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From: RulemakingComments Resource
Sent: Wednesday, January 08, 2014 10:08 AM
To: Rulemaking1CEm Resource
Cc: RulemakingComments Resource
Subject: PR-51 Waste Confidence
Attachments: Comment of David Helker on behalf of Exelon Generation received via mail.pdf

DOCKETED BY USNRC—OFFICE OF THE SECRETARY
SECY-067

PR#: PR-51
FRN#: 78FR56775
NRC DOCKET#: NRC-2012-0246
SECY DOCKET DATE: 12/20/13
TITLE: Waste Confidence—Continued Storage of Spent Nuclear Fuel
COMMENT#: 00855

Hearing Identifier: Secy_RuleMaking_comments_Public
Email Number: 918

Mail Envelope Properties (377CB97DD54F0F4FAAC7E9FD88BCA6D0014435D7364A)

Subject: PR-51 Waste Confidence
Sent Date: 1/8/2014 10:07:51 AM
Received Date: 1/8/2014 10:07:53 AM
From: RulemakingComments Resource

Created By: RulemakingComments.Resource@nrc.gov

Recipients:
"RulemakingComments Resource" <RulemakingComments.Resource@nrc.gov>
Tracking Status: None
"Rulemaking1CEm Resource" <Rulemaking1CEm.Resource@nrc.gov>
Tracking Status: None

Post Office: HQCLSTR01.nrc.gov

Files	**Size**	**Date & Time**	
MESSAGE	254	1/8/2014 10:07:53 AM	
Comment of David Helker on behalf of Exelon Generation received via mail.pdf			80993

Options
Priority: Standard
Return Notification: No
Reply Requested: No
Sensitivity: Normal
Expiration Date:
Recipients Received:

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December 20, 2013

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

Subject: Comments Concerning Proposed Rule 10 CFR Part 51, *"Waste Confidence - Continued Storage of Spent Nuclear Fuel"* (78FR56776, dated September 13, 2013) and Draft NUREG-2157, *"Waste Confidence Generic Environmental Impact Statement"* (78FR56621, dated September 13, 2013) (Docket ID NRC-2012-0246)

This letter is being submitted in response to the U.S. Nuclear Regulatory Commission (NRC) request for comments published in the *Federal Register* on September 13, 2013, concerning the subject proposed rule and draft NUREG.

The NRC proposes revising its generic determination on the environmental impacts of the continued storage of spent nuclear fuel beyond a reactor's licensed life for operation and prior to ultimate disposal. The NRC has prepared a draft generic environmental impact statement to support this proposed rule. The NRC proposes to conclude that the analysis generically addresses the environmental impacts of continued storage of spent nuclear fuel beyond the licensed life for operation of a reactor and supports the determinations that it is feasible to safely store spent nuclear fuel beyond the licensed life for operation of a reactor and to have a mined geologic repository within 60 years following the licensed life for operation of a reactor. The proposed rule also would clarify that the generic determination applies to a license renewal for an Independent Spent Fuel Storage Installation (ISFSI). In addition, the proposed rule would make conforming amendments to the NRC's 2013 findings on the environmental effects of renewing the operating license of a nuclear power plant to address issues related to the storage of spent nuclear fuel after a reactor's licensed life for operation and the offsite radiological impacts of spent nuclear fuel and high-level waste disposal.

Exelon Generation Company, LLC (Exelon) appreciates the opportunity to comment on the subject proposed rule and draft NUREG and offers the attached comments for consideration by the NRC. In addition, Exelon supports the comments submitted by the Nuclear Energy Institute (NEI) on behalf of the industry related to this subject.

Respectfully,

D. P. Helker

David P. Helker
Manager, Licensing and Regulatory Affairs
Exelon Generation Company, LLC

Attachment

Comments Concerning Proposed Rule 10 CFR Part 51, *"Waste Confidence - Continued Storage of Spent Nuclear Fuel"* and Draft NUREG-2157, *"Waste Confidence Generic Environmental Impact Statement"*

Exelon Generation Company, LLC (Exelon) has reviewed the U.S. Nuclear Regulatory Commission's (NRC's) proposed Waste Confidence Generic Environmental Impact Statement (GEIS) documentation noticed in the *Federal Register* and offers the following comments for consideration by the NRC:

1. Exelon supports the NRC's generic determination that used fuel can be stored at nuclear power plant sites, safely and without significant environmental impact, between the end of the license term and the time it is shipped offsite.

