



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

February 1, 2012

Ms. Alyse Peterson
Senior Project Manager
Nuclear Coordination and
Radioactive Waste Policy
NYSERDA
17 Columbia Circle,
Albany, NY 12203-6399

SUBJECT: RESPONSE TO NEW YORK STATE COMMENTS ON FIRE PROTECTION
EXEMPTION REQUESTS FOR THE INDIAN POINT NUCLEAR GENERATING
UNIT NOS. 2 AND 3

Dear Ms. Peterson:

By letter dated March 6, 2009, followed by additional supplements, Entergy Nuclear Operations, Inc. (Entergy or the licensee) requested that the Nuclear Regulatory Commission (NRC) issue exemptions to Indian Point Nuclear Generating Unit Nos. 2 and 3 (IP2 and IP3) for certain NRC fire protection regulations. By e-mail dated May 11, 2011, you provided comments to me from New York State officials on the environmental assessment and the technical merits of the exemption request.

The NRC staff previously issued the environmental assessment and addressed the State comments pertaining to the environmental assessment therein. It is available through the web-based version of the NRC's Agencywide Documents Access and Management System (ADAMS), which can be found at <http://www.nrc.gov/reading-rm/adams.html>, under accession number ML112010664. In the enclosure to this letter, I am providing responses to the State's additional comments on the exemption request.

If you have any questions concerning this exemption, please contact me at 301-415-2901.

Sincerely,

A handwritten signature in cursive script that reads "John P. Boska".

John P. Boska, Senior Project Manager
Plant Licensing Branch I-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-247 and 50-286

Enclosure:
As stated

cc: Distribution via Listserv

NRC Response to State Comments

1.0 Background on State Comments

In accordance with its stated policy, on February 8, 2011, the NRC staff consulted with the New York State (NYS or State) official, at the NYS Energy Research and Development Authority, regarding the environmental impact of the proposed action. The State official provided 14 pages of comments by e-mail dated May 5, 2011 (ADAMS Accession No. ML112010063). The State opposed the granting of the requested exemptions to the licensee. The State comments stated that acceptance of the Operator Manual Actions (OMAs) discussed in this exemption would present an undue risk to public health and safety. The State comments describe the NRC's regulatory framework, discuss exemptions in general and selected exemptions granted previously to Indian Point, the NRC's administration of federal fire safety regulations, security issues, seismic issues, and special circumstances that the State believes justifies the rejection of the exemption requests. The State's comments also state that the public should be offered an opportunity to comment on the environmental impacts and potential alternatives to the proposed action.

2.0 Details of State Comments with NRC Responses

2.1 Regulatory Framework

2.1.a State Comments

The State commented that IP2 and IP3 are subject to the NRC regulations at 10 CFR 50.48, which invokes sections of 10 CFR Part 50, Appendix R, in particular, Section III.G. The State lists requirements from Section III.G and states that NRC's fire safety regulations in Appendix R do not authorize OMAs as a means of protecting a redundant system from fire.

2.1.b NRC Staff Response

The NRC staff agrees with the State comments above.

2.2 Exemptions from Regulations

2.2.a State Comments

The State reviewed 10 CFR 50.12, a regulation that authorizes the NRC to grant exemptions from NRC regulations if certain conditions are met. The State commented that: "Entergy's request for fire safety exemptions fails to demonstrate that grounds for an exemption are present. Moreover, the undue risk inherent in Entergy's application is further exacerbated by the extraordinary number of exemptions sought and, to our knowledge, the unprecedented number of locations within the facility in which Entergy requests exemptions be granted. The number of locations for which Entergy requests exemptions from the NRC fire safety regulations should alone be sufficient grounds to deny this application. However, the unique location of Indian Point further adds to the undue risk that would be created by granting these exemptions."

2.2.b NRC Staff Response

The NRC staff granted only a small fraction of the requested exemptions. The NRC staff follows the process described in 10 CFR 50.12 in order to grant exemptions. Pursuant to 10 CFR 50.12, the NRC may, upon application by any interested person or upon its own initiative, grant exemptions from the requirements of 10 CFR Part 50 when: (1) the exemptions are authorized by law, will not present an undue risk to public health or safety, and are consistent with the common defense and security; and (2) when special circumstances are present. The special circumstances stated by the licensee and evaluated by the NRC staff is that the application of the regulation is not necessary to achieve the underlying purpose of the rule. This type of request is not unprecedented. For example, at Millstone Unit 2 exemptions were requested for 21 fire zones, similar to the 30 fire zones at IP2 and the 20 fire zones at IP3. The staff's judgments, and the reasoning behind them, are described in the exemption document.

2.3 Previous Exemptions from Fire Safety Regulations at Indian Point

2.3.a State Comments

The State commented that Entergy and the NRC do not take into account the cumulative effect of previous fire safety regulation exemptions that have already been granted for the Indian Point reactors, and described some of the previous exemptions. The State commented that "NRC and Entergy must identify and take into account all of the previous exemptions to fire safety regulations that have been granted to Indian Point Units 2 and 3 before considering any request for further fire safety exemptions at the facilities."

