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DOCKET NUMBER
PETITION RULE PRM 54-02
(70FR 34700)



DOCKETED
USNRC

August 23, 2005 (10:22am)

OFFICE OF SECRETARY
RULEMAKINGS AND
ADJUDICATIONS STAFF

Riverkeeper, Inc.
828 So. Broadway
Tarrytown, NY 10591

August 22, 2005

Secretary
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001
ATTN: Rulemakings and Adjudications Staff.

Re: Comments on PRM-54-02

Dear Sir/Madame:

Herewith Riverkeeper submits comments in support of Westchester County's §2.208 Petition for Rulemaking (PRM-54-02) filed on May 10, 2005.

Thank you for receiving our comments on the need to update the regulatory guidelines for nuclear power plant license renewal applications.

Sincerely,

Lisa Rainwater van Suntum, PhD
Indian Point Campaign Director
Riverkeeper, Inc.

Template = SECY-067

SECY-02



PRM-54-02 COMMENTS ON A PETITION FOR RULEMAKING

License renewals should be reviewed/approved/rejected under the same regulations as those for new licenses.

Siting and permitting criteria for new nuclear power plants have changed since Indian Point received its original operating license.

The NRC is operating under the fundamental premise that every operating reactor is a viable ongoing operation that has an assumed right to keep on operating. This assumption is erroneous. The political, social and economic conditions specific to many of the nation's nuclear power plant sites has changed dramatically over the last forty years. Increases in population density, the ongoing impasse over the long term storage of spent nuclear fuel, and the continuing threat of international terrorism are all issues that must be considered in the regulatory process that determines whether a plant is relicensed for an additional twenty years. Under the NRC's current regulatory regime, these problem areas are either exempted from review entirely, or considered adequately addressed under a plant's Current Licensing Basis (CLB). Given the checkered safety history of the civilian nuclear power industry, these measures are simply not comprehensive enough to ensure that these plants will operate safely during their potentially extended life spans.

The following sections focus in detail on what changes should be made to the NRC's license renewal regulations.

The NRC must include "Moving Parts" assessment during re-licensing inspection.

The NRC's existing inspection regime will not guarantee that those parts of a plant's operation not subject to the aging management review required for license renewal will function safely during the extended twenty-year life of the plant.

The NRC should require all renewal applicants to submit an Integrated Plant Assessment that includes a safety review of all aspects of the plant's operation, instead of a narrow assessment that only examines the 'plant systems, structures and components.' See 10 C.F.R. §54.21(a)(1)(i). Under these regulations, only the 'non-moving parts' of a plant's structure, such as the containment dome and liner, reactor vessel, and electrical cables, are required to undergo

this review. *See* 10 C.F.R. §54.21(a)(1)(i). Other essential elements of the plant's operating system, such as containment sump pumps, motors, generators and electrical switches will not be included in the licensee's assessment. Only a comprehensive safety review, coupled with an aggressive inspection policy, will ensure that relicensed plants will operate safely during their extended life span.

The safe operation of these parts of the plant is supposed to be managed under the plant's Current Licensing Basis. Yet many of the major safety problems affecting plants in the past, including those resulting in extended plant shutdowns, were the result of system failures that were supposed to be managed under the CLB.

For example, Indian Point 3 was shutdown for an extended period in the mid 1990s due to recurring problems with the AMSAC system. AMSAC is part of the reactor protection system that automatically shuts down the reactor when sensors in the field detect degrading conditions. While AMSAC problems were the straw that broke the camel's back, the ensuing outage allowed NYPA to fix recurring problems with the power operated relief valves (PORVs). AMSAC and the PORVs are moving parts.

Both reactors at Salem shut down after IP3. The straw in this case was the rod control system which repeatedly malfunctioned. Once down, the NRC created a list of 43 items that had to be fixed before restart - many of them fixes to moving parts.

