

POLICY ISSUE INFORMATION

June 25, 2010

SECY-10-0084

FOR: The Commissioners

FROM: Eric J. Leeds, Director
Office of Nuclear Reactor Regulation

SUBJECT: EXPLANATION OF CHANGES TO REVISION 2 TO REGULATORY
GUIDE 1.159, "ASSURING THE AVAILABILITY OF FUNDS FOR
DECOMMISSIONING NUCLEAR REACTORS"

PURPOSE:

On March 25, 2010, the U.S. Nuclear Regulatory Commission (NRC) issued Staff Requirements Memorandum (SRM) M100223B, "Briefing on Decommissioning Funding," directing the staff to provide the Commission with an information paper explaining the changes to the final Regulatory Guide (RG) 1.159, Revision 2, "Assuring the Availability of Funds for Decommissioning Nuclear Reactors," and allowing appropriate time to receive Commission direction, if the Commission is so inclined, before issuance of the regulatory guide. This information paper provides the staff response.

SUMMARY:

The NRC issued draft guidance DG-1229, "Assuring the Availability of Funds for Decommissioning Nuclear Reactors," in June 2009 to gather public comments on proposed changes to three sections of regulatory guidance that the agency would ultimately issue as RG 1.159, Revision 2. In addition to updating references, the changes would (1) increase the frequency of covering a shortfall in decommissioning financial assurance (the merchant plant licensee frequency would be increased from 2 years to 1 year and the utility licensee frequency would be increased from every 6 years to every rate case) and remove a statement on using

CONTACT: Thomas L. Fredrichs, NRR/DPR
301-415-5971

a reasonable time to make up a deficit, (2) clarify when a real rate of return greater than 2 percent may be credited, and (3) clarify that the earnings credit allowed during a safe storage period following permanent shutdown must reflect any withdrawals needed to maintain the facility in safe storage.

The staff received comments opposing the increased frequency of adjustments. No comments were received on the other 2 proposed changes, which simply document existing staff practice.

The staff concluded that RG 1.159, Revision 2 should include the unopposed changes to clarify the 2 percent return and the earnings credit during safe storage. Regarding the increase in adjustment frequency, the staff evaluated the cost of covering a shortfall within 3 months of the annual escalation adjustment of the minimum amount done on December 31, as required under Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.75(b). The staff found that the commenter's assertions of undue financial burden were contradicted by a number of sources, including financial reports published by parent company owners of reactor licensees. The staff determined that RG 1.159, Revision 2 should include guidance for merchant plant licensees to adjust the actual amount of financial assurance annually, as of March 31 of each year, based on the escalated amount calculated as of the previous December 31. The staff determined that utility licensees would not have to address decommissioning funding in every rate case, but should make a good faith effort to obtain rate relief by requesting their rate regulator to address the issue within the year, and to obtain rate relief as necessary within 5 years.

BACKGROUND:

All power reactor licensees are required to report the status of their decommissioning funds biennially on March 31 of each odd numbered year.¹ Where the amount of financial assurance provided by the licensee is less than the amount required by the regulation, the difference is termed the "shortfall." The NRC now has experience with two equity market downturns, in 2003 and 2009, in which a number of power reactor licensees reported shortfalls.² The existing guidance of RG 1.159, Revision 1 states that a merchant plant licensee should make needed adjustments in the level of financial assurance every 2 years, in conjunction with the decommissioning fund status report. For public utility licensees, the existing guidance states that they should obtain rate relief within 6 years.

