



SECRETARY

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

July 17, 2018

COMMISSION VOTING RECORD

DECISION ITEM: SECY-18-0062

TITLE: REQUEST BY THE EXELON GENERATION COMPANY, LLC
FOR EXEMPTIONS FROM CERTAIN EMERGENCY PLANNING
REQUIREMENTS FOR THE OYSTER CREEK NUCLEAR
GENERATING STATION

The Commission acted on the subject paper as recorded in the Staff Requirements Memorandum (SRM) of July 17, 2018.

This Record contains a summary of voting on this matter together with the individual vote sheets, views and comments of the Commission.

A handwritten signature in blue ink, appearing to read "Annette L. Vietti-Cook", written over a horizontal line.

Annette L. Vietti-Cook
Secretary of the Commission

Enclosures:

1. Voting Summary
2. Commissioner Vote Sheets

cc: Chairman Svinicki
Commissioner Baran
Commissioner Burns
Commissioner Caputo
Commissioner Wright
OGC
EDO
PDR

VOTING SUMMARY – SECY-18-0062

RECORDED VOTES

	<u>APPROVED</u>	<u>DISAPPROVED</u>	<u>ABSTAIN</u>	<u>NOT PARTICIPATING</u>	<u>COMMENTS</u>	<u>DATE</u>
Chrm. Svinicki	X					07/05/18
Cmr. Baran	X	X			X	07/11/18
Cmr. Burns	X				X	07/11/18
Cmr. Caputo	X				X	07/06/18
Cmr. Wright	X				X	07/10/18

NOTATION VOTE

RESPONSE SHEET

TO: Annette Vietti-Cook, Secretary
FROM: CHAIRMAN SVINICKI
SUBJECT: SECY-18-0062: REQUEST BY THE EXELON
GENERATION COMPANY, LLC FOR EXEMPTIONS
FROM CERTAIN EMERGENCY PLANNING
REQUIREMENTS FOR THE OYSTER CREEK
NUCLEAR GENERATING STATION

Approved XX Disapproved _____ Abstain _____ Not Participating _____

COMMENTS: Below _____ Attached _____ None XX



SIGNATURE

07/5/18

DATE

Entered on "STARS" Yes No _____

NOTATION VOTE

RESPONSE SHEET

TO: Annette Vietti-Cook, Secretary
FROM: Commissioner Baran
SUBJECT: SECY-18-0062: Request by the Exelon Generation Company, LLC for Exemptions from Certain Emergency Planning Requirements for the Oyster Creek Nuclear Generating Station

Approved X Disapproved X Abstain Not Participating

COMMENTS: Below Attached X None

Entered in "STARS"

Yes X

No



SIGNATURE

7/11/18

DATE

**Commissioner Baran's Comments on SECY-18-0062,
"Request by the Exelon Generating Company, LLC for Exemptions from Certain
Emergency Planning Requirements for the Oyster Creek Nuclear Generating Station"**

The risk profile of a permanently shut down reactor entering decommissioning is very different than that of an operating reactor. However, NRC currently does not have regulations specifically tailored to the transition from operations to decommissioning. Because of this gap in NRC's regulatory framework, licensees with reactors transitioning to decommissioning routinely have sought exemptions to many of the regulations applicable to operating reactors. In order to address this gap and to take a fresh look at a range of decommissioning issues, the NRC staff is proceeding with the power reactor decommissioning rulemaking. Until the rulemaking is completed, the Commission is reviewing exemption requests from certain emergency planning requirements for permanently shut down reactors on a case-by-case basis.

Exelon seeks exemptions from a range of NRC emergency preparedness requirements at the Oyster Creek Generating Station, which will permanently shut down in September 2018. The NRC staff reviewed Exelon's request and recommended that the exemptions be granted because:

(1) an offsite radiological release will not exceed the limits of the U.S. Environmental Protection Agency's early phase protective action guide of one roentgen equivalent man [rem] at the site's exclusion area boundary for remaining applicable design-basis accidents (DBA); and (2) in the unlikely event of a beyond-DBA resulting in a loss of all [spent fuel pool] cooling, there would be sufficient time to initiate appropriate SFP mitigating actions and, if a release is projected to occur, there is sufficient time for offsite agencies to take protective actions to protect the health and safety of the public using a comprehensive, "all-hazards," emergency management plan.

