



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

August 7, 2014

COMMISSION VOTING RECORD

DECISION ITEM: SECY-14-0066

TITLE: REQUEST BY DOMINION ENERGY KEWAUNEE, INC. FOR EXEMPTIONS FROM CERTAIN EMERGENCY PLANNING REQUIREMENTS

The Commission acted on the subject paper as recorded in the Staff Requirements Memorandum (SRM) of August 7, 2014.

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



Annette L. Vietti-Cook
Secretary of the Commission

Attachments:

1. Voting Summary
2. Commissioner Vote Sheets

cc: Chairman Macfarlane
Commissioner Svinicki
Commissioner Magwood
Commissioner Ostendorff
OGC
EDO
PDR

VOTING SUMMARY - SECY-14-0066

RECORDED VOTES

				NOT APRVD	DISAPRVD	ABSTAIN	PARTICIP	COMMENTS	DATE
CHRM. MACFARLANE	X	X					X		7/25/14
COMR. SVINICKI		X					X		7/3/14
COMR. MAGWOOD		X					X		7/9/14
COMR. OSTENDORFF	X						X		7/3/14

NOTATION VOTE

RESPONSE SHEET

TO: Annette Vietti-Cook, Secretary

FROM: Chairman Allison M. Macfarlane

SUBJECT: SECY-14-0066 – REQUEST BY DOMINION ENERGY KEWAUNEE, INC. FOR EXEMPTIONS FROM CERTAIN EMERGENCY PLANNING REQUIREMENTS

Approved X **Disapproved** X **Abstain** _____

Not Participating _____

COMMENTS: Below Attached None

Suzanne
SIGNATURE
7/25/14
DATE

Entered on "STARS" Yes X No

Chairman Macfarlane's comments on SECY-14-0066, "Request by Dominion Energy Kewaunee, Inc. for Exemptions from Certain Emergency Planning Requirements"

Some EP Exemptions are Appropriate

This vote considers a request from Dominion Energy Kewaunee for exemptions to the Nuclear Regulatory Commission's (NRC's) emergency preparedness (EP) requirements after the plant has permanently shut down. This is the first such request put before this Commission and we expect similar requests from the other recently permanently closed power plants. Currently the only set of EP rules for nuclear power plants are those for operating plants even though the risks posed by permanently shutdown plants differ from those of operating plants.

A permanently shutdown and defueled reactor presents a different risk to the public because the types of possible accidents are fewer in number and any possible fuel damage and offsite release from a spent fuel pool (SFP) accident is likely to develop slower than those at operating reactors. These considerations provide a sufficient basis for thoughtful consideration of whether some reduction in EP requirements. The question is which rules are reasonable to exempt?

Staff Safety Basis for Recommendation

The staff's basis for granting exemptions that would relieve Kewaunee of many of the requirements to maintain a formal offsite radiological emergency plan is based on the licensee's site specific analysis coupled with insights from an NRC study often cited by both the staff and licensees used to evaluate EP exemptions, NUREG-1738, "Technical Study of Spent Fuel Pool Accident Risk at Decommissioning Nuclear Power Plants". The staff recommends granting the EP exemptions to Kewaunee based on the licensee's analysis that concludes at least 10 hours would be available, from the time fuel begins to heat up and assuming the complete loss of all cooling, to take mitigating actions to restore cooling. The time available also allows for offsite protective actions by state and local authorities under a comprehensive emergency management plan. The staff concluded that granting the exemption request would provide: (1) an adequate basis for an acceptable state of emergency preparedness; and (2) in conjunction with arrangements made with offsite response agencies, reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency at Kewaunee.

Basis for Vote – Maintain some EP because a Large Release Remains Possible

A general consensus of past spent fuel pool studies, including NUREG-1738, is that the potential for any significant offsite release from SFP accidents is from zirconium fires, which can occur as a result of severe beyond design basis earthquakes or cask drop events. Malevolent events could also impact SFP cooling but were not included in NUREG-1738, as the frequency

of these events cannot be estimated.¹ The low likelihood of SFP accidents, regardless of the initiating cause, and the time available for a licensee to take mitigating actions to prevent a zirconium fire are reasons why the potential for an offsite release exceeding the U.S. Environmental Protection Agency's (EPA) Protective Action Guidelines (PAGs) is very low. However, as the staff noted in NUREG-1738, which was the basis for the decommissioning rulemaking proposed in SECY 00-0145, "Integrated Rulemaking Plan for Nuclear Power Plant Decommissioning," it is still possible to have an event that could lead to a release resulting in offsite doses that exceed the EPA PAGs.

