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Diane
415-8548

Thanks,

Shouty.

for June 12. Let's discuss this further

staff to provide feedback is scheduled

Modular Reactor. A meeting for the

paper from Exelon on the Pebble Bed

for your group to review this white

As we discussed, we are looking

Diane

From: Diane Jackson, PM
NRR/FLO

To: Diane Dandois

5/24/01

NR

5/10/01

**ANNUAL FEES UNDER 10 CFR § 171.15 AS APPLICABLE TO A
PEBBLE BED MODULAR REACTOR (PBMR) FACILITY**

I. ISSUE:

10 CFR § 171.15(a) states that each person licensed to operate a power reactor shall pay an annual fee "for each unit for each license" held at any time during the Federal fiscal year in which the fee is due. If each PBMR module is treated as a reactor, Section 171.15 could be construed so as to impose a separate fee for each module. Therefore, the annual fee for a 10-module PBMR would be greatly disproportionate to the annual fee for an equivalent sized boiling water reactor (BWR) or pressurized water reactor (PWR). This could place a modular reactor design at a competitive disadvantage with other designs and act as a disadvantage to the development of modular reactors.

II. EXELON'S PROPOSAL:

For the purposes of assessing annual fees, it is not reasonable to treat multiple PBMR modules at a site the same as multiple PWRs or BWRs at a site. NRC should initiate rulemaking to change Section 171.15 to specify that only one annual fee will be required for each facility or set of modular reactors at a given site. This rulemaking on Section 171.15 should be completed prior to issuance of the license for the first PBMR.

III. ANALYSIS:

The requirements set forth in 10 CFR Part 171 originally were promulgated in 1986. See 51 Fed. Reg. 24078 (July 1, 1986). The NRC enacted Part 171 to comply with the requirements of the Consolidated Omnibus Budget Reconciliation Act of 1985

which required the NRC to "assess and collect annual charges from persons licensed by the Commission pursuant to the Atomic Energy Act of 1954" in order to recover the Commission's estimated budget costs. *Id.* The NRC consequently promulgated the requirement that "[e]ach person licensed to operate a power reactor shall pay an annual fee for each power reactor unit for which the person holds an operating license" to recoup a portion of its costs. Annual Fee for Nuclear Power Reactor Operating Licenses and Conforming Amendments, 51 Fed. Reg. 33224, 33230 (Sept. 18, 1986).

When discussing the fee schedules, the NRC stated that "[t]he annual charge should be assessed under the principle that licensees who require the greatest expenditures of the agency's resources should pay the greatest annual charges." Revision of Fee Schedules, 56 Fed. Reg. 14870, 14871 (Apr. 12, 1991). See also 136 Cong. Rec. H 10107 (Oct. 16, 1990). Although the NRC never stated in the Federal Register why "reactors" were used as the basis for assigning fees, instead of sites or facilities, the NRC commented that "[a]fter examining and analyzing the historical data available, the Commission has determined that the bulk of its licensee-related activities have and will continue to be directly related to the regulation of *large power reactors*." 51 Fed. Reg. at 24084 (emphasis added). Presumably, this statement provides the link between the decision to require fees for each reactor instead of the entire site or facility. In 1986, when this rule was originally considered, the NRC and the industry had no reason to foresee any need to word the rule differently. Almost all commercial nuclear power facilities in existence were large reactors, and a multiple modular facility had not yet been developed or approved.

10 CFR § 171.15(a) states that each person licensed to operate a power reactor shall pay an annual fee "for each unit for each license" held at any time during the Federal fiscal year in which the fee is due. In turn, Section 171.15(b) states that the 2000 Fiscal Year annual fee for "each operating power reactor" is \$2,815,000. If each PBMR module is treated as a reactor, Section 171.15 would impose a separate fee for each module. Therefore, the annual fee for a 10-module PBMR would be almost \$30,000,000. In contrast, the annual fee for an equivalent sized BWR or PWR would be less than \$3,000,000. There is no basis for providing such disparate treatment to a PBMR facility.

For several reasons, NRC resources for regulating a 10-module PBMR facility will be similar to or lower than NRC resources for regulating a large BWR or PWR, and therefore NRC's annual fees for each should be similar. First, the PBMR modules at a site will have a single licensing basis. Second, the PBMR design will be simpler and safer than the design of a PWR or BWR. Finally, a PBMR facility will have a smaller workforce than existing reactors, thereby simplifying NRC's oversight responsibilities.

Furthermore, NRC assesses annual fees to recover its costs that cannot be assigned to any particular facility. See 51 Fed. Reg. at 24078. For this purpose, it would be unfair to assess higher fees for multiple modules that have a combined power level equivalent to a single large PWR or BWR. Higher fees would, in essence, penalize Exelon for selecting a modular design rather than a LWR design, and would serve to discourage development of a newer and safer technology.

For all of these reasons, it is reasonable and appropriate to treat multiple PBMR modules at a site as a single facility for purposes of assessing annual fees, and NRC

should initiate rulemaking to accomplish this goal. In order to implement this rulemaking, NRC should define the term "modular facility." Exelon suggests that the total size of a modular reactor facility be limited to no more than 1500 MWe (which would bound a PBMR facility, which is currently expected to consist of as many as ten modules each with a rating of between 100 and 150 MWe). Exelon believes that this provides a reasonable basis for defining a modular reactor facility in light of the current state of modular design technology and the size of current large scale PWRs and BWRs.

The previous paragraph provides a conceptual basis for rulemaking to modify Section 171.15. Exelon is working with the Nuclear Energy Institute to provide NRC with more detailed information to support rulemaking on this issue.

Resolution of this issue is not necessary for licensing or design certifications of the PBMR. However, this issue does have a significant impact on the economic feasibility of the PBMR. Therefore, Exelon requests NRC to indicate whether it is conceptually willing to initiate such rulemaking or other alternatives for accomplishing the same object (such as granting an exemption to the PBMR, or creating special annual fee provisions for modular reactors).