More recently, Indian Point 2 (operated by Entergy) received a White Finding and a Notice of Violation on August 1, 2005 arising from the operator's failure to take proper corrective action to repair a leaking valve on a safety injection pump.¹ The resulting buildup of nitrogen gas compromised the safe operation of two additional pumps on the same system. Perhaps most alarming was Entergy's failure to recognize what risk this buildup of nitrogen gas would pose to the integrity of the safety injection system, and the safe operation of the pumps. Despite identifying the problem on November 4, 2004, Entergy only took further action after a January 19, 2005 NRC inspection, 77 days later. Under NRC Technical Specification Requirement 3.5.2.A, the outage resulting from this type of malfunction is limited to 72 hours. In this case, it lasted 77 days. Again, the injector pumps and valves are considered moving parts, to be properly managed under the plant's CLB. Yet despite this supposed high level of oversight, over two months passed before the NRC's inspection process under the CLB revealed the extent of the failure.

These examples demonstrate that the scope of the inspection regime under the CLB falls well short of ensuring that ongoing or newly arising problems with the 'moving parts' of the plant will be properly addressed during the additional twenty year time span of a renewed operating license. It is essential that every plant is subjected to a comprehensive IPA that includes both "moving and non-moving" parts before being relicensed.

¹ August 1, 2005 letter from NRC to Entergy Nuclear Operations, Inc., Indian Point 2, "FINAL SIGNIFICANCE DETERMINATION FOR A WHITE FINDING (NRC Engineering Team Inspection Report 05000247/2005006) Indian Point Nuclear Generating Unit 2."

NRC regulations must be based on best scientific and technical knowledge and data available.

The NRC should base its regulations on the best scientific and technical knowledge available, instead of allowing currently operating plants to be 'grandfathered' into compliance, based on scientific data from the 1970s that is proven to be outdated.

In particular, the NRC has not required licensees in the Eastern United States to update their analyses of the potential seismic hazards facing their plants, despite issuing new regulations that acknowledge the change in scientific knowledge regarding the differing effects of earthquakes on plant structures in the Eastern and Western U.S.

The new seismic regulations (See Federal Register, *61 FR 65157*, December 1996) only apply to new power plants that are seeking an original license. Currently operating plants in the Eastern U.S. are exempt from the new regulations, even when they apply to renew their license. If there is even a slight risk that the seismic criteria upon which these plants based their structural designs and safety systems is inadequate, then the licensees should be required to work with the NRC to reevaluate how the plant's physical structures might react to an earthquake, based on the new scientific findings reflected in the NRC's own regulations.

The NRC has also updated the regulations regarding seismic siting criteria for Independent Spent Fuel Storage Installations (ISFSI), but these only apply to holders of *specific ISFSI licenses*. Most plants, including Indian Point, hold general licenses, which allow them to remain exempt from the updated regulations. (See 10 CFR §72.103) Again, the potential risk to both the spent fuel pools and dry cask storage demands that the NRC require the most up to date science be applied to these facilities.

The storage of spent nuclear fuel must be considered during the license renewal process.

Exempting the issue of spent fuel storage from consideration during the license renewal process is completely unreasonable, considering the significant safety, security, and disposal issues involved, and the certainty that many currently operating nuclear power plants will run out of wet fuel storage space within the next five years.

Given the continued failure of the federal government to establish a long term repository for nuclear waste at Yucca Mountain, the safety, security, and environmental issues arising from storing spent nuclear fuel should be addressed during the license renewal process, when other aspects of the plant's extended operation are being reviewed. Alternatively, even if Yucca Mountain is eventually approved and put into use, there is only enough space in the repository to store spent fuel produced by all nuclear plants in the U.S. until 2011. At that point the repository will reach its capacity.² As a result, all the spent fuel produced during the additional twenty-

² Appendix A, Table A-7, Volume II, *Final Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High Level Radioactive Waste at Yucca Mountain, Nye County, Nevada*, February, 2002.

year life span of a relicensed plant will have to be stored onsite, or in a second, as yet unnamed repository that is potentially decades away from approval.

The security of both wet fuel pool and dry cask storage should also be considered during the relicensing process. A 2005 study by the National Academy of Sciences on security of spent fuel storage at commercial nuclear power plants concluded that a successful terrorist attack on spent fuel pools was possible, and recommended that an assessment of current security measures for protecting spent fuel be performed by an independent organization, outside of the NRC.³ Based on these findings, the NRC should amend the regulations to require that security of spent fuel pools and dry cask storage be comprehensively assessed during the relicensing process.