According to the staff paper, the main risk at Oyster Creek is a beyond-design basis event resulting from an extreme earthquake or large aircraft impact. These events potentially could initiate a zirconium fire in the spent fuel pool if they were to result in a substantial loss of water in the pool. The staff explains that this is "the only accident scenario that might lead to a significant radiological release."

Whether to grant the exemption requests, as the NRC staff recommends, is a significant decision. After careful review of the specific circumstances at Oyster Creek, I approve the staff recommendation in part and disapprove it in part.

During my time on the Commission, I voted on four previous emergency planning exemption requests. I approved the exemption request for Crystal River Unit 3 and approved in part and denied in part the exemption requests for Vermont Yankee, San Onofre Units 2 and 3 and Fort Calhoun. My analysis for each focused on the relative likelihood of a zirconium fire in the spent fuel pool. The key variables in the analysis were the time that had passed from the permanent shutdown of the reactor (and the resulting time for spent fuel decay) and the seismicity of the site. Here, Exelon is seeking exemptions for Oyster Creek that would take effect in September 2019, 12 months after its shutdown. In May 2014, NRC published calculated ground motion response spectra for Oyster Creek that are above the plant's original design safe shutdown earthquake.¹ In my view, while some of the requested exemptions for

¹ NRC memorandum dated May 21, 2014 (ADAMS Accession No. ML14136A126).

Oyster Creek are appropriate once the spent fuel has decayed for 12 months, others are not. In evaluating when certain exemptions from emergency planning regulatory requirements are appropriate, the prior work of the NRC staff is instructive.

In the late 1990's, the Commission directed the staff to develop a single, integrated decommissioning rulemaking. This effort was halted in the wake of the September 11, 2001, attacks, when other initiatives took priority. Before the effort was suspended, the NRC staff presented a rulemaking plan to the Commission that recommended a tiered approach to emergency planning for decommissioning plants.² This tiered approach defined four periods of operation after a reactor permanently shuts down and described the appropriate emergency planning requirements for each period. For the first year after shutdown, the plant would be required to meet the emergency planning requirements for operating plants and no emergency planning exemptions would be issued.³ Between one year after shutdown and five years of post-shutdown spent fuel decay, emergency planning requirements would be similar to those for a monitored retrievable storage installation except that licensees would still be required to classify events up to a General Emergency level and make protective action recommendations to offsite officials. In this phase, detailed offsite radiological emergency response plans applicable to operating reactors would no longer be required, but Federal Emergency Management Agency (FEMA) approved all-hazards emergency plans would remain in effect. After five years of spent fuel decay, all fuel is removed from the pool, or a licensee has demonstrated through conservative adiabatic analysis that the decay heat level of spent fuel in the pool is low enough that the fuel would not be susceptible to a zirconium fire, emergency planning requirements would be reduced and similar to those for an independent spent fuel storage installation. Finally, once all spent fuel was removed from the site, no emergency planning would be required.

This thoughtful approach recommended by the NRC staff was risk-informed and performance-based. I have applied it in evaluating exemption requests in the past, and in the absence of a completed decommissioning rule, I believe this approach continues to provide a useful framework for evaluating pending emergency planning exemption requests.⁴

Applying this framework to the Oyster Creek exemption request provides for a gradual reduction in emergency planning requirements as the spent fuel cools and the risks diminish over time. Oyster Creek will permanently shut down in September 2018. After 12 months of natural decay, the likelihood of a zirconium fire and subsequent offsite release would be reduced. Moreover, in the event of a loss of cooling of the spent fuel, the licensee could take actions using the post-9/11 and post-Fukushima spent fuel pool mitigating strategies, such as using fire hoses and portable pumps to inject water into the spent fuel pool to restore and maintain cooling.⁵ Offsite response agencies also could take protective actions pursuant to their FEMA-approved comprehensive emergency management plan. Based on these factors, I

² SECY-00-145, "Integrated Rulemaking Plan For Nuclear Power Plant Decommissioning," June 2000.

³ The one-year timeframe was the approximate amount of time that would need to pass to ensure that, in the worst case scenario of no water or air cooling of the spent fuel, it would take ten hours for the temperature of the fuel rods to increase enough for a zirconium fire to start.

⁴ My interim use of this approach in analyzing exemption requests does not reflect a view on whether a ten-hour buffer before the potential onset of a zirconium fire is the appropriate standard to establish in the rulemaking. I want to thoroughly review all of the public comments and the staff's draft proposed rule before reaching a judgment on what the generally applicable standard should be.

