

Mendiola, Doris

Subject: FW: Comment on Draft Strategic Plan: Fiscal Years 2012-2016, NUREG-1614, Vol. 5, draft

From: tomclements329@cs.com [mailto:tomclements329@cs.com]

Sent: Tuesday, November 01, 2011 12:33 PM

To: Coyle, James

Subject: Comment on Draft Strategic Plan: Fiscal Years 2012-2016, NUREG-1614, Vol. 5, draft

November 1, 2011

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REGISTRATION DIVISION

Comment on Draft Strategic Plan: Fiscal Years 2012-2016, NUREG-1614, Vol. 5, draft

Dear Mr. Coyle:

I notice that there is no discussion in the NRC's draft strategic plan about the testing of plutonium fuel (MOX) made from weapons-grade plutonium that will be required for the Nuclear Regulatory Commission to license MOX use in boiling water reactors (BWRs) and which will be needed to license MOX use for three cycles in pressurized water reactors (PWRs). I believe this issue and problems associated with it are worthy of mention in the strategic plan, as preparations for this test may well begin by 2016.

Given that the U.S. Department of Energy is considering MOX use in the Tennessee Valley Authority's Browns Ferry reactors (GE Mark I BWRs) and Energy Northwest's Columbia Generating Station (GE Mark II BWR) as well as in TVA's Sequoyah PWRs (ice condenser design, with thin containment), the NRC will be intimately involved in the licensing of these tests and subsequently in any licensing of batch use if such a license request goes forward. A discussion of the task in front of the NRC to license the MOX tests is worthy of discussion in the plan and though no request are now before the NRC construction of the MOX plant at the DOE's Savannah River Site implies such requests if the facility is finished and can operate per NRC license requirements.

As there has been no testing at all of weapons-grade MOX in BWRs – a fact which some in the plutonium industry have attempted to cloud - a test for a full three 2-year fuel cycles will be necessary to license MOX for three cycles of irradiation. After the irradiation, the NRC will have to be involved in post irradiation examination, if it is decided to review the results of any test that might take place.

Likewise, in order to license MOX for three 18-month cycles in the Sequoyah PWRs, a three-cycle test will be necessary. As a test of weapons-grade MOX was aborted in Duke Energy's Catawba reactor after only two cycles in which the fuel assemblies did not perform as planned, a successful third cycle of MOX assemblies will be necessary if MOX will be used for the normal three cycles for uranium fuel.

Obviously, there may be decisions not to proceed with MOX use given exorbitant costs of the program, proliferation implications associated with introducing plutonium into commerce, the stresses it places on reactor operation and given the more serious radiation release in case of an accident involving containment breach.

While the licensing review of the MOX plant under construction at the DOE's Savannah River Site is mentioned in the draft plan, it must be noted that operation of the plant, if it were to receive an operating license, will be curtailed during testing of weapons-grade MOX in BWRs and PWRs. As the MOX plant is at risk of sitting idle or operating at reduced capacity after initial fabrication of the MOX "lead test assemblies" (LTAs), the NRC must take this into account as it considers the operating license. The SRS MOX plant will be, if completed and if operable, the only place in the world which could be available to fabricate MOX fuel from weapons-grade plutonium, so the only option will be that the LTAs be fabricated there. Fabrication of the LTAs could only take place after successful start-up of the MOX plant and production of batch quantities of fuel will likely not be able to proceed given the necessity of lengthy NRC-licensed MOX testing in a

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BWR and a PWR, which will have unknown results. Lacking licensing confirmation of batch MOX use at the time of initial operation of the MOX plant dictates that no production can take place until multi-year testing of LTAs has fully concluded. That the MOX plant may sit idle or will operate at reduced capacity needs to be considered during licensing review of the facility.

I request that this comment be made a part of the official record and that it also be placed in ADAMS.

Sincerely,

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