2.3.b NRC Staff Response

The NRC staff is aware of the previous exemptions that have been granted to IP2 and IP3. All these exemptions are publicly available documents. The NRC requested that the licensee discuss the impact of previous exemptions on the OMA exemptions. Where the NRC staff determined that the current exemption could be affected by a previous exemption, the staff discusses the impact of the previous exemption.

2.4 NRC's Administration of the Federal Fire Safety Regulations

2.4.a State Comments

The State cited reports by the NRC's Office of the Inspector General (OIG) and the Government Accountability Office (GAO) to point out deficiencies in the NRC's exercise of its responsibilities with respect to fire protection issues.

2.4.b NRC Staff Response

The NRC staff acknowledges that the OIG and GAO reports identify deficiencies in industry's compliance with existing NRC fire regulations, such as OMAs and multiple spurious actuations. The NRC has taken actions to improve industry compliance with respect to fire protection issues, including periodic fire protection inspections at all power reactors and new regulations which authorized the use of a performance-based, risk-informed method of fire protection using National Fire Protection Association (NFPA) standard NFPA-805. The IP2 and IP3 exemption requests are an attempt to bring some of these issues to a satisfactory conclusion.

2.5 Security Issues

2.5.a State Comments

The State commented that events such as terrorists crashing jet airliners into the World Trade Center and other targets demonstrates the importance of a robust fire protection program, and that following those events the NRC required all power reactors to identify mitigative measures to reduce the consequences of explosions or fire at nuclear plants, but did not compel licensees to achieve full compliance with the 10 CFR 50.48 fire safety regulations.

2.5.b NRC Staff Response

The NRC issued Orders to licensees following the events of September 11, 2001, in order to improve their ability to respond to the loss of large areas of the plant due to explosions or fire. These Orders were later incorporated into 10 CFR 50.54(hh). IP2 and IP3 appropriately implemented the Orders and are in compliance with 10 CFR 50.54(hh). The NRC continues to work with licensees to achieve full compliance with 10 CFR 50.48 and Appendix R. This exemption request resulted from the NRC's ongoing attempts to bring these regulatory matters to a satisfactory conclusion.

2.6 Seismic Issues

2.6.a State Comments

The State commented that a report by Sandia National Laboratories acknowledged that an earthquake involving a nuclear power reactor facility could result in fires, and that a recent report showed IP3 with the highest core damage frequency (CDF) from seismic events, and also showed IP2 with a relatively high CDF number.

2.6.b NRC Staff Response

The NRC staff notes that the report on CDF at power reactors was an NRC scoping study to weigh the need for further investigation of recent data which suggested the seismic hazard in the central and eastern United States had increased (NRC Generic Issue GI-199, see <http://www.nrc.gov/reading-rm/doc-collections/fact-sheets/fs-seismic-issues.pdf>). The report used older plant seismic response data that was readily available to the NRC staff. Based on that preliminary analysis, the NRC is continuing its evaluation of GI-199, and will ask licensees to supply current additional data to better categorize the seismic risk at the applicable sites, including IP2 and IP3. Based on the analysis of the additional data, the NRC staff will take additional regulatory actions where they are justified.

2.7 Special Circumstances That Justify the Rejection of the Exemption Requests

2.7.a State Comments

The State commented that the Indian Point site has the highest population density within 10 miles and within 50 miles of any power reactor in the United States. The State also commented that within the 50-mile radius around Indian Point is some of the most densely-developed and expensive real estate in the country.

2.7.b NRC Staff Response

The NRC staff acknowledges the high population density near the Indian Point site. The criteria for granting an exemption request are that (1) the exemptions are authorized by law, will not present an undue risk to public health or safety, and are consistent with the common defense and security; and (2) special circumstances are present. The NRC staff based its analysis on whether IP2 and IP3's exemption requests meet the regulatory requirement. As discussed previously, the staff granted a limited number of the exemption requests, while denying the rest, based on the applicable regulatory requirements.

2.8 Entergy's Request for Exemptions

2.8.a State Comments

The State challenged Entergy's assertion that the underlying purpose of Appendix R is to provide reasonable assurance that safe shutdown of the reactor can be achieved and maintained in the event of a postulated fire in any plant area. The State quotes from the NRC's *Federal Register* notice which implemented the regulation that "The basic objective of the proposed Appendix R is to specify the minimum fire protection requirements with respect to certain recurring generic issues for nuclear power plants operating prior to January 1, 1979." The State contends that the mass substitution of OMAs for the required engineered solutions is not consistent with the underlying purpose of the rule. The State also commented that "There does not appear to be any independently verified data to support Entergy's assertions that the operator manual actions are a feasible or reliable means to assure safe shutdown in a fire situation or that there are no safety benefits to be gained through modifications of the physical plant. Further, the substitution of manual actions for engineered fire protection features does not provide an acceptable alternative or an equivalent level of safety. To the contrary, the best assurance for safe reactor shutdown in the event of a fire is through compliance with the provisions of paragraph III.G.2."

