



Anthony R. Pietrangelo
SENIOR VICE PRESIDENT
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March 8, 2011

The Hon. Gregory B. Jaczko
Chairman
U.S. Nuclear Regulatory Commission
11555 Rockville Pike
Mail Stop 016 C1
Rockville, MD 20852

Subject: Concerns Regarding the Conduct of the U.S. Nuclear Regulatory Commission's March 2 Decommissioning Funding Workshop

Dear Mr. Chairman:

The Nuclear Energy Institute (NEI¹), on behalf of the nuclear energy industry, is writing to express issues of significant concern related to the conduct of the recent NRC workshop on Decommissioning Funding held on March 2, 2011.

Last October, SRM-SECY-10-0084 directed the staff to hold a workshop to engage stakeholders and develop an options paper for the Commission regarding use of the net present value (NPV) method. This workshop was conducted last week on March 2. Based on the presentations and discussions at the workshop, we have significant concerns regarding the staff positions on the NPV method and the process for updating NUREG 1307.

As an example, a presentation delivered by NRC staff stated that the net present value approach to parent guarantees is not permitted by § 50.75 (see attached presentation at slides 12-16). Therefore, the presentation concludes that regulatory dispensation – either in the form of an exemption or special approval pursuant to § 50.75(e)(vi) – would be required in order to use the net present value approach. To the contrary, § 50.75(e)(1)(iii)(B) allows licensees to provide financial assurance in the form of a “parent guarantee of funds for decommissioning

¹ NEI is the organization responsible for establishing unified nuclear industry policy on matters affecting the nuclear energy industry. NEI's members include all utilities licensed to operate commercial nuclear power plants in the United States, nuclear plant designers, major architect/engineering firms, fuel fabrication facilities, nuclear material licensees, and other organizations and individuals involved in the nuclear energy industry.

costs based on a financial test.” The only condition placed on use of this method is that the guarantee and financial test must be as contained in appendix A to 10 CFR part 30. Appendix A does not address how the value of the guarantee is to be calculated (*i.e.*, whether the net present value approach is acceptable). Further, as the Commission noted in SRM-SECY-10-0084, the NRC has approved the net present value approach to parent guarantees in several license transfer cases. The staff presentation points out that these approvals were issued pursuant to § 50.75 (e)(iii)(B). The staff then asserted that these precedents were an “incorrect application of the regulation” (see attached presentation at slide 12). The position contained in the presentation disregards agency precedent and is in tension with SRM-SECY-10-0084, which explicitly recognized the NRC’s license transfer precedent approving the use of the net present value method. NEI is concerned that the NRC staff would publicly disregard agency precedent established in three license transfer decisions and categorize them as erroneous and inconsistent with the Commission’s regulatory requirements.

During the discussion of proposed changes to NUREG-1307, slide 5 of the presentation warned that the NRC staff plans to change the vendor/direct disposal ratio from 100% to 70/30 with a potential cost impact of \$50-\$70 million per licensee. A 100% vendor option is currently allowed. As one of the licensees in the audience pointed out, industry would logically use a 100% vendor approach to decommissioning unless a cheaper direct disposal option can be identified, therefore supporting the 100% assumption. Slide 6 indicates that the staff is considering a higher cost for low level waste disposal when the Texas compact numbers are released. Industry representatives present in the audience urged the staff to engage in discussions about private contracts and negotiated rates that they could use to inform their pricing models since the publicly available pricing information may be higher than negotiated options and there is likely more cost certainty than the staff knows. In response to a request for a public comment period on the proposed changes, the audience was informed that this is not required for the NUREG and the workshop should serve as public notice. This approach is unacceptable. NUREG-1307 is explicitly referenced in 10CFR 50.75(c)(2), which states that the escalation factor for waste burial in the minimum funding formula “is to be taken from NRC report NUREG-1307.” Thus, changes to the NUREG are effectively changes to the rule and should be noticed for public comment. This is especially important in cases such as this, where the staff predicts that changes to the NUREG could result in the minimum amount required for decommissioning funding assurance increasing by \$50 to \$70 million per reactor licensee. At best, this practice is grossly inconsistent with the Commission’s Principles of Good Regulation; at worst it is a violation of the Administrative Procedure Act.