⁵ These post-9/11 measures require that the licensee have the equipment and staff available to take appropriate mitigating actions in the event of a beyond design basis occurrence. The measures are required by the license as long as spent fuel remains in the pool.

agree with the NRC staff that some elements of offsite radiological emergency planning are not necessary after September 2019 in this particular case.

However, for the period beginning in September 2019 and continuing until September 2023 (or until all spent fuel has been removed from the spent fuel pool, whichever is earlier), I disapprove those requested emergency planning exemptions that are inconsistent with the tiered approach described in the June 2000 SECY paper. During this period, the licensee would not be required to maintain a detailed offsite radiological emergency response plan, but would continue to be subject to the requirements to classify events up to a General Emergency level, to make protective action recommendations to offsite officials, and to maintain the post-9/11 and post-Fukushima spent fuel pool mitigating strategies. In addition, I would require Exelon to continue to maintain an emergency public notification system and the capability to notify responsible state and local officials within 15 minutes of declaring an emergency.

After five years of spent fuel decay in the pool, a zirconium fire should no longer be reasonably conceivable. Beginning in September 2023 (or the date on which all spent fuel has been removed from the spent fuel pool, whichever is earlier), I approve the remainder of the requested emergency planning exemptions. This would result in emergency planning requirements similar to those for an independent spent fuel storage installation. The license will continue to require the post-9/11 and post-Fukushima spent fuel pool mitigating strategies as long as fuel remains in the pool.

Consistent with the tiered approach, I also approve the requested exemptions for Oyster Creek in the event that Exelon demonstrates to the NRC staff's satisfaction through a conservative analysis that the decay heat level of the spent fuel is so low that the fuel is no longer susceptible to a zirconium fire.

NOTATION VOTE

RESPONSE SHEET

TO: Annette Vietti-Cook, Secretary

FROM: Commissioner Burns

SUBJECT: SECY-18-0062: Request by the Exelon Generation Company, LLC for Exemptions from Certain Emergency Planning Requirements for the Oyster Creek Nuclear Generating Station

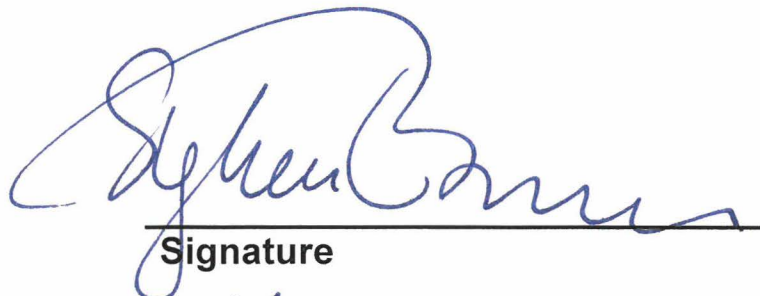
Approved Disapproved Abstain Not Participating

COMMENTS: Below Attached None

I approve Exelon Generation Company's requested exemptions from certain emergency planning requirements in 10 CFR 50.47(b) and Appendix E to 10 CFR Part 50. These exemptions will reduce the emergency planning requirements commensurate with the risk associated with the permanent cessation of operations and permanent removal of spent fuel from the reactor vessel at the Oyster Creek Nuclear Generating Station (OCNGS). Exelon plans to permanently cease operations at OCNGS no later than October 31, 2018, and has based its application for revision to the emergency plan and emergency action level scheme on an effective implementation date no earlier than 12 months after shutdown. The NRC staff has concluded that granting the exemption request would provide: (1) an adequate basis for an acceptable state of emergency preparedness; and (2) assurance that adequate protective measures can and will be taken in the highly unlikely event of a radiological emergency at OCNGS. The NRC staff has also determined that the exemptions are authorized by law, will not present an undue risk to the public health and safety, will be consistent with the common defense and security, and special circumstances are present. Therefore, I approve the exemptions.