The NRC issued draft guidance DG-1229 in June 2009 to gather public comments on proposed changes in regulatory guidance. A public meeting held on August 20, 2009, drew over 100 participants to discuss the draft guidance. The Nuclear Energy Institute (NEI) provided extensive written comments, by the end of the comment period in September 2009, which were supported by four industry stakeholders. The comments objected to reducing the time available to cover a shortfall. The comments suggested using case-by-case negotiation without time limits as an acceptable method to resolve shortfalls, and that the NRC should accept net present value (NPV) methods to calculate the size of the shortfall. No comments were received on the proposed clarifications regarding the use of the 2-percent real rate of return or the earnings credit during a period of safe storage. No comments were received supporting the

¹ 10 CFR 50.75(f). The report is required annually for licensees involved in mergers or acquisitions; within 5 years of expected shutdown; or permanently shut down.

² The minimum amount is specified in 10 CFR 50.75(c), which includes a factor for inflation.

proposed changes. Beginning in summer 2009, the staff engaged in case-by-case negotiation with the 26 licensees who had not resolved their shortfalls in their March 2009 decommissioning fund status reports. As of May 2010, four merchant plant facilities (Braidwood 1 and 2, Byron 2, and River Bend) had not resolved their shortfalls. Over 1700 staff hours have been spent on resolving the shortfalls on a case-by-case basis.

The Commission held a public meeting to discuss decommissioning financial assurance on February 23, 2010. Following the meeting, the Commission issued SRM M100223B directing the staff to explain its reasoning for the proposed changes to RG 1.159, Revision 2.

DISCUSSION:

In concluding that existing NRC guidance should be changed to increase the frequency of adjusting financial assurance for decommissioning to annually, the staff considered two major issues.

First, the Commission has often stated that licensees must provide timely and adequate financial assurance for decommissioning costs.³ The Commission also stated that a licensee is required to provide assurance that at any time during the life of the facility, through termination of the license, adequate funds will be available to complete decommissioning.⁴ These statements imply that shortfalls, should be avoided where possible and, if they occur, should be covered in a timely manner.

Licensee Performance in Response to Equity Market Declines⁵

Reporting Year	Market Decline from Previous Report	Number of Facilities with Shortfalls	Shortfalls Resolved in 3 Months	Shortfalls Not Resolved in 1 Year
2003	-23%	9	3	0
2009	-30%	27	1	6

Second, the NRC last considered annual adjustments in 2002. Since then, changed circumstances indicate that reconsideration is warranted. The table above summarizes licensee performance in response to the 2003 and 2009 equity market declines. In 2003, about 91 percent of power reactors avoided shortfalls, while in 2009, about 75 percent avoided shortfalls. The number of licensees with shortfalls increased more than expected in relation to the percentage decline in the market. The number of licensees that corrected their shortfalls in 3 months decreased in 2009, although a greater number needed to make corrections.

³ See the following: 53 FR 24030–24031 and 24033, 56 FR 41493, 57 FR 30395, and 67 FR 78332.

⁴ See 61 FR 39278.

⁵ Decline calculated from Dow Jones Industrial Average Index closing price on December 31 of the relevant years

Following the 2003 market decline, all licensees resolved their shortfalls within 1 year. In 2009, six licensees did not resolve their shortfalls within 1 year of December 31, 2008. The licensees raised several issues that delayed resolution: 4 licensees claimed the staff should accept NPV methods to calculate the size of the shortfall; 1 licensee provided an incomplete parent company guarantee; and 1 licensee provided a power sales contract which is under review by the staff. Comparing 2009 to 2003, the number of facilities with shortfalls increased by 18, of which 16 were merchant plants.⁶ The staff concluded that (1) the data indicated an apparent trend toward less adequate and less timely financial assurance in response to an equity market decline, and (2) case-by-case negotiation with each licensee to resolve a shortfall appeared to be less effective in 2009.

The timing and severity of market fluctuations are outside licensee control. However, licensees have the ability to make forward-looking plans to account for the inescapable volatility of the markets. Licensees can control a variety of measures to manage financial risks.⁷ Three-fourths of power reactors avoided shortfalls in 2009, thus demonstrating that successful forward-looking plans are available.