In closing, we would like to reiterate that a large number of the shortfalls reported in 2009 was the result of the worst financial downturn in the United States since the Great Depression. These unique circumstances impacted the entire international financial community and do not indicate a systematic failure in the management of decommissioning trust funds, nor should they be interpreted as representing a negative “trend” in the management of such funds. Rather, it is a testament to the rigor of the present regulatory scheme that, despite the worst financial crisis to hit the United States in over 75 years, decommissioning funding assurance remained adequate for

The Honorable Gregory B. Jaczko

March 8, 2011

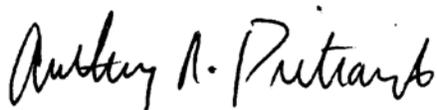
Page 3

approximately 75 percent of the nation's nuclear power facilities, and 21 of the 27 reported shortfalls were corrected less than a year after 2009 biennial reports were filed. Thus, the current regulatory framework and guidance performed extraordinarily well, despite difficult circumstances. Importantly, many of these apparent funding shortfalls were corrected within a relatively short period of time without any additional cash contributions, guarantees, or other surety mechanisms. Thus, NEI disagrees that an increase in the number of shortfalls reported in 2009 should serve as the basis for changes to the guidance, much less to the regulations, without a public comment period.

NEI will be providing a comprehensive set of comments on the workshop by the April 4, 2011, due date. In the meantime, we respectfully request that the Commission ensure that the Principles of Good Regulation and its commitment to transparency are applied to the staff's activities in the area of decommissioning funding going forward. In this vein, we believe that a public correction of the statements regarding the validity of the NRC's license transfer precedent and provision of opportunity for public comment on NUREG-1307 are necessary.

We would welcome the opportunity to discuss this matter further with the Commission and appreciate your attention to these issues. Please contact me if you have any questions.

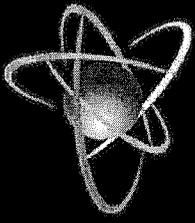
Sincerely,



Anthony R. Pietrangelo

Attachments

- c: Commissioner Kristine L. Svinicki, U.S. Nuclear Regulatory Commission
- Commissioner George Apostolakis, U.S. Nuclear Regulatory Commission
- Commissioner William D. Magwood, IV, U.S. Nuclear Regulatory Commission
- Commissioner William C. Ostendorff, U.S. Nuclear Regulatory Commission
- Mr. R. William Borchardt, U.S. Nuclear Regulatory Commission
- Mr. Stephen G. Burns, U.S. Nuclear Regulatory Commission
- Mr. Bruce Boger, U.S. Nuclear Regulatory Commission, NRR
- Mr. Chris Regan, U.S. Nuclear Regulatory Commission, NRR/DPR
- Mr. Thomas L. Fredrichs, U.S. Nuclear Regulatory Commission, NRR/DPR



U.S. NRC

United States Nuclear Regulatory Commission

Protecting People and the Environment

OVERVIEW OF NUREG-1307, Revision 14, “REPORT ON WASTE BURIAL CHARGES”

March 2, 2011

Clayton Pittiglio - NRC

Steve Short- PNNL

NUREG-1307, Revision 14 (2010):

- Advised licensees when new disposal facilities become available, disposal rates will likely be significantly higher.
- Information received since the waste vendor option was introduced in 1998 suggests that the percentage of waste that is actually processed by a waste vendor may be less than 100 percent.
- NRC is considering adjusting the waste vendor option to reflect this additional information in the next revision of NUREG-1307, which could result in an increase in the cost estimate for the waste vendor option.

Key Assumptions/Points:

- Low level Waste (LLW) generated during operations is disposed of using operating funds;
- Plants that have no disposal site available are forced to provide interim storage for this waste; volumes may become significant;
- If additional disposal sites do not become available prior to shutdown, LLW generated during plant operations will be disposed of during decommissioning;

Key Assumptions/Points (Continued):

- Disposal cost for stored waste not accounted for in minimum amount under 10 CFR 50.75(c) (nor would cost of D&D of the storage facility);
- For plants that have no disposal site available, the cost for disposal is the same as that provided for the Atlantic Compact, for lack of a better alternative at this time; and
- NUREG-1307, Rev 8 (1998), applied the assumption of 100/0 Vendor/Direct Disposal option.



NUREG-1307, Revision 15, Proposed Changes:

- Vendor/Direct Disposal ratio of 70/30:
 - Current ratio 100/0 has an approximate \$350 million delta
 - Review of licensee's submitted site specific cost estimate and actual decommissioning experience (more than 30 cases – ML110390111) support 70/30 ratio
 - Potential cost impact range from \$50 – \$70 million
- Aligns formula amount with site specific cost estimates/assumptions, including possible impacts from life extension;



NUREG-1307, Revision 15, Proposed Changes (Continued):

- Update Disposal Costs based on new disposal facility costs; and
- When new disposal facilities become available, disposal rates will likely be significantly higher.