My view that a partial relaxation of the requirements is acceptable is based on several factors. The licensee's site specific analysis shows that, assuming a loss of water cooling (but not a partial drain down), air cooling would still result in sufficient cooling of the cladding well below zirconium ignition temperatures. I agree with the staff's review and conclusion that sufficient time likely exists to take action and the equipment necessary to take action is available onsite. A license condition to maintain portable equipment onsite for SFP cooling and licensee commitments to implement industry decommissioning commitments and staff decommissioning assumptions referenced in NUREG-1738 are also key aspects to granting any EP exemptions. The license condition and commitments ensure that the likelihood of a SFP accident that results in an offsite release remains very low. I, therefore, conclude that certain EP requirements that exist to require a licensee to be able to rapidly respond to potential operating reactor accidents can be relaxed at Kewaunee.

I do not, however, agree with all of the proposed exemptions. The possibility of significant offsite release continues to exist for some period of time while the spent fuel continues to decay, and considering the uncertainties and limitations in predicting all human-induced or natural events that could result in a loss of all SFP cooling, from a defense-in-depth perspective, I believe the staff should have presented options for a more graded approach for granting the exemptions.

Therefore, until the time that sufficient analysis is presented to show that a spent fuel pool zirconium fire, and therefore a significant offsite release, is no longer possible, I believe the licensee should retain some limited pre-planned offsite response capabilities. Given the timing of this exemption request and past Commission direction on an integrated rulemaking for decommissioning, the staff has not had the opportunity to present any options to the Commission for a more graded approach for EP regulatory requirements during the phases of reactor operations, post-defueling stages, and the longer-term decommissioning phases. Similar to the previously proposed integrated rulemaking, it is possible that some options would have preserved some pre-planned offsite response capabilities. Absent information on other options, I do not have a basis to determine whether some requirements, such as emergency classification and off-site dose projection capabilities have little added-value in defense-in-depth and should be specifically exempted.

¹ With respect to security and terrorist attacks during decommissioning, the staff separately reviews and inspects the licensee's Security Plan to ensure that physical protection of the spent fuel pool will continue to maintain high assurance of adequate protection for the spent fuel pool.

However, I note that in the proposed rulemaking presented to the Commission in SECY 00-0145, the staff recommended that if the possibility of a spent fuel pool fire that could result in an offsite dose exceeding the EPA PAGs existed, it was prudent to maintain the capability to classify events up to and including the general emergency level. As stated in SECY 00-0145, this would also necessitate retaining the capability for licensees to perform dose assessments and provide protective action recommendations to offsite officials. The staff recommendation at the time proposed an alternative that a licensee could conduct a site-specific analysis to demonstrate that the spent fuel had cooled sufficiently such that the possibility of a zirconium fire no longer existed. A graded approach to EP exemptions similar to what was recommended in SECY 00-0145 that recognizes the continued potential for offsite releases would be more appropriate at this time.

Spent Fuel Pool Storage ≠ Independent Spent Fuel Storage Installations (ISFSI)

While I agree it is important to examine the emergency planning requirements in Part 72 for independent spent fuel storage installations, I do not agree with the premise that the risk of spent fuel storage in casks is equivalent to the risk of storing 1-2 year old fuel in a densely packed spent fuel pool. First, fuel that is stored in casks is typically much older than 1-2 years post-discharge and there is not a possibility of fuel heating up to zirconium fire temperatures if a cask loses its helium coolant. Second, the very nature of dry casks results in the spent fuel being segregated and compartmentalized into smaller volumes. A severe accident or event would be less likely to propagate to the entire population of fuel being stored externally in casks.

Other Influencing Factors

I am encouraged by the licensee's stated plans and schedule to move the spent fuel to dry cask storage by the end of 2016. Removing the older fuel from the pool and placing it in casks will further decrease the potential for SFP accidents with large consequences², which in turn, provides significant justification for further reduction in EP. However, this cannot be used to justify the reduction in EP proposed since no license condition or requirement ensures that the planned schedule is executed.

Kewaunee is very near to Point Beach and the two facilities have overlapping emergency planning zones. The staff did not rely on this factor in the staff's safety basis for its recommendation to grant the EP exemptions, but this reality may provide additional assurance to the public regarding offsite response to radiological emergencies. Since Point Beach is owned and operated by a separate licensee, it would not be appropriate to rely on this point in my decision here.

I also believe it is important to clearly communicate to the public our overall strategy regarding decommissioning in general, and with exemptions in particular. Presently, the word "exemptions" without a grander context and understanding conjures up a perception on behalf of many in the public that we are not upholding the highest standard for safety. While exemptions are a part of our regulatory process, we should use them sparingly and only when

² Though, we must admit that during the period of spent fuel transfer, the potential for a cask drop accident exists.

we are convinced that granting the exemption will not be a detriment to safety and security. In reviewing the staff's paper on this exemption request, I find the overall strategy for decommissioning to be lacking, and am not convinced that there is an adequate basis to exempt the licensee from the majority of the offsite radiological emergency preparedness requirements at this point in time.