The potential environmental impacts of storing spent fuel onsite for an additional twenty years are also off the table during relicensing, due to the NRC's "Finding of No Significant Environmental Impact" (FONSI) that applies to all currently licensed ISFSIs. (See 10 CFR §51.23(a))

- The FONSI can be extended by the NRC for up to 30 years beyond the licensed term of an operating plant, including the twenty-year renewal term. This means that the NRC has the discretion to independently regulate the storage of spent fuel for fifty years after the renewal of an operating license.

The Supplemental Environmental Impact Study must address changes in population density and traffic patterns.

The Supplemental EIS required by the NRC for license renewal should comprehensively address changes in population and traffic patterns within the EPZ of an existing plant, especially as they relate to the adequacy of the Emergency Planning in case of an accident.

Indian Point is a prime example of a plant sited in an area which has undergone tremendous population growth and development over the last thirty years. The population living and working near Indian Point has dramatically increased since the original operating licenses were granted. This increase in population density must be taken into consideration during the license renewal process. Roads and bridges cannot handle the amount of traffic leaving the 10-mile radius and beyond.

Were Entergy applying for a license to build a brand new nuclear power plant where Indian Point is now located, it is unlikely they would be allowed to do so, based on its proximity to such a highly populated area.

Under the current regulations, the EIS need only address "socioeconomic impacts," such as public transportation, housing, and public services including the availability of a public water supply. See 10 C.F.R. §51, Appendix B.

³ National Academy of Sciences, "Safety and Security of Commercial Spent Nuclear Fuel Storage: Public Report (2005).

The radiological emergency plan for Indian Point is badly flawed, unworkable and key components are unfixable. According to former FEMA director, James Lee Witt, "...the current radiological response system and capabilities are not adequate to ... protect the people from an unacceptable dose of radiation in the event of a release from Indian Point..."⁴

In 2003 KLD Associates conducted a traffic study for Entergy and determined that evacuation times for the Emergency Planning Zone around Indian Point doubled since 1994. The original estimate was 2.5 hours for people to proceed with evacuation, with a total of 5.5 hours for complete evacuation. KLD estimates increased mobilization time to four hours, while complete evacuation of the region in good weather conditions could take up to 9.5 hours and in snow conditions up to 12 hours.⁵ Shadow evacuation would increase this time.

Over twenty years ago, one of your own directors found the placement of Indian Point absurd. In 1979, Robert Ryan, the NRC's Director of the Office of State programs, stated, "I think it is insane to have a three-unit reactor on the Hudson River in Westchester County, 40 miles from Times Square, 20 miles from the Bronx . . . [Indian Point is] one of the most inappropriate sites in existence."⁶

This was before an increase in population around Indian Point and before the terrorist attacks of September 11, 2001.

The feasibility of the current emergency evacuation plan for communities surrounding operating plants must be considered in the relicensing process.

The analysis of the effects of a 'severe accident' resulting in releases of radiation to the atmosphere and groundwater should also include the latest studies of how well the Emergency Evacuation Plan has been designed, and whether it will work. *See* 10 C.F.R. §51, Appendix B. Ignoring the significant issues related to emergency planning is unreasonable, and fails to take the requisite 'hard look' required under NEPA.

Again, the controversy surrounding the emergency plan for Indian point serves to illustrate the inherent inadequacies in the current relicensing regulations. Elected officials and first responders within the EPZ lack confidence in the current REPP's ability to protect the public. For the third consecutive year, counties within the EPZ have refused to submit their Annual Certification Letters for the radiological emergency preparedness plan for Indian Point. Over 300,000 people are living within the 10-mile radius of Indian Point without a workable emergency evacuation plan.

⁴ *Review of Emergency Preparedness of Areas Adjacent to Indian Point and Millstone*, p. viii, James Lee Witt Associates, 2003.

⁵ *Indian Point Energy Center Evacuation Time Estimate*, Table 1-1, p. 1-12, KLD Associates, Inc., 2003.