Example: SONGS Unit 1

- **SONGS submittal March 31, 2009**
 - Formula amount \$344.1 million
 - Site specific estimate \$394.0 million
 - Actual radiological expenditure \$385.2 million
 - Balance to complete decommissioning \$8.8 million
- **SONGS submittal March 31, 2010**
 - Formula amount \$337.3 million
 - Site specific estimate \$490.4 million
 - Actual radiological expenditure \$461.8 million
 - Balance to complete decommissioning \$28.6 million

SONGS Unit 1

RESULTS:

- Despite expected completion cost of \$8.8 million, SONGS spent \$76.6 million since their March 31, 2009 report, and needs an additional \$28.6 million to complete decommissioning;
- The increase in decommissioning costs of \$86.4 million from 2009 to 2010 is mostly due to LLW disposal cost; and
- Actual decommissioning costs exceed the formula by \$153 million (45%)

FORMULA - 10 CFR 50.75(c):

Estimated Cost (Year X) = [1986 \$ Cost] [A Lx + B Ex + C Bx]

A, B, and C are the fractions of the total dollar costs that are attributable to labor (0.65), energy (0.13), and burial (0.22), respectively, and sum to 1.0. The factors Lx, Ex, and Bx are defined by:

- Lx = labor cost adjustment,
- Ex = energy cost adjustment,
- Bx = LLW burial/disposition cost adjustment^[1]

QUESTIONS?



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Present Value Discounting of Parent Company Guarantee for Decommissioning Financial Assurance

Thomas Fredrichs
Office of Nuclear Reactor Regulation
March 2, 2011

Overview



- Some thoughts on the parent company guarantee (PCG)
- The regulations
- Three license transfer cases
- Comments & responses
- Costs & risks
- Conditions to achieve equivalency
- Summary

Thoughts on the PCG



- PCG an agreement between parent and subsidiary-licensee
- Should be a win-win approach

Licensee	Public
• Lowest cost method	• Lower risk of future shortfall
• Demonstrate stewardship	• Enhanced confidence
• Useful for temporary needs	• Assurance adds to licensee funds
• No third party involvement	
• Unlikely to need performance	

Thoughts on the PCG (continued)



Benefits	Risks
• No financing cost	• More vulnerable in bankruptcy
• Can be issued quickly	• Common mode risk
• Useful for temporary needs	• No funds for security
• Can adjust deposit timing	• Incentive to avoid deposits
	• Delays in decommissioning

- Do "indirect costs" negate the benefits?

Thoughts on the PCG (continued)



- Comments solicited
 - Are there additional benefits or risks to using the PCG?

The Regulations



- History
 - 1981 EPA faced same question on PCG
 - Did not allow PCG buildup over time
 - 1988 NRC allowed PCG for all licensees except electric utility reactors
 - External sinking fund required annual deposits
 - 1998 power reactors allowed to use PCG
 - Low-cost flexible method in view of deregulation
 - Deposits not required for external sinking fund or prepayment trust fund

The Regulations (continued)



- PCG requirements:
 - Tangible net worth 6 times face amount
 - \$10 million minimum
 - New rule allows intangible net worth
 - Assets worth 6 times face amount
 - 90% of assets in United States
 - Investment grade credit rating
 - Annual passing of financial test
 - Written PCG agreement

The Regulations (continued)



- Why does the PCG need to be full-value?
 - § 50.75(b)(1) amount may be more but not less than specified by § 50.75(c)(1) and (2)
 - § 50.75(b)(3) amount must be covered by financial assurance methods of § 50.75(e)
 - § 50.75(e)(1)(iii)(B) has no provision for discounting a PCG

The Regulations (continued)



- How can a PCG be discounted?
 - § 50.12 Exemption
 - Special circumstances required to grant
 - § 50.75(e)(1)(vi) Other mechanisms
 - NRC evaluation of special circumstances of submittal
 - Equivalent to methods of § 50.75(e)(1)(i) through (v)
 - “Special circumstances” overlap
 - Rulemaking
- Equivalency adds requirement above simple exemption

The Regulations (continued)



- Comments solicited
 - What might constitute a “special circumstance” that should be considered in evaluating a discounted PCG for financial assurance?
 - What factors should be considered in determining whether the discounted PCG is equivalent to the methods of § 50.75(e)(1)(i) through (v)?

The Regulations (continued)



- Comments solicited on public participation
 - Should public participation be provided for evaluations of a discounted PCG?
 - What methods should be used:
 - *Federal Register* notice?
 - Public meeting?
 - Public website announcement?

