

#13

## RESPONSE TO COMMENTS ON PROPOSED DIRECT FINAL RULE

### CRITICALITY ACCIDENT REQUIREMENTS

#### Commonwealth Edison

1. Proposed rule should not prohibit licensees from applying for exemptions under the guidelines of 10CFR70.14 and should contain provisions to note that any existing approved exemptions remain valid.

Even though the wording of paragraph (d) in the current version of 10CFR70.24 which provides for applying for exemptions should "good cause" exist is being deleted, this does not prohibit licensees from applying for such exemptions under the guidelines of 10CFR70.14. The new rule has been revised to note that any existing approved exemptions remain valid. *check*

2. For many BWRs, optimum moderation calculations are not performed for the fresh fuel storage racks since administrative controls are in place to preclude these conditions.

Criterion (3) has been revised to exempt low-density optimum moderation evaluations of fresh fuel storage racks if administrative controls and/or design features prevent such moderation or if fresh fuel storage racks are not used. *check*

3. The rule should eliminate the reference to GDC 63 and describe the underlying monitoring requirements.

*use* The reference to GDC 63 was initially incorporated to ensure that licensees receiving an exemption to 10CFR70.24 would not erroneously view the exemption as the basis for removing radiation monitors from the spent fuel pool area that were meeting other monitoring requirements, such as those contained in 10CFR20.1501 and GDC 63. The staff agrees that this rule change does not affect these other monitoring requirements, and referencing GDC 63 here is redundant and unnecessary. *Delete* *check*

4. Placing a limit on enrichment provides no direct safety benefit and should not be included.

*use* *the staff disagrees with the comment.* The maximum allowable nominal enrichment of reactor fuel is currently limited to 5 weight percent based on possible criticality concerns even in a dry environment as well as current approved extensions to 10CFR51.52 based on an environmental impact study for enrichments higher than 5 weight percent. Any future approved enrichment extension can be readily handled by modifying this criterion. *change*

#### Carolina Power & Light Company

1. Replace "may not permit" with "shall prohibit the" in Criterion (1).

The proposed wording has been used. *check*

2. Clarify that the determination of "safely subcritical" in Criterion (1) is made by the licensee

**Criterion (1) has been modified to eliminate these concerns.**

3. Use of "pure water" and "unborated water" should be consistent.

**Criteria have been modified to be consistent.**

4. Eliminate the words "ratio of neutron production to neutron absorption and leakage" since "k-effective" is a sufficiently understood term.

**Criterion (2) has been modified accordingly.**

5. Criteria (2) and (3) should not be applicable if the licensee does not use the fresh fuel racks.

**Criteria (2) and (3) have been revised to state this provision.**

6. Clarify criterion (6) concerning GDC 63 requirements.

**Criterion (6) has been removed.**

**Nuclear Energy Institute**

1. For many BWRs, optimum moderation calculations are not performed for the fresh fuel storage racks since administrative controls are in place to preclude these conditions.

**Criterion (3) has been revised to exempt low-density optimum moderation evaluations of fresh fuel storage racks if administrative controls and/or design features prevent such moderation.**

2. The rule should affirm the continuing validity of existing exemptions.

**The new rule has been revised to note that any existing approved exemptions remain valid.**

3. Replace "may not permit" with "shall prohibit the" in Criterion (1).

**The proposed wording has been used.**

4. Clarify that the determination of "safely subcritical" in Criterion (1) is made by the licensee and add a specific criterion to define "safely subcritical".

**Criterion (1) has been modified to eliminate these concerns.**

5. Use of "pure water" and "unborated water" should be consistent.

**Criteria have been modified to be consistent.**

6. Eliminate the words "ratio of neutron production to neutron absorption and leakage" since "k-

effective" is a sufficiently understood term.

**Criterion (2) has been modified accordingly.**

7. Criteria (2) and (3) should not be applicable if the licensee does not use the fresh fuel racks.

**Criteria (2) and (3) have been revised to state this provision.**

8. Clarify criterion (6) concerning GDC 63 requirements.

**Criterion (6) has been removed.**

9. Placing a limit on enrichment provides no direct safety benefit and should not be included.

**The maximum allowable nominal enrichment of reactor fuel is currently limited to 5 weight percent based on possible criticality concerns even in a dry environment as well as current approved extensions to 10CFR51.52 based on an environmental impact study for enrichments higher than 5 weight percent. Any future approved enrichment extension can be readily handled by modifying this criterion.**

#### Northern States Power Company

1. The phrase "as required by GDC 63" in criterion (6) should be removed.

**Criterion (6) has been removed.**

2. The 5 weight percent limit on U-235 enrichment should be eliminated.

**The maximum allowable nominal enrichment of reactor fuel is currently limited to 5 weight percent based on possible criticality concerns even in a dry environment as well as current approved extensions to 10CFR51.52 based on an environmental impact study for enrichments higher than 5 weight percent. Any future approved enrichment extension can be readily handled by modifying this criterion.**

3. The phrase "maximum permissible U-235 enrichment" in criteria (2), (3), and (4) should be replaced by the phrase "maximum fuel assembly reactivity".

**The proposed change has been made to criteria (2), (3), and (4).**

#### Trojan Nuclear Plant

1. Rule should exclude any facility that has received NRC staff action related to the application of 10CFR70.24(a).

**The new rule has been revised to note that any existing approved exemptions remain valid.**

Detroit Edison

1. For many BWRs, optimum moderation calculations are not performed for the fresh fuel storage racks since administrative controls are in place to preclude these conditions.

**Criterion (3) has been revised to exempt low-density optimum moderation evaluations of fresh fuel storage racks if administrative controls and/or design features prevent such moderation.**

2. Clarify "fuel handling" and "storage and associated handling areas" addressed criterion (6).

**Criterion (6) has been removed.**