into commercial fuel cycles is a serious proliferation risk. The Pu in MOX fuel can be chemically removed, so MOX fuel is always a potential terrorist target. It will be very expensive to guard MOX fuel fabrication sites, MOX fuel burning reactor sites, and all MOX fuel transportations. Pu processing cannot properly account for all the Pu that passes through the fuel cycle. Incremental amounts can be systematically removed and used to make terrorist weapons. Terrorist atomic weapons are extremely bad for the environment.

5. MOX fuel HLW is thermally hotter and more difficult to dispose of than ordinary reactor HLW. The disposal problems of ordinary HLW have not been solved, and disposal of HLW from MOX fuel is an even more serious problem. HLW disposal problems have to be solved. HLW on reactor sites is both illegal and dangerous because of its susceptibility to terrorist attacks or sabotage. Let's not make the environmental problems of HLW disposal even harder to solve!

6. Any reactors that would use this MOX fuel pose additional environmental risks on two accounts: First off, having two different kinds of fuel in a nuclear reactor is a trickier technological problem than running a reactor on one kind of fuel. Trickier technologies have more ways of going wrong. So a MOX fuel burning reactor, using maybe 1/3 MOX fuel and 2/3 LEU, has a higher probability of having a catastrophic accident. Secondly, because there is more Pu in the reactor, the consequences of a catastrophic accident would be more serious. Because there is no need to make this MOX fuel and no need for the government to subsidize this dangerous venture, it is immoral to risk higher probabilities of accidents with more serious consequences threatening human beings and the environment!

The MOX fuel fabrication decision hinges on the Duke/COGEMA/Stone and Webster consortium's plan to use this fuel at the Catawba and McGuire reactors near Charlotte. Here are my reasons for opposing using MOX fuel in those four reactors:

1. Those four reactors are near the largest city in NC, Charlotte, with population of 400,000. When the Chernobyl accident occurred, the city of Prypiat, nearby, now in the uninhabitable "Zone," had a population less than 1/10 of the population of Charlotte. Don't do experimental nuclear technology in four reactors surrounding a large population center!

2. The costs of Chernobyl were in the hundreds of billions of dollars and had a major part in the disintegration of the USSR. The Price-Anderson liabilities are totally unrealistic for this situation.

3. All four of these reactor are aging "ice-condenser" reactors. There are only ten such reactors, lacking steel-reinforced concrete containment domes, in the United States. Why on earth would the NRC even consider using experimental MOX fuel in the most fragile reactors

in the US? Even if the Duke consortium sees the possibility of high government-subsidized profits, the NRC has a responsibility to protect the citizens of the United States from dangerous nuclear possibilities. Higher risk of accident - more serious consequences of accident - no steel-reinforced concrete containment dome - near a major population center - doesn't sound good.

Here is what I think the NRC should be pursuing. Build an immobilization plant that would vitrify the excess weapons Pu. Build it at the Nevada Test Site to minimize transportation and closeness to populations.

Thank you for your attention to these comments.

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