Three License Transfer Cases



- License transfer cases offered as reason to approve discounted PCG
- Basis was § 50.75(e)(1)(iii)(B)
 - Incorrect application of regulation

Three License Transfer Cases (continued)



- Inconsistent with the large majority of PCGs accepted by NRC
 - Parts 30, 40, 70
 - Research & test reactors
 - Other power reactors

Three License Transfer Cases (continued)



- Inconsistent with materials guidance
 - “No credit is taken for earnings on any financial assurance mechanism (e.g., a parent company guarantee) that does not set aside actual funds as prepayment for site control and maintenance activities.” NUREG-1757, Vol.3, p. 4-29
- Not addressed in reactor guidance

Three License Transfer Cases (continued)



- Nine Mile Point (NMP) Unit 1 license transfer illustrates error

August 2001 NMP Unit 1 License Transfer Application:

Balances at Transaction Closing	
Unit 1 Qualified Fund Balance as of 7/01/2001	\$189,200,000
Unit 1 Non-Qualified Fund Balance as of 7/01/2001	\$76,800,000
Unit 1 Guarantee Amount	<u>\$54,496,000</u>
Total Used for Funding Projection	\$320,496,000

- Only \$266 million was actually placed in trust fund (cash)
- Projected earnings were based on \$320 million

Three License Transfer Cases (continued)



- Compare NMP Unit 1 Projections to Actual

Year	Year End Fund Balance	
	Feb. 2001 Transfer Application Projection	Fund Status Report Actual
2001	\$323,685,000	Not Available
2005	\$350,367,000	\$318,106,000
2008	\$371,812,000	\$288,106,000

- 2009 shortfall of \$45 million using 20 year license renewal period

Three License Transfer Cases (continued)



- Comments solicited:
 - Should NRC continue to approve discounted PCGs under §50.75(e)(1)(iii)(B) as used in the license transfer cases?
 - What factors argue for or against different treatment of an earnings credit for PCGs offered by power reactors as compared to all other licensees?

Summary Comments & Responses



NEI Comments	NRC Staff Responses
"Set aside" assets worth 6 times face amount	No requirement to set aside – only possession required
Lost use of assets as collateral for other obligations	No restriction on use of assets
Significant indirect cost: <ul style="list-style-type: none"> • Reduced liquidity • Credit quality stress • Credit rating downgrade 	Counter-examples: <ul style="list-style-type: none"> • Progress Energy (2003) • FPL Group (2008) • FirstEnergy (2008) • Exelon (2010) ?

Summary Comments & Responses (continued)



NEI Comments	NRC Staff Responses
Tangible net worth requirement too burdensome	Other methods have no net worth requirement
Not consistent with GAAP	Accounting standard FAS 143 does not ensure adequate funds

Summary Comments & Responses (continued)



- Indirect cost of liquidity, credit stress or downgrade?

Parent	LOC	Parent Guarantee	NRC PCG
Progress Energy 2003	\$11 million	\$1.0 billion	\$276 million
FPL Group 2008	\$737 million	\$9.6 billion	\$93 million
First Energy 2008	\$2.1 billion	\$3.8 billion	\$80 million

- Progress reported no effect on liquidity or short-term borrowing costs; FPL had "A" credit, FirstEnergy credit upgrade

Summary Comments & Responses (continued)



- PCG is off-balance sheet arrangement
 - Not recorded as liability
- No performance expected

Parent	Off-Balance Sheet	Performance
Progress Energy	Yes	“not likely”
FPL Group	Yes	“unlikely”
First Energy	Yes	“remote”

Summary Comments & Responses (continued)



- Tangible net worth burden?
- New reactor example from NEI:
 - \$405 million decommissioning cost
 - Assume shutdown after 40 years, DECON complete in 7 years
 - 2% discount yields \$171 million face amount for discounted PCG

Summary Comments & Responses (continued)



- If goal is to reduce net worth requirement, alternatives are more effective

Financial Assurance Method	Parent Company Tangible Net Worth Requirement
Full-value PCG	\$2,400,000,000
Discounted PCG, if allowed	\$1,000,000,000
Prepayment method	\$0
Surety method fund	\$0
Utility external sinking fund	\$0
Contractual obligation	\$0

Summary Comments & Responses (continued)



- Comments solicited:
 - How much weight should be given to minimizing parent company net worth in evaluating a request to use a discounted PCG?
 - Are there examples of a reactor licensee that experienced reduced liquidity, credit stress, or credit downrating due to a full-value PCG that could have been avoided by a discounted PCG?