Entered in STARS

Yes
No



Signature

11 July 2018

Date

NOTATION VOTE

RESPONSE SHEET

TO: Annette Vietti-Cook, Secretary
FROM: Commissioner Caputo
SUBJECT: SECY-18-0062: Request by the Exelon Generation Company, LLC for Exemptions from Certain Emergency Planning Requirements for the Oyster Creek Nuclear Generating Station

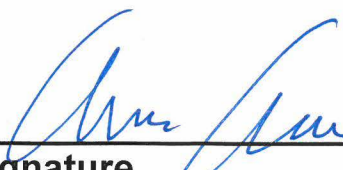
Approved X Disapproved Abstain Not Participating

COMMENTS: Below Attached X None

Entered in STARS

Yes X

No



Signature

7-6-18

Date

Commissioner Caputo's Comments on SECY-18-0062

I commend the staff on their thorough review and analysis of the request for exemptions from specific portions of 10 CFR 50.47 and Appendix E to 10 CFR Part 50 for the Oyster Creek Nuclear Generating Station. Based on its well-reasoned conclusions, I approve the staff's recommendation to grant Exelon's request.

Under 10 CFR 50.12, the Commission is authorized to grant requests for specific exemptions to its Part 50 regulatory requirements if the exemptions are authorized by law, will not present an undue risk to the public health and safety, are consistent with the common defense and security, and special circumstances are present. One such special circumstance occurs when application of the regulation would not serve or is not necessary to achieve the underlying purpose of the rule.

Exelon has notified the staff that it would retire Oyster Creek and permanently cease operations no later than October 31, 2018. The staff explained that the level of risk of a radiological emergency at a decommissioning power reactor site decreases significantly as a licensee transitions from an operating reactor site to a decommissioning site. Since specific portions of 10 CFR 50.47 and Appendix E to 10 CFR Part 50 address situations where the risk of radiological accidents far exceeds the level of risk existent at a decommissioning power reactor site, the application of those regulations are not necessary to achieve the underlying purpose of those regulations. In order to establish a level of Emergency Planning (EP) commensurate with the risk, the NRC in the past has issued exemptions from certain EP requirements for certain licensees transitioning from operating reactor site to decommissioning site, including, among others, Kewaunee Power Station; Crystal River Nuclear Power Station, Unit 3; San Onofre Nuclear Generating Station, Units 2 and 3; Vermont Yankee Nuclear Power Station; and Fort Calhoun Station, Unit 1.

The staff has concluded that Exelon's request meets the standards for specific exemptions in 10 CFR 50.12, consistent with well-established precedent. Specifically, the staff has determined that granting the requested exemption to Exelon would provide reasonable assurance that: (1) an offsite radiological release will not exceed the limits of the U.S. Environmental Protection Agency's early phase protective action guide of one roentgen equivalent man at the site's exclusion area boundary for remaining applicable design-basis accidents (DBA); and (2) in the unlikely event of a beyond-DBA resulting in a loss of all spent fuel pool cooling, there would be sufficient time to initiate appropriate spent fuel mitigating actions and, if a release is projected to occur, there is sufficient time for offsite agencies to take protective actions to protect the health and safety of the public using a comprehensive "all-hazards" emergency management plan. After reviewing the staff's analysis, I agree with these conclusions and determine that granting the requested exemption to Oyster Creek is consistent with past-practice. I therefore approve Exelon's request for an exemption from specific portions of 10 CFR 50.47 and Appendix E to 10 CFR Part 50.

NOTATION VOTE

RESPONSE SHEET

TO: Annette Vietti-Cook, Secretary
FROM: Commissioner David A. Wright
SUBJECT: SECY-18-0062: Request by the Exelon Generation Company, LLC for Exemptions from Certain Emergency Planning Requirements for the Oyster Creek Nuclear Generating Station

Approved Disapproved Abstain Not Participating

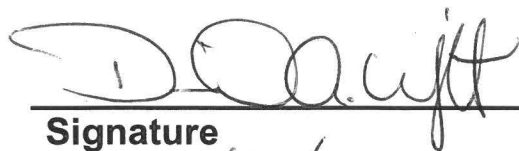
COMMENTS: Below Attached None

The NRC staff's recommendation that the Commission grant Exelon's request for exemptions from certain emergency planning requirements for the Oyster Creek Nuclear Generating Station is consistent with the NRC's previous grant of exemptions from those emergency planning requirements for licensees transitioning from operating status to decommissioning. These exemptions reflect the significant reduction in the level of risk of a radiological emergency at a decommissioning power reactor site as the site transitions from operation to decommissioning status. Accordingly, I approve the staff's recommendation to grant Exelon's request and commend the staff for its thorough review and analysis.

Entered in STARS

Yes

No



Signature

7/10/18

Date