



Regulatory Affairs

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Docket Nos.: 50-321 50-348 50-424  
50-366 50-364 50-425

NL-18-0171

Ms. May Ma  
Office of Administration, Mail Stop OWFN-2-A13  
U. S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

Comments on "Draft Project Plan to Prepare the U. S. Nuclear Regulatory Commission to  
License and Regulate Accident Tolerant Fuel," [Docket ID NRC-2017-0236]

Ms. Ma:

In response to the "Draft Project Plan to Prepare the U. S. Nuclear Regulatory Commission to License and Regulate Accident Tolerant Fuel," as noticed in the Federal Register (82 FR 60633; Docket ID NRC-2017-0236), Southern Nuclear Operating Company (SNC) hereby submits comments for consideration by the U. S. Nuclear Regulatory Commission (NRC) staff. SNC concurs with industry comments provided by Nuclear Energy Institute (NEI) in a separate submittal dated February 5, 2018. In addition, SNC provides further comments in the enclosure to this letter.

This letter contains no NRC commitments. If you have any questions, please contact Ken McElroy at 205.992.7369.

Respectfully submitted,

Justin T. Wheat  
Nuclear Licensing Manager

JTW/kgf/cg

Enclosure: SNC Comments on Docket ID NRC-2017-0236

cc: Regional Administrator, Region II  
NRR Project Manager – Farley, Hatch, Vogtle 1 & 2  
Senior Resident Inspector – Farley, Hatch, Vogtle 1 & 2  
NRR Project Manager – Farley, Hatch, Vogtle 1 & 2  
RType: Farley=CFA04.054, Hatch=CHA02.004, Vogtle=CVC7000

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Add=Andrew Proffitt (JAP5)

Comments on "Draft Project Plan to Prepare the U. S. Nuclear Regulatory Commission to  
License and Regulate Accident Tolerant Fuel, [Docket ID NRC-2017-0236]

Enclosure

SNC Comments on Docket ID NRC-2017-0236



Comments:

1. The Draft Project Plan assigns any fuel with greater than 5 weight percent U235 to the longer of the two licensing paths outlined within. SNC recommends that the treatment of fuel with greater than 5 weight percent U235 enrichment be bifurcated. In addition, fuel with enrichments up to 6 weight percent should be considered in the shorter of the two licensing paths in the Draft Project Plan.

Rationale: Far fewer changes to the commercial fuel cycle are expected to be required to accommodate up to 6 weight percent U235 than will likely be required for much higher enrichments. In some portions of the fuel cycle, it may be possible to accommodate up to 6 weight percent U235 with existing margin or with only minor changes. The use of enrichments up to 6 weight percent U235 may have an economic benefit for ATF implementation, as well as a collateral positive economic benefit for current fuel systems.

2. The Draft Project Plan does not address transportation of enriched uranium prior to its fabrication into fuel assemblies. Please revise the Draft Project Plan to clearly address transportation of enriched uranium with greater than 5 weight percent U235 prior to its fabrication into fuel assemblies.

Rationale: Uranium hexafluoride (UF6) enriched to greater than 5 weight percent U235 or enriched uranium in forms other than UF6 may require transportation packages other than those currently in use for transporting UF6 enriched to 5 weight percent or less. Also, new critical experiments may be required to provide adequate experimental benchmarks for the design of new transportation packages. The design and licensing of transportation packages has historically been a lengthy process, and this effort needs to be considered early in the plan so that it does not hinder implementation of ATF programs.

[In line with NEI Comments 28 and 29]

3. Please include in the Draft Project Plan a schedule that integrates all 4 tasks. The schedule should identify assumed start dates, as well as identify the "critical path" to irradiation of reload quantities of ATF. The schedule should consider the availability of needed data from various industry research programs.

Rationale: It is evident that the NRC staff has put considerable thought and effort into the development of the Draft Project Plan. However, without an integrated schedule, it is difficult to determine which subtasks need to be addressed soon, which can be worked in parallel, and which can wait until later. Without an integrated schedule, it is difficult to understand when the NRC envisions being positioned to license an "evolutionary" or a "revolutionary" ATF product in reload quantities. It will also be difficult to track progress and assess the impact of breakthroughs or delays. A well-developed integrated schedule is essential to successful project implementation.

[In line with NEI Comment 19]

4. On Page 8, Add the following shown below in red (double underlined):

*Task 3: Probabilistic Risk Analysis Activities*

- *The staff will evaluate how industry batch loading of ATF may affect the current risk informed programs like risk-informed technical specification (RITS) initiatives 4b and 5b*
- *The NRC's risk-informed oversight activities depend on standardized plan analysis risk (SPAR) models for which success criteria will need to be updated to reflect the properties/characteristics of various ATF types and batch loading of ATF*

5. On Page 9, Table 5 PRA Activities, add the following items under "Activity":

- Incorporate properties/characteristics of various ATF types into MELCOR to be used for PRA success criteria analyses
- Compare risk profiles and dominant contributors to CDF/LERF from the PRA models before and after ATF

[In line with NEI Comments 7 and 8]

6. In Page 2 of the Task 3 section, the first paragraph/sentence below the bulleted items states:

"The staff will need to ensure that licensee's PRAs continue to use acceptable models and assumptions as part of the implementation of ATF and update internal models (as necessary) to reflect the ATF plant modifications."

Rationale: In order to reflect the true risk of the plant, and any subsequent improvement from ATF, all the other hazard PRA models (Fire, Seismic, etc.) should be updated along with the Internal Events PRA model.