Summary Comments & Responses (continued)



- **Not consistent with GAAP?**
- GAAP and financial assurance have different goals
 - GAAP: provide cash flow information
 - Financial assurance: protect public health and safety
- Accounting standard [FAS No. 143] will not ensure adequate accumulation of funding for decommissioning
 - Only a reporting requirement, no funding required
 - Source: GAO-02-48 Nuclear Regulation, December 2001

Summary Comments & Responses (continued)



- **Not consistent with GAAP? (continued)**
- Capital investment analysis, if used to calculate contributions to decommissioning funds, could result in financial assurance levels that are not adequate to pay for all assured obligations. (63 FR 50465, 50477)
- Purpose of financial assurance is to provide a second line of defense if the licensee's financial operations do not produce sufficient funds (63 FR 50465, 50474)

Summary Comments & Responses (continued)



- Comments solicited regarding GAAP
 - To what extent should financial reporting requirements under GAAP be used to evaluate a request to use a discounted PCG as financial assurance for decommissioning costs?

Costs & Risks



- Comments solicited
 - What cost savings can be realized from discounting the face amount of a PCG?
 - Are there costs of using a full-value PCG not considered in the discussion?

Costs & Risks (continued)



- Risks
- PCG vulnerable to bankruptcy
 - Creditors may seize parent's funds
 - Partial, perhaps no recovery
 - Automatic stay
 - Potential discharge of debt
 - Potential abandonment

Costs & Risks (continued)



- Risks
- Creditors may seize parent's funds
 - Lacks protection of trusts and third-party surety methods
- Partial recovery in bankruptcy
 - Discounted PCG lower recovery than full-value PCG
 - Lower tangible net worth provides lower safety margin

Costs & Risks (continued)



- **Risks**
- Safety margin
 - Cost of decommissioning remains the same
 - Lower tangible net worth of discounted PCG yields lower ratio of net worth to cost of decommissioning
 - Lower face value of discounted PCG yields lower recovery in bankruptcy

Costs & Risks (continued)



- **Risks**
- Comments solicited
 - How much weight should be placed on the vulnerabilities to bankruptcy when evaluating a discounted PCG for equivalency to other financial assurance methods?

Costs & Risks (continued)



- **Risks**
- Incentive to delay or cease payments into trust fund
 - Discounted PCG allows longer periods of delay for a given net worth
 - In 2009, over 80% of the dollar shortfall was experienced by facilities that ceased payments into their trust funds

Costs & Risks (continued)



- **Comments solicited**
 - How much weight should be placed on the incentive to delay or cease payments into the trust fund in evaluating a request to use a discounted PCG?

Costs & Risks (continued)



- Comments solicited
 - Would the bankruptcy risks of the automatic stay, discharge of debt, or abandonment be expected to differ between a full-value and discounted PCG?

Conditions to Achieve Equivalency



- What factors should be considered in determining equivalency to the financial assurance methods of § 50.75(e)(1)(i) through (v)?
 - Variation in time horizon
 - Security for discounted PCG
 - Merchant plant lack of ratepayer access
 - Other factors

Conditions to Achieve Equivalency (continued)



- Variation of discounted PCG over time

Shortfall	NPV @ 2% for Shortfall Occurring in the Future		
	20 Years in Future	40 Years in Future	93 Years in Future
\$100,000,000	\$67,000,000	\$45,000,000	\$16,000,000

- Comments solicited
 - Should discount period be limited?
 - Should full-value be required after shutdown?

Conditions to Achieve Equivalency (continued)



- Recall no funds or collateral secure the PCG agreement
- Comments solicited:
 - Should security be required for discounted PCG?
 - Cash reserve in escrow
 - First-lien collateral unencumbered by other liens
 - Payments to trust fund while discounted PCG use

Conditions to Achieve Equivalency (continued)



- Merchant plants lack access to ratepayers
- Comments solicited
 - Should merchant plant use of discounted PCGs be subject to additional conditions?

Conditions to Achieve Equivalency (continued)



- Comments solicited
 - Are there other factors that should be considered when evaluating the equivalency of a discounted PCG to the financial assurance methods of §50.75(e)(1)(i) through (v)?

Summary



- The PCG can be a win-win method
- Regulations & guidance do not provide for a discounted PCG without evaluation
- No financing costs for PCG
- Indirect costs have not been demonstrated
- Conditions should be considered to achieve equivalent assurance

The End



Questions?

- Contact information
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