Licensees can also control their response to a shortfall, if it occurs. For example, following the 2002 equity market decline, Progress Energy provided PCGs totaling \$276 million to supplement financial assurance at three of its public utility reactor facilities within 3 months of the end of the decommissioning fund status reporting period. Its action demonstrate that a licensee can cover a substantial shortfall within 3 months without suffering the adverse effects asserted by comments submitted in opposition to the proposed annual frequency for covering shortfalls.

The staff considered periods of 1 to 3 years for the frequency of adjustments to cover shortfalls. The staff determined, based on experience with the Connecticut Yankee (CY) facility, that allowing 3 years to resolve a shortfall could increase the risk that a licensee would lack adequate funds to complete decommissioning. CY was a regulated electric utility. In CY's case, the licensee conducted periodic market studies to determine the economic viability of the plant. Unfortunately, CY's outlook reversed from viable to nonviable within 3 years as the result of price competition. A decrease in competitive prices of about 7 percent resulted in a decision to immediately shut down the plant and begin decommissioning. When the shutdown occurred, CY's rate collections had not yet accumulated adequate funds for decommissioning.⁸ CY was able to pay for decommissioning because of its status as an electric utility with access to several hundred million dollars in additional ratepayer funds, after going through contentious rate proceedings.

⁶ In 2003, the total included 8 utility facilities and 1 merchant facility. In 2009, the total included 9 public utility facilities, 16 merchant plant facilities, and 2 facilities that were "hybrids," with both utility and merchant licensee owners.

⁷ For instance, licensees control how much exposure to market risk they will accept when they give instructions to their fund managers. They can increase or decrease their reliance on future earnings to pay for decommissioning. They can arrange to obtain guarantees to cover shortfalls before the fact, at favorable rates, or choose to wait until after the fact and face potentially higher rates. They can choose to maintain a higher fund balance to withstand volatility or a lower balance that is vulnerable to volatility.

⁸ The regulations do not require licensees to possess the full amount of cash needed for decommissioning until the time of permanent shutdown. However, licensees must provide financial assurance that they can obtain the funds at any time during the life of the facility. See footnotes 3 and 4, *supra*.

However, the CY experience emphasizes the need for full up-front financial assurance from a merchant plant licensee that has no access to ratepayer funds to cover shortfalls, but faces at least equal competitive pressures.

The staff considered the 2-year frequency to be a suboptimal adjustment frequency. First, the 2-year frequency appears to be getting less effective in encouraging licensees to make forward-looking plans to avoid shortfalls. Second, if a merchant plant delays covering the shortfall for over a year, as happened in several cases in 2009, the 2-year period can extend beyond 3 years.

The staff found that the cost of covering a shortfall on an annual basis is minimal using a PCG and is a very small percentage of net income using other guaranty methods. Annual adjustment of the actual amount of financial assurance provided would encourage licensees to use forward-looking plans to avoid shortfalls, and would align with the Commission's policy that licensees are required to provide adequate financial assurance at any time during the life of the facility. The adjustment of the actual amount provided would coincide with the existing requirement to make an annual escalation adjustment to the minimum requirement, as required by the provisions of 10 CFR 50.75(b)(2) and (c)(2).

The staff considered the comments received on the draft guidance of DG-1229. As noted in the Progress Energy example, the commenter's assertions of undue financial burden are contradicted by actual licensee experience. The staff found that NEI did not adequately consider the effects of equity market volatility on the ability of a licensee to provide funds when needed for decommissioning when relying on market gains to cover future expenses. The enclosure provides details of the staff's consideration of the comments.

The staff declined the suggestion to provide guidance recommending case-by-case negotiation without time limits as a method to resolve shortfalls on the grounds that the Commission rejected the case-by-case approach to decommissioning financial assurance when it issued its 1988 Decommissioning Rule.⁹

The staff declined the suggestion to provide guidance recommending the net present value method for calculating the size of a shortfall on grounds that it underestimated the amount.