2. Exelon supports the NRC's decision to continue its long-standing and Court-sanctioned practice of addressing waste confidence issues generically, rather than on a site-specific basis. This practice maximizes administrative efficiency, while ensuring that the environmental impacts of spent fuel storage are fully considered and disclosed prior to licensing or relicensing nuclear power reactors. Exelon agrees that a comprehensive general analysis is sufficient to examine onsite risks that are essentially common to all plants, particularly given the NRC's use of conservative bounding assumptions and the opportunity for concerned parties to raise site-specific differences at the time of a specific site's licensing.

3. For spent fuel storage risk, Exelon recommends that the NRC use existing information to the extent possible, and bolster it with new analyses only as necessary. Exelon does not consider it necessary to utilize "worst case" assumptions and believes that the NRC should focus on explaining how data on past events informs the NRC on the likelihood and impacts of future events. For example, the NRC has appropriately cited NUREG-1864, "A Pilot Probabilistic Risk Assessment of a Dry Cask Storage System at a Nuclear Power Plant," dated March 2007 in support of statements made about the low risk associated with dry cask storage. These statements could be further strengthened by also citing an independent Probabilistic Risk Assessment (PRA) study conducted by the Electric Power Research Institute (EPRI) (i.e., EPRI Document 1009691, "Probabilistic Risk Assessment (PRA) of Bolted Storage Casks: Updated Quantification and Analysis Report," dated Nov 2004), which also supports the conclusion that the risks are low. EPRI confirmed low risk for bolted storage systems. Exelon, along with the industry, agrees with the NRC that the low risks calculated by these studies were evident during the Mineral, Virginia and Fukushima earthquakes, neither of which resulted in significant damage to dry cask storage systems or release of radionuclides.

4. For its analysis of spent fuel pool fires, Exelon recommends that the NRC use existing information to the extent possible. The NRC has previously compiled numerous technical studies regarding the risks and environmental impacts of onsite spent fuel storage that it can rely upon in assessing both the probabilities and consequences of spent fuel pool fires. Exelon agrees that the environmental impacts associated with a spent fuel pool fire would be small based on the probability-weighted consequences of such an event at all existing reactor sites.

    - It is noted in the reference information that the likelihood of spent fuel pool fires is very low and diminishes to zero as fuel cools. The data indicates that only

freshly discharged (less than four months) fuel has the ability to create a spent fuel pool fire. This effectively eliminates most of the spent fuel being considered, and certainly all of the fuel for plants who have terminated their license. The NRC should carefully weigh this important fact during its consideration of the risk of spent fuel pool fires.

5. In the discussion of historic and cultural resources impacts for at-reactor long-term storage, Exelon believes there is an inappropriate conclusion that the possibility of moderate or large impacts to historic and cultural resources could exist. It should be recognized that for long-term or indefinite storage at decommissioned reactor sites, there will be a large area of previously disturbed land that could be used for the storage facilities and a possible Dry Transfer System (DTS). A more reasonable assumption would be that the Independent Spent Fuel Storage Installation (ISFSI) can be sited to avoid significant historic and cultural resources much like the appropriate assumption made for special status species and habitat made in other sections of the GEIS. Therefore, historic properties would not be adversely affected. It is reasonable to assume that, at a decommissioned nuclear power plant site, any new construction would be on the large area previously disturbed in an effort to avoid any undisturbed areas. The GEIS seems to reach an unreasonable conclusion regarding the possibility of large historic and cultural impacts. The rationale is already included in the discussion to conclude that impacts will likely be small. Exelon believes that the conclusion for at-reactor continued storage should be that cultural and historic impacts will be small for all phases.

6. Exelon suggests that the NRC reconsider including "public perception" costs and benefits in the NRC's cost benefit analysis. Exelon believes that these costs might be speculative and fail to consider that different segments of the public have different perceptions. For example, the NRC has concluded that there would be a public perception benefit to site-specific review and a public perception cost to precluding such review. Indeed, among segments of the public opposing specific facilities, this is most likely a correct assumption, as a site-specific tool provides another opportunity for