July 1, 1999

FOR: The Commissioners

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

SUBJECT: SUMMARY OF DECOMMISSIONING FUND STATUS REPORTS

PURPOSE:

To provide the Commission with a summary of the staff's review of the first biennial decommissioning fund status reports and to discuss options for possible additional action.

BACKGROUND:

This commission paper responds to a staff requirements memorandum (SRM) dated June 30, 1997, that was issued in reference to SECY-97-102 -- "Proposed Rule on Financial Assurance Requirements for Decommissioning Nuclear Reactors." In part, this SRM stated, "After reviewing the initial reports from licensees on the status of decommissioning funds, the staff should advise the Commission on the need for further rulemaking. In making a recommendation, the staff should consult with the National Association of Regulatory Utility Commissioners [NARUC], the Federal Energy Regulatory Commission [FERC], and the Securities and Exchange Commission [SEC]."

On September 22, 1998, the NRC published in the *Federal Register* a final rule on "Financial Assurance Requirements" (63 FR 50465). Among other things, this rule required power reactor licensees to submit the first biennial decommissioning fund status reports to the NRC by March 31, 1999. With this first cycle of reports completed, the staff is able to respond to the Commission's directive in the SRM.

DISCUSSION:

SUMMARY OF DECOMMISSIONING FUND STATUS REPORTS
All power reactor licensees submitted the reports for their units by March 31, 1999. The NRC received reports for 122 reactor units, consisting of 104 operating units and 18 that have been permanently shut down. The staff has reviewed these reports and has developed the following summary information:

1. As of December 31, 1998, power reactor licensees have on deposit approximately $22.5 billion in external decommissioning trust fund accounts. The total minimum amount needed to decommission the radiological portion of power plants, based on the generic formulas in 10 CFR 50.75(c), is approximately $31.9 billion. The aggregate estimate by licensees, based in some cases on site-specific estimates that exceed the minimum formula amounts, is approximately $38.7 billion. Licensee estimates often include costs of spent fuel management, demolition of non-radiological structures, and site restoration, all of which the NRC specifically excludes in its definition of decommissioning in 10 CFR 50.2.

2. In the aggregate, licensees have collected about 70 percent of the funds currently estimated to be needed for decommissioning using the NRC's generic formulas and about 58 percent using the licensees' own estimates, when available. Individual licensees have, of course, collected higher or lower percentages than these aggregate percentages.

3. On the basis of the minimum amounts contained in the generic formulas, 15 operating units have fully funded decommissioning accounts. That is, if these units were permanently shut down today, they would have sufficient funds, based on the NRC formulas, to complete radiological decommissioning. Another 46 units have from 50 percent to almost 100 percent of decommissioning funds collected. Finally, licensees of 43 units have collected less than half of the current estimate of what they will eventually need for decommissioning, although, as discussed below, this does not necessarily indicate non-compliance.(1)

4. The staff also evaluated collections on a straight-line basis. That is, the staff compared the funds collected, expressed as a percentage of the total estimated minimum amounts using the generic formulas, to expended reactor life, expressed as a percentage of a 40-year license term. When measured this way, 64 units exceed a straight-line collection rate and 40 units are collecting at less than a straight-line rate. (The staff notes that NRC's regulations do not require a straight-line collection schedule. The NRC has explicitly deferred to a licensee's rate regulator, or the licensee itself if self-regulated, to determine the decommissioning funds collection rate. Consequently, all licensees appear to be in compliance with the provisions of 10 CFR 50.75.)

5. The reports included aggregate projections of future trust fund deposits of an additional $9.4 billion. In addition, licensees project that future interest earned on funds already collected and on future collections will be approximately $12.1 billion. The total of current deposits and future estimated deposits and earnings is approximately $44 billion. This amount exceeds both NRC and licensee estimates (as described in item 1, above) of current decommissioning costs, but in some cases reflects future decommissioning cost escalation. The staff notes that the NRC's regulations do not require licensees to estimate future cost escalation, but do require licensees to recalculate annually their decommissioning cost estimates to account for escalation that has occurred in the previous year.

On the basis of the staff's review of the status reports and the foregoing findings, all power reactor licensees appear to be on track to fund

decommissioning by the time that they permanently shut down their units. Pursuant to 10 CFR 50.82(c), a few licensees that have already permanently shut down their units prematurely are collecting funding shortfalls into the decommissioning period. In addition, although they appear to be on track, a few licensees have ambiguities in the information reported or otherwise rely on future funding methods that the NRC does not allow. For example, one licensee is relying on future tax deductions for some of its remaining decommissioning funds. It is not clear from this licensee's report whether such future tax deductions are meant to apply to non-radiological decommissioning costs, in which case they would be allowed, or whether future tax deductions would apply to radiological decommissioning costs, in which case they would not be allowed. In another case, a minority owner municipal licensee that sets its own rates has a small percentage of its decommissioning funds in an internal reserve. The NRC's regulations prohibit internal reserves. However, this licensee appears to be on track with its external funds and may intend to convert the internal funds to external as part of its future collections. The staff has been working with the project managers of these and the other plants where questions exist to obtain additional information from the licensees and, where appropriate, require corrective action.

DISCUSSION OF POSSIBLE ADDITIONAL RULEMAKING

As mentioned previously, NRC issued a final decommissioning funding assurance rule on September 22, 1998, that, in addition to imposing the decommissioning fund status reporting requirement, also revised other NRC decommissioning funding assurance requirements in light of economic deregulation and restructuring of the electric utility industry. This extensive effort included issuance of an advance notice of proposed rulemaking in April 1996, and a proposed rule in September 1997. In view of this effort, the staff believes that the NRC thoroughly considered decommissioning funding assurance issues in light of economic deregulation to the extent it is currently known. Throughout the rulemaking process, the staff met with or received comments from FERC, SEC, and the State public utility commissions (PUCs), individually and through NARUC.

