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From the perspective of Physicians for Social Responsibility, I wish to cite the dangers and massive costs of the the entire plutonium bomb fuel experiment, the lesser costs and dangers of the option of plutonium immobilization, how such a venture could affect us in North Carolina and an apparent hidden agenda.

Dangers stem from this entire plutonium fuel experiment. The U.S. portion of the proposal involves shipment of plutonium from dismantled nuclear weapons sites in western states, some likely via Interstates 40 and 26 en route to South Carolina. The greatest transportation risk would be an accident in which plutonium metal, which rapidly oxidizes when it comes into contact with air, would vaporize or burn and disperse its deadly particles contaminating the air our citizens inhale, the water upon which we depend and the soil upon which we grow crops and upon which animals feed. Inasmuch as your staff have already introduced the subject of terrorism into tonight's discussion, it is appropriate to cite the increased risks that terrorism add to all other concerns about the proposed production and use of plutonium bomb fuel.

Creating the proposed Mixed Oxides Fuel Fabrication Factory would be counterproductive. Such a facility at Savannah River Site would place workers' health at greater risk from unnecessarily increasing their plutonium exposure. It would greatly increase the radioactive wastes generated at that already highly contaminated bomb building plant. It places populations in nearby areas at increased risks of exposure to plutonium and other byproducts of such a facility as stated above.

Over the decades that SRS has been in operation, there has been ample time to conduct long-term, well-controled, epidemiologic studies of workers and other potentially exposed populations carried out by impartial, qualified scientists. Such studies should have been conducted on populations which might have been exposed through air, water and food ingestion. Such studies should not be prejudiced by prior assumptions, such as extrapolating data derived from the flawed studies of Hiroshima and Nagasaki, which were limited to the survivors of

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those acute massive exposures. It is difficult to justify the absence of such studies and further how a DEIS can be adequately carried out in the absence of such data. The DEIS would have more validity if risk factors were based more upon such information. Effects of chronic low dose radiation have been reported by scientists such as Drs. Alice Stewart and Dr. Steve Wing (UNC Chapel Hill). Absent the use of such epidemiologic data, skepticism is warranted regarding the estimated health risks presented in the DEIS.

Inseparable from the proposed MFFF is the fact that once manufactured, plutonium bomb fuel is destined for first use at Duke Energy's McGuire and Catawba nuclear reactors within 20 miles of Charlotte. Plutonium fuel is experimental, in that fuel derived from weapons grade plutonium has never before been used in commercial reactors. These plants are poor choices for an experimental program, because their cooling systems depend on a constant supply of ice; in the event of failure for even a few hours, a serious accident would result. The plants are encased in plate metal rather than the preferred four feet of concrete. Plutonium bomb fuel is inherently more dangerous than currently used uranium fuel, in that it bombards structures within the reactor chamber with more damaging radioactivity and would be more difficult to control, increasing the likelihood of a Chernobyl type disaster. Compared with currently used uranium, should a nuclear catastrophe occur involving a MOX fueled reactor, up to twice the number of cancer deaths would result due to the nature of radioactivity produced. The possibility of terrorism should not be ignored, either to the reactor vessel itself or to the "spent fuel rods" that are stored on site. A worst case scenario could result in the entire Charlotte area becoming a nuclear wasteland for decades to come, with national repercussions and most of the population becoming refugees.

One more danger comes from vastly increased radioactivity produced through MOX. Promoters deceptively claim its use would rid the world of plutonium, making it unavailable for future nuclear weapons use. As you well know, plutonium will be produced while MOX fuel generates electricity. The proposed parallel tract whereby plutonium is presumably converted into fuel in both the U.S. and Russian reactors would markedly increase the availability of plutonium on a global scale. It would be contrary to our national interests; it would favor further nuclear weapons proliferation.

Furthermore, MOX would vastly increase amounts of radioactive waste for which no satisfactory solution has yet been discovered. The railway or highway transpiration of increased quantities of radioactive wastes to the proposed Yucca storage facility in Nevada would create new and extensive dangers which further increase the risks to large segments of our population because of the risks of accident or terrorism. Finally, when the Yucca facility would be filled to capacity, there will remain at the Catawba and McGuire sites at least as much high level nuclear wastes as at present. In addition, these sites will continue to

be attractive targets to terrorists, due to their proximity to a large population and financial center.

Immobilization is the safest and least expensive alternative to converting plutonium into fuel. Originally immobilization was to have been developed along with the MOX program. It would consist of vitrifying plutonium into ceramic pucks, surrounding them with highly radioactive wastes and sealing them in corrosion resistant containers, making plutonium extremely difficult and dangerous to extract, but capable of long term storage. It would substantially reduce the risks of accident and terrorist procurement of this deadliest of all elements. Although it is the best choice for a problem like plutonium, all funds for this alternative have been deleted from the budget and the concept for such an alternative appears to have been placed on an indefinite hold. Failure to consider this option has to be considered abysmal decision.

There appears to be a hidden agenda connected with the decision to continue with the MFFF despite the risks and uncertainties of proceeding with plans for this facility. The production of quantities of tritium in three of TVA's nuclear reactors which will be processed at Savannah River Site has to have significance. Such quantities of tritium can be used only in the production of nuclear weapons. An MFFF could make plutonium available in sufficient quantity for the production of nuclear weapons. What other explanation could there be than that another objective of the MFFF is connected with the production of large numbers of new nuclear weapons? If valid, this should be acknowledged as part of this DEIS and should be made apparent to the U.S. citizenry upon whose taxes this project would depend. Without a satisfactory explanation of this, the DEIS is incomplete.

If these premises are correct and we are on the verge of constructing a new massive buildup of nuclear weapons, it will further signal the rest of the world that we have abandoned our prior commitment of moving toward eventually ridding the world of weapons of mass destruction and in fact are encouraging a new worldwide arms race.

For the reasons I have stated, the proposed MFFF should not be approved for construction.

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