2.8.b NRC Staff Response

Over many years, the NRC staff has had to evaluate exemption requests related to compliance with 10 CFR 50.48 and Appendix R, including previous requests at IP2 and IP3. The NRC staff has consistently relied on the words of the regulation and the regulation's statement of consideration from when it was issued to evaluate the underlying purpose of the rule. For example, 10 CFR 50.48(a)(2)(iii) states "The means to limit fire damage to structures, systems, or components important to safety so that the capability to shut down the plant safely is ensured." Again, in Appendix R, Section II.A, one of the stated objectives of the fire protection program is "To provide protection for structures, systems, and components important to safety so that a fire that is not promptly extinguished by the fire suppression activities will not prevent the safe shutdown of the plant." The NRC staff's determination is that the underlying purpose of the rule is that, in the event of a fire, the operators will be able to achieve and maintain safe shutdown of the plant. This is consistent with the staff's previous evaluations of the purpose of 10 CFR 50.48 and Appendix R. Finally, the staff evaluates the feasibility and reliability of OMAs using the criteria in NUREG-1852, "Demonstrating the Feasibility and Reliability of Operator Manual Actions in Response to Fire."

2.9 Fire Safety Comments

2.9.a State Comments

The State commented that Entergy did not evaluate an individual's ability to perform any OMA. The State also noted that because of the large number of fire zones for which OMAs were requested, the likelihood of a fire to impact both trains of cables is increased, especially considering that Entergy had already been granted some exemptions. The State expressed concern with relying on manual actions instead of automatic actions, including concerns with human reliability. The State also commented that Entergy did not provide any evidence why actual compliance with the regulation is technically infeasible or cost prohibitive. The State commented that it appears the requested action will effectively amend the facility's operating license, and that the public should be offered an opportunity to comment on the environmental impacts and alternatives to the proposed action.

2.9.b NRC Staff Response

The NRC staff has performed inspections at the Indian Point site which evaluated the feasibility and reliability of the OMAs (see for example, ADAMS Accession No. ML111920339). In order to gain approval of an exemption request, the licensee does not need to show that compliance with the regulation is infeasible or cost prohibitive. The NRC can grant exemptions from the requirements of 10 CFR Part 50 when: (1) the exemptions are authorized by law, will not present an undue risk to public health or safety, and are consistent with the common defense and security; and (2) when special circumstances are present. There are six different ways of demonstrating special circumstances: (1) application of the regulation in the particular circumstances conflicts with other rules or requirements of the Commission; (2) application of the regulation in the particular circumstances would not serve the underlying purpose of the rule or is not necessary to achieve the underlying purpose of the rule; (3) compliance would result in undue hardship or other costs that are significantly in excess of those contemplated when the regulation was adopted, or that are significantly in excess of those incurred by others similarly situated; (4) the exemption would result in benefit to the public health and safety that compensates for any decrease in safety that may result from the grant of the exemption; (5) the exemption would provide only temporary relief from the applicable regulation and the licensee or applicant has made good faith efforts to comply with the regulation; or (6) there is present any other material circumstance not considered when the regulation was adopted for which it would be in the public interest to grant an exemption. In this case, special circumstances have been evaluated using the second condition, on whether or not application of the regulation is necessary to achieve the underlying purpose of the rule.

Exemptions are not license amendments and do not provide for public hearings before the Atomic Safety and Licensing Board or the Commission. The NRC staff has reviewed the exemption request and determined that no significant environmental impact exists. The staff previously published its finding of no significant impact. Additionally, the State comments did not identify any environmental impacts arising out of the exemption request.

As discussed above, an exemption request is not a license amendment. As such, there is no requirement to solicit public comments. The current NRC process for exemptions is to make appropriate licensee-submitted information available to the public, hold any meetings with the licensee as publicly open meetings, and publish the results of NRC technical reviews, but does

not include a specific opportunity for the public to comment on the exemption process. The public has the ability to use the NRC's 10 CFR 2.206 petition process to petition for the modification, revocation or suspension of a license.

Based on the above discussion, the NRC staff followed the applicable regulatory process. The information submitted by the licensee was made publicly available, and the staff's technical analysis was stated in the exemption. The NRC staff's determination that there is no undue risk to public health and safety also addresses the State's contention that special circumstances justify rejection of these exemption requests. Further, the NRC granted only a small portion of the exemptions requested for IP2 and IP3.

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/ra/

John P. Boska, Senior Project Manager
Plant Licensing Branch I-1
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Office of Nuclear Reactor Regulation

Docket Nos. 50-247 and 50-286

Enclosure:

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