SECY-98-253

November 4, 1998

FOR: The Commissioners

FROM: William D. Travers /s/
Executive Director for Operations

SUBJECT: APPLICABILITY OF PLANT-SPECIFIC BACKFIT REQUIREMENTS TO PLANTS UNDERGOING DECOMMISSIONING

PURPOSE:

To request, by negative consent, Commission approval of the staff's recommendation on the applicability of the backfit rule to plants undergoing decommissioning.

BACKGROUND:

On August 7, 1997, Maine Yankee Atomic Power Company (MYAPC) certified under 10 CFR 50.82(a)(1) the permanent cessation of operations and the permanent removal of fuel from the Maine Yankee reactor vessel. By letter dated November 6, 1997, MYAPC requested an exemption from certain regulations associated with the implementation of emergency planning and justified the request by stating that the risk to the public associated with the permanently shutdown and defueled facility was significantly reduced.

During a November 25, 1997, meeting with the licensee, the staff indicated that in order for it to find that the exemption will not present an undue risk to the public health and safety, as required by 10 CFR 50.12(a), the licensee must provide a spent fuel pool heatup analysis that demonstrates that the spent fuel pool is no longer vulnerable to a loss of cooling event leading to a zirconium fire and a projected radiation dose that exceeds the limits of the Environmental Protection Agency's Protection Action Guidelines.

On February 17, 1998, MYAPC submitted a claim of backfit, stating that the staff was imposing a backfit without the proper review required in 10 CFR 50.109, "Backfitting." In addition, the Nuclear Energy Institute (NEI) submitted a claim of backfit of Maine Yankee on March 20, 1998. By letters dated April 21 and June 9, 1998, in response to the backfit claims made by MYAPC and NEI, respectively, the staff determined that the request to perform a spent fuel pool heatup analysis did not impose a backfit as defined in 10 CFR 50.109, and denied the claim. The licensee has since appealed the staff's decision. The appeal process is currently ongoing.

In the response to NEI's letter of June 9, 1998, the staff stated that the matter of how the provisions of the backfit rule apply to permanently shutdown nuclear power plants would be raised to the Commission.

DISCUSSION:

The backfit rule, 10 CFR 50.109, was first adopted by the Atomic Energy Commission in 1970, (35 FR 5317, March 31, 1970). Because of complaints by nuclear power plant licensees that the backfit rule was ineffective, in 1983 the Commission issued a policy statement on backfitting (48 FR 44173, September 28, 1983) and began rulemaking to revise the rule. The Commission adopted a final backfit rule in 1985 (50 FR 38097, September 1985), but on appeal the U.S. Court of Appeals remanded that rule to the Commission because it failed to distinguish between "adequate protection" backfits for which costs of the backfit could not be considered under the Atomic Energy Act (AEA), versus other backfits which represented an enhancement to safety beyond what may be required for adequate protection. Union of Concerned Scientists v. NRC, 824 F.2d 103 (D.C. Cir. 1987). The Commission subsequently adopted a revised backfit rule in 1988 (53 FR 20603, June 6, 1988) which is substantially the same rule in effect today.

The Backfit Rule provides that, unless a backfit falls into one of three "exceptions" (listed in Section 50.109(a)(4)(i) through (ii)), the NRC may not impose a backfit on a licensee without preparing a backfit analysis which finds that there is:

> a substantial increase in the overall protection of the public health and safety...to be derived from the backfit and that the direct and indirect costs of implementation for that facility are justified in view of this increased protection.

10 CFR 50.109(a)(3). Section 50.109(a)(1) defines a "backfit as:

> the modification of or addition to systems, structures, components, or design of a facility; or the design approval or manufacturing license for a facility; or the procedures or organization required to design, construct, or operate a facility; any of which may result from a new or amended provision in the Commission rules or the imposition of a regulatory staff position interpreting the Commission rules that are either new or different from a previously applicable staff position.

NRC Manual Chapter 0514 (Management Directive 8.4), "NRC Program for Management of Plant-Specific Backfitting of Nuclear Power Plants," and Office of Nuclear Reactor Regulation (NRR) Office Letter No. 901, "Procedures for Managing Plant-Specific Backfits and 10 CFR 50.54(f) Information Requests," define the objectives, authorities, and responsibilities and establish basic requirements for actions to be taken in instances in which the NRC staff imposes new plant-specific requirements on a nuclear power plant licensee. NRR Office Letter No. 500, "Procedures for Controlling the Development of New and Revised Generic Requirements for Power Reactor Licensees," establishes procedures to develop, among other things, new or revised generic staff positions or requirements for power reactor licensees while avoiding placing unnecessary burdens on licensees.

The decommissioning rule, 10 CFR 50.82, "Termination of License," was issued in essentially its current form on July 29, 1996, and amended on July 21, 1997. This rule governs the decommissioning and termination of a license of a nuclear plant and provides an appropriate level of regulatory oversight, timely notification, opportunities for public information and participation, and a time frame for completing decommissioning activities at facilities that

have permanently ceased operation.