In view of the information summarized above, the staff concluded that the NRC's guidance should recommend an increased frequency for adjusting the level of financial assurance to cover a shortfall.

For merchant plant licensees, the guidance will state that the level of financial assurance should be adjusted to cover shortfalls annually, by March 31 of each year.

⁹ See Volume 53, page 24019, of the Federal Register (53 FR 24019). However, in the case of prematurely shutdown reactors, the Commission concluded that a case-by-case approach was necessary. See 57 FR 30383, 30394. The Commission may also take actions as appropriate on a case-by-case basis to modify a licensee's schedule for the accumulation of decommissioning funds. See 10 CFR 50.75(e)(2).

For utility licensees, the NRC has a policy to minimize its involvement with the rate regulatory process.¹⁰ However, a commenter requested that the staff include guidance on good-faith efforts to seek rate relief. Accordingly, the staff will include guidance for a utility licensee to inform its rate regulator by March 31 of each year when a shortfall occurs as of the preceding December 31 and request its rate regulator to review decommissioning cost recovery within the year.

The staff will continue its practice of monitoring the adequacy of financial assurance for decommissioning in conjunction with the decommissioning fund status report submitted by licensees. However, the staff may increase the frequency of its reviews, if necessary, under the provisions of 10 CFR 50.75(e)(2), which allow the NRC to review and take appropriate action with respect to decommissioning financial assurance, either independently or in cooperation with a licensee's rate regulator.

COORDINATION:

There are no resource implications in this paper. The Office of the General Counsel has reviewed this paper and has no legal objection.

/RA/

Eric J. Leeds, Director
Office of Nuclear Reactor Regulation

Enclosures:

1. Summary of NRC Financial Assurance Requirements
2. Response to Comments on DG-1229
3. Staff Calculation Using 2 Percent Earnings
4. Licensee Calculation Using Net Present Value Methods
5. Proposed Changes to Final RG 1.159, Revision 2

¹⁰

See 53 FR 24030.

For utility licensees, the NRC has a policy to minimize its involvement with the rate regulatory process.¹⁰ However, a commenter requested that the staff include guidance on good-faith efforts to seek rate relief. Accordingly, the staff will include guidance for a utility licensee to inform its rate regulator by March 31 of each year when a shortfall occurs as of the preceding December 31 and request its rate regulator to review decommissioning cost recovery within the year.

The staff will continue its practice of monitoring the adequacy of financial assurance for decommissioning in conjunction with the decommissioning fund status report submitted by licensees. However, the staff may increase the frequency of its reviews, if necessary, under the provisions of 10 CFR 50.75(e)(2), which allow the NRC to review and take appropriate action with respect to decommissioning financial assurance, either independently or in cooperation with a licensee's rate regulator.

COORDINATION:

There are no resource implications in this paper. The Office of the General Counsel has reviewed this paper and has no legal objection.

Eric J. Leeds, Director
Office of Nuclear Reactor Regulation

Enclosures:

1. Summary of NRC Financial Assurance Requirements
2. Response to Comments on DG-1229
3. Staff Calculation Using 2 Percent Earnings
4. Licensee Calculation Using Net Present Value Methods
5. Proposed Changes to Final RG 1.159, Revision 2

WITS 201000120/ SECY-2010-0173

ADAMS Accession No: ML101540500(Package); ML101540471(SECY Paper);

* Via E-Mail

OFFICE	NRR/DPR/SL	NRR/DPR/PFAB:BC*	NRR/DPR:D*	Tech. Ed.*	OGC NLO*
NAME	TFredrichs	ASimmons	TMcGinty	Kazariah - Kribbs	E. Williamson
DATE	6/22/10	6/21/10	6/21/10	6/17/10	6/22/10
OFFICE	NRR:D				
NAME	ELeeds				
DATE	6/25/10				

OFFICIAL RECORD COPY

¹⁰ See 53 FR 24030.