Conclusion

Based on my review of this request, in a general sense, I agree that EP requirements that are specifically designed for rapidly developing operating reactor accidents can be exempted, and I support those exemptions. There is a significant amount of time to react to events involving colder fuel in the pool. However, I find that there is not an adequate basis to exempt the licensee from all of the offsite radiological emergency preparedness requirements. Specifically, I disapprove elements of the exemption request that remove Keweenaw's requirements for emergency classification and offsite dose projection capabilities, which appear to have defense-in-depth value in the unlikely event of an offsite release. The staff should maintain these elements in its pending review of Keweenaw's license request to change its EP plan.

While the likelihood of having a significant offsite release is judged by the staff to be much lower for SFP accidents as compared to operating reactor accidents, the uncertainty in estimating the likelihood for offsite release (accident or malevolent), coupled with the need for defense-in-depth, leads me to a conclusion that a more graded approach to issuing EP exemptions, in this case, would better protect the public health and safety.

I encourage staff to consider options for a graded approach to EP in any future rulemaking, for the interim time in which fuel may reside in spent fuel pools after permanent defueling of the core.



A handwritten signature of Allison M. Macfarlane, consisting of stylized initials "AMM" followed by her last name, written over a horizontal line.

Allison M. Macfarlane

Date

NOTATION VOTE

RESPONSE SHEET

TO: Annette Vietti-Cook, Secretary

FROM: COMMISSIONER SVINICKI

SUBJECT: SECY-14-0066 – REQUEST BY DOMINION ENERGY
KEWAUNEE, INC. FOR EXEMPTIONS FROM CERTAIN
EMERGENCY PLANNING REQUIREMENTS

Approved XX Disapproved _____ Abstain _____

Not Participating _____

COMMENTS: Below Attached XX None


SIGNATURE

07/  /14
DATE

Entered on "STARS" Yes No

Commissioner Svinicki's Comments on SECY-14-0066
Request by Dominion Energy Kewaunee, Inc. for Exemptions from Certain
Emergency Planning Requirements

I approve the staff's request to grant Dominion Energy Kewaunee, Inc.'s (DEK's) request for exemptions from certain emergency planning (EP) requirements of 10 CFR 50.47(b) and Appendix E to 10 CFR Part 50, consistent with the staff's safety determination as described in SECY-14-0066. The staff has determined that the exemption request is consistent with Commission policy as reflected in previous agency action on exemption requests of this nature and is commensurate with the risk associated with the facility. Because the regulatory provisions cited here do not distinguish between the risk profiles of operating reactors and those in a state of decommissioning, the issuance of such exemptions is the agency's regulatory mechanism for acknowledging this changed risk profile.

The NRC staff has concluded that granting the exemption request provides (1) an adequate basis for an acceptable state of emergency preparedness and (2) in conjunction with arrangements made with offsite response agencies, reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency. The staff has further determined that the exemption is authorized by law, will not present an undue risk to the public health and safety, and will be consistent with the common defense and security.

The staff further notes that, in addition to DEK's request, the licensees for Crystal River Nuclear Generating Plant, San Onofre Nuclear Generating Station, and Vermont Yankee Nuclear Power Station have also applied for exemptions in a parallel fashion. Should the Commission approve the staff's recommendation in the instant case, it will have affirmed the staff's establishment of the requisite showing for approval of similar exemption requests.

While I support the Commission's disinclination to delegate the approval of decreases in effectiveness of certain emergency preparedness measures to the staff, and certainly do not propose we do so here, the existence of multiple pending requests for the same relief causes me to propose that Commission approval of the staff's recommendation here could guide and form the precedent for the other pending requests.

Should the Commission approve this action, if the staff determines that the pending exemption requests for Crystal River, San Onofre, and Vermont Yankee make the same showing on the same factors to the staff's satisfaction, the staff should notify the Commission in each case and provide to the Commission, for information, the same analysis and information provided for DEK's request. In the absence of intervening Commission action, after a period of five business days during which the matter would lay before the Commission for its review, the staff would be authorized to proceed in issuing the exemptions in these three cases. Should the staff identify any special, unique considerations in any of these cases, however, it should provide its analysis, with a discussion of these factors, to the Commission, for its review and approval, as was done in this paper.