⁶ *Report of the Office of the Chief Counsel on Emergency Preparedness to the President's Commission on the Accident at Three Mile Island*, October 31, 1979, p. 5.

The 2003 Witt Report noted several pressing issues that have yet to be addressed by the NRC or FEMA. These concerns, among many others noted in the Witt Report must be considered during the license renewal process:

- The REPP does not address the site-specific, hazardous conditions of a sabotage event or a terrorist attack at the Indian Point facility.
- The REPP fails to deal with a scenario involving an earthquake (Indian Point sits above the Ramapo Fault).
- The REPP fails to adequately address an emergency scenario involving a “multiplier” effect in which a radiological or biological weapon is discharged in the vicinity of Indian Point, devastating the region and interfering with the actions that plant employees could take to prevent a meltdown could not be performed.
- In the event of a rapid release, the REPP relies on a “sheltering” option. There is evidence that a significant number of people will self-evacuate in spite of instructions to shelter. It is doubtful that those who choose to seek shelter in their homes would be adequately protected.

From: "Lisa Rainwater van Suntum" <lisa@riverkeeper.org>
To: <SECY@nrc.gov>
Date: Mon, Aug 22, 2005 12:48 PM
Subject: Riverkeeper Comments on PRM-54-02

Hello -

Please find attached Riverkeeper's comments on PRM-54-02, as per the announcement in the Federal Register (below). If you have any questions, please contact me.

Sincerely,

Lisa Rainwater van Suntum, PhD

Indian Point Campaign Director

Riverkeeper, Inc.

828 South Broadway

Tarrytown, NY 10591

Phone: 914-478-4501 x. 221

www.riverkeeper.org

[Federal Register: June 15, 2005 (Volume 70, Number 114)]

[Proposed Rules]

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[DOCID:fr15jn05-25]

NUCLEAR REGULATORY COMMISSION

10 CFR Part 54

[Docket No. PRM-54-02]

Andrew J. Spano, County of Westchester, NY; Receipt of Petition
for Rulemaking

AGENCY: Nuclear Regulatory Commission.

ACTION: Petition for rulemaking; notice of receipt.

SUMMARY: The Nuclear Regulatory Commission (NRC) is publishing for public comment a notice of receipt of a petition for rulemaking, dated May 10, 2005, which was filed with the Commission by Andrew J. Spano, County Executive, Westchester County, New York. The petition was docketed by the NRC on May 13, 2005, and has been assigned Docket No. PRM-54-02. The petitioner requests that the NRC amend its regulations to provide that a renewed license will be issued only if the plant operator demonstrates that the plant meets all criteria and requirements that would be applicable if the plant was being proposed de novo for initial construction.

DATES: Submit comments by August 29, 2005. Comments received after this date will be considered if it is practical to do so, but the Commission is able to assure consideration only for comments received on or before this date.

ADDRESSES: You may submit comments by any one of the following methods. Please include PRM-54-02 in the subject line of your comments. Comments on petitions submitted in writing or in electronic form will be made available for public inspection. Because your comments will not be edited to remove any identifying or contact information, the NRC cautions you against including any information in your submission that you do not want to be publicly disclosed.

Mail comments to: Secretary, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, ATTN: Rulemakings and Adjudications Staff.

E-mail comments to: SECY@nrc.gov. If you do not receive a reply e-mail confirming that we have received your comments, contact us directly at (301) 415-1966. You may also submit comments via the NRC's rulemaking Web site at <http://ruleforum.llnl.gov> <<http://irwebgate.access.gpo.gov/cgi-bin/leaving.cgi?from=leavingFR.html&log=linklog&to=http://ruleforum.llnl.gov>> . Address questions about our rulemaking Web site to Carol Gallagher (301) 415-5905; e-mail <<mailto:cag@nrc.gov>> cag@nrc.gov. Comments can also be submitted via the Federal eRulemaking Portal <http://www.regulations.gov> <<http://irwebgate.access.gpo.gov/cgi-bin/leaving.cgi?from=leavingFR.html&log=linklog&to=http://www.regulations.gov>> .

CC: <phillip@riverkeeper.org>

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