Based upon a review of the backfit rule and the decommissioning rule, including the statements of considerations (SOCs) for the final rules, the staff believes that the Commission has not definitively determined whether the backfit rule should apply to decommissioning plants - that is, plants that have submitted the certifications under Section 50.82(a)(1) and whose Part 50 license no longer authorizes plant operation pursuant to Section 50.82(a)(2). On one hand, the rule defines the point in time that backfitting protection begins with no cut-off point, thereby implying that backfit protection continues into decommissioning and up to the point of license termination. In addition, the term, "operate" as used in the backfit rule could be reasonably interpreted as including activities to decommission the reactor. However, the backfit rule was developed when decommissioning of nuclear power plants was not an active area of regulatory concern. The rule's definition of "backfit" uses terms that are associated with the design, construction and operation of a facility, rather than its decommissioning(1). Moreover, two of the factors to be used in evaluating a backfit, in paragraphs (c)(5) (costs of construction delay/facility downtime) and (c)(6) (changes in plant/operational complexity), are geared towards actual power operation and are conceptually inappropriate in evaluating the impacts of a backfit on a decommissioning plant. The SOCs for the 1970, 1985, and 1988 backfit rules do not discuss any aspect of decommissioning; rather, the discussions focus entirely on the adverse impact of backfitting on plants undergoing construction and operation. Finally, the contexts for backfitting at decommissioning oftentimes differ from that for operating plants. Proposed changes to requirements for decommissioning plants often involve the relaxation of a requirement, or determining whether a requirement, clearly applicable to operating reactors, continues to be applicable to a decommissioning plant. Under these contexts, the notion of a "substantial increase" in protection to public health and safety from a backfit does not appear to be particularly useful.

When the Commission adopted the 1996 decommissioning rule, it had the opportunity to address the applicability of the backfit rule during a plant's decommissioning, inasmuch as several comments were received which asserted that the backfit rule should apply during decommissioning. Unfortunately, the comment response did not directly address the comments, instead responding that the provisions in the decommissioning *rulemaking* do not constitute a backfit (which is correct, but non-responsive to the issue of applicability of the backfit rule during decommissioning). See 61 FR at 39291.

The staff, however, believes that sound regulatory policy dictates that there be a process and appropriate standards for ensuring that changes to requirements or commitments imposed on the decommissioning licensee are technically justified and whose costs are justified in view of the perceived safety benefits of the changes. In short, the staff believes that the backfit rule, suitably modified to accommodate the non-operating permanently defueled condition, should be applied to plants in decommissioning.

The staff proposes to conduct a series of workshops to solicit input from stakeholders. These workshops will provide a format for discussion between stakeholders and the staff on the current backfit rule and how to adapt the concept of backfit regulation to plants undergoing decommissioning. In the development of this process, the staff will factor in the reduction in risk from final shutdown through license termination. The stakeholder input from the workshop will be factored into the development of a backfit rule for plants undergoing decommissioning. Currently, NRR is not budgeted for this new rulemaking. If the Commission gives consent to these recommendations, NRR will use the planning, budgeting, and performance management process to evaluate the impact on other ongoing work activities.

Since the staff believes that a regulatory requirement analogous to the current backfit rule is necessary for plants undergoing decommissioning, an interim action is prudent until a new rule can be developed. This interim action will protect the plants undergoing decommissioning from unwarranted NRC-imposed changes in requirements during the time when the new rule is being developed. The staff will apply the current backfit rule to plants undergoing decommissioning, although the terms within the rule indicate application to operating reactors. The staff will apply the current rule to the extent practical and mindful of the above considerations, which includes a rigorous cost-benefit analysis for any NRC-imposed changes to the license requirements. The staff is in the process of developing guidance associated with applying the current backfit rule to plants undergoing decommissioning.

RECOMMENDATION:

The intent of the backfit rule is to protect licensees from unwarranted, costly, NRC-imposed operational and design changes and modifications that would not result in substantial increases in the overall protection of the public health and safety or the common defense and security. Although the backfit rule may not, by its explicit terms, apply to plants undergoing decommissioning, the staff believes that a backfit process and protections should apply to such facilities. The staff will pursue the development of a rule(2) similar to the backfit rule that will clearly apply to plants undergoing decommissioning in the same manner in which the current backfit rule applies to operating plants. In the interim, the staff will apply the current backfit rule to the extent practical, which includes cost-benefit analysis for NRC-imposed changes in license requirements.

The staff recommends that the Commission approve, by negative consent, the development of a process similar to the backfit rule that will clearly apply to plants undergoing decommissioning, and in the interim, application of the current backfit rule to the extent practical. The staff requests action within 10 days. Action will not be taken until the SRM is received. We consider this action to be within the delegated authority of the EDO.

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1. In this regard, we note that prior to the 1996 decommissioning rule, the Commission regarded decommissioning as a phase of the plant's life cycle which is different from the operational phase.

2. The rule may involve a modification to the existing Section 50.109.