Kristine L. Svinicki 07/ 3 /14

NOTATION VOTE

RESPONSE SHEET

TO: Annette Vietti-Cook, Secretary

FROM: COMMISSIONER MAGWOOD

SUBJECT: SECY-14-0066 – REQUEST BY DOMINION ENERGY
KEWAUNEE, INC. FOR EXEMPTIONS FROM CERTAIN
EMERGENCY PLANNING REQUIREMENTS

Approved X Disapproved _____ Abstain _____

Not Participating _____

COMMENTS: Below _____ Attached X None _____


Willard Magwood
SIGNATURE

9 July 2014
DATE

Entered on “STARS” Yes X No _____

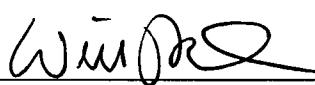
**Commissioner Magwood's Comments on
SECY-14-0066, "Request by Dominion Energy Kewaunee, Inc.
For Exemptions from Certain Emergency Planning Requirements"**

I commend the staff for its hard work and thorough review of the first emergency planning and preparedness exemption request in over 15 years for a reactor that has permanently ceased operations. Because there are no explicit regulatory provisions distinguishing emergency preparedness requirements for a power reactor that has been permanently shut down from those for an operating reactor, licensees must seek exemptions from the NRC for certain emergency preparedness requirements before amending their emergency plans.

In reviewing the request by this licensee to modify their emergency plan to reflect the risk commensurate with a shutdown plant, NRC staff ensured that the continuing storage of spent fuel in the spent fuel pool and onsite dry casks onsite will be conducted in a manner that is fully protective of public health and safety. The staff reviewed the Kewaunee exemption request against the requirements included in 10 CFR 50.47, Appendix E to 10 CFR Part 50, and 10 CFR 72.32, and concluded that granting the exemption request would provide: (1) an adequate basis for an acceptable state of emergency preparedness; and (2) in conjunction with arrangements made with offsite response agencies, reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency at the Kewaunee site. Importantly, the NRC staff also engaged the Federal Emergency Management Agency (FEMA) and reflected that agency's views in its consideration.

After a thorough review of the staff's analysis, as discussed in SECY-14-0066, and in keeping with past precedent, I concur with the staff's recommendation.

Nevertheless, I note that the use of exemptions, while appropriate and protective of public health and safety, is less desirable than the application of an established and regularized regulatory framework. As staff notes in SECY-14-0066, development of such a framework had been initiated in 2000, but was later deferred to deal with higher priority activities. Similarly today, the agency is occupied fully with issues of higher safety significance, and the development of an integrated rulemaking to address reactors that have been permanently shut down is not our highest priority. However, this calculus could change if the number of plants entering into early decommissioning should increase in the near future. Staff should monitor closely the potential for additional plant closures and report to the Commission in January 2015 as to its views on the need for an integrated rulemaking and the schedule and resources required to complete such an effort.



William D. Magwood, IV Date

7/9/14

NOTATION VOTE

RESPONSE SHEET

TO: Annette Vietti-Cook, Secretary

FROM: COMMISSIONER OSTENDORFF

SUBJECT: SECY-14-0066 – REQUEST BY DOMINION ENERGY KEWAUNEE, INC. FOR EXEMPTIONS FROM CERTAIN EMERGENCY PLANNING REQUIREMENTS

Approved XX **Disapproved** **Abstain**

Not Participating

COMMENTS: **Below** **Attached XX** **None**

Crofton

SIGNATURE

7/3/14

DATE

Entered on “STARS” Yes X No

Commissioner Ostendorff's Comments on SECY-14-006, "Request by Dominion Energy Keweenaw, Inc. for Exemptions from Certain Emergency Planning Requirements"

I commend the staff for its thorough technical analysis of the Emergency Planning (EP) exemptions requested by Dominion Energy Keweenaw, Inc. (DEK). I also commend the staff for its diligent efforts to address the technical and regulatory issues associated with the transition of a reactor from operating to decommissioning. While this work was not anticipated when the FY2014 budget was formulated, the staff has proven its flexibility to address these issues in a timely manner, thus avoiding unnecessary regulatory burden on a facility that is no longer operating.

The NRC has a comprehensive regulatory program for both operating reactors and for reactors performing decommissioning activities. However, only limited regulations and guidance exist that specifically address the transition of a reactor from operating to decommissioning. Specifically, there are no explicit regulatory provisions distinguishing EP requirements for a power reactor that has been permanently shut down from those for an operating power reactor. However, there are clear and significant differences between operating plants and those that are permanently shutdown and defueled. Accordingly, the NRC's existing regulatory framework provides appropriate means for licensees to amend their programs commensurate with the reduction of the hazards at a permanently shutdown facility.

As stated in the SECY paper, with the significant reduction in radiological risk for a power reactor undergoing decommissioning, the NRC has historically approved exemptions to EP and security requirements based on site-specific evaluations and the objectives of the regulations. In the specific case of the EP exemptions and proposed EP program that is commensurate with the risk associated with its new status. Therefore, I approve the staff's recommendation to grant DEK's requested exemptions from certain EP requirements of 10 CFR 50.47(b) and Appendix E to 10 CFR Part 50.