In the rulemaking process, the Commission considered requiring accelerated decommissioning funding, benchmarking (i.e., requiring set amounts of decommissioning funds at specified points in a reactor's operating life), and other assurance mechanisms. The Commission rejected accelerated funding and benchmarking at the time of the rulemaking and concluded that accelerated funding was not cost-beneficial, given the increased costs to licensees associated with this funding mechanism without apparent commensurate safety benefits. In addition, accelerated funding would interject the NRC into ratemaking areas traditionally exercised by the State PUCs and FERC. On the basis of the staff's review of the decommissioning fund status reports and its ongoing monitoring of State and FERC restructuring initiatives, the staff does not believe that additional rulemaking to reconsider benchmarking or accelerated funding is necessary.(2)

However, based on recent experience with the NRC's approval of the transfers of the operating licenses of the Three Mile Island Unit 1 (TMI-1) and Pilgrim nuclear power stations, additional rulemaking may be justified to specify more fully provisions of decommissioning trust agreements in order to increase assurance that decommissioning funds will be available for their intended purpose. Until recently, direct NRC oversight of the terms and conditions of the decommissioning trusts was not necessary, because rate regulators exercised such authority. With deregulation, this oversight may cease and the NRC may need to take a more active oversight role. Although the NRC included sample language for decommissioning trust agreements in guidance issued in August 1990 (i.e., Regulatory Guide 1.159, "Assuring the Availability of Funds for Decommissioning Nuclear Reactors"), the NRC's regulations do not require that specific terms and conditions be included in the decommissioning trust agreements. We will continue to monitor developments in the industry to determine whether we must take a more active oversight role.

In both the TMI-1 and Pilgrim license transfers, the sellers agreed to fund fully the decommissioning trusts in the amounts of site-specific decommissioning cost estimates performed for each plant. With respect to the TMI-1 transfer, the seller agreed to hold the trust, subject to the terms of the sales agreement, until such time as Federal taxation issues were satisfactorily resolved. At that point, the decommissioning trust would be transferred to the buyer. Thus, the decommissioning trust would be held initially by an entity that, although it would remain rate-regulated, would no longer be an NRC licensee for the TMI-1 unit. In order to better protect a decommissioning fund held by a non-licensee, the staff concluded that additional trust fund provisions should be included in the order approving the license transfer. In the Pilgrim transfer, and in the TMI-1 transfer after transfer of the trust fund to the buyer, the buyers would be NRC licensees, but would not be rate-regulated. The staff believes that these and similar situations require more direct NRC oversight over the decommissioning trust funds. Thus, the staff required the TMI-1 decommissioning trusts to be modified to, among other things, (1) restrict investments of the trusts to non-nuclear assets; (2) adhere to a "prudent investor" standard; (3) more clearly limit expenditures from the trusts to "decommissioning," as defined by the NRC; (4) provide 30-day notice to the NRC of disbursements from the trusts and prohibit trust fund disbursements if the Director of NRR objects; and (5) prohibit any material modifications to the trust agreements without the prior written consent of the Director of NRR. The staff required the Pilgrim decommissioning trusts to be modified to include conditions (1) and (4), and to require that the form of the trust agreements be acceptable to the NRC.

The staff intends to continue to review decommissioning trust agreements in license transfers on a case-by-case basis and impose appropriate conditions in the orders approving the transfers. However, the staff believes that efficiency would be increased if the NRC codified this practice generically in the regulations. The staff proposes to develop a rulemaking that would require explicitly that decommissioning trust agreements must be in a form acceptable to the NRC. Concurrently, the staff would revise Regulatory Guide 1.159 to incorporate the terms and conditions that the NRC believes are necessary to fully protect the funds in the decommissioning trusts for their intended purpose. (The staff believes that it would be too prescriptive to incorporate specific trust fund language directly in the regulations.) The staff believes that the effort that would be expended on this rulemaking would be small and can be accommodated using existing budgeted resources. In addition, by addressing this issue generically through rulemaking, rather than continuing the current case-by-case approach, the overall impact on resources will likely be to reduce staff time expended on this issue.

RESOURCES:

There are no additional resource implications based on the evaluation provided herein.

COORDINATION:

The Office of the General Counsel has no legal objection to this paper. NMSS staff has reviewed this paper and their comments have been considered, where appropriate.

RECOMMENDATION:

That the Commission approve the staff's development of a rulemaking plan for decommissioning trust provisions as described above.

William D. Travers
Executive Director for Operations

Contact: Robert Wood, NRR
301- 415-1255

---

1. As indicated in the discussion on possible additional rulemaking later in this paper, the NRC decided not to require accelerated funding of decommissioning for those licensees that continue to have rate regulatory oversight or access to State-mandated non-bypassable wires charges for decommissioning costs. Rather, such licensees may continue to collect decommissioning funds until the expected end of the operating license term. This point was also addressed in the Commission's response of June 15, 1999, to the Government Accounting Office's final report, "Nuclear Regulation - Better Oversight Needed to Ensure Accumulation of Funds to Decommission Nuclear Power Plants."

2. The staff believes that the recent General Accounting Office (GAO) report, "Better Oversight Needed to Ensure Accumulation of Funds to Decommission Nuclear Power Plants," which appeared to endorse accelerated funding, did not adequately consider the provisions to ensure decommissioning funding adopted by those States that have implemented economic deregulation. The basis for the staff's conclusions is contained in the NRC's response to the GAO report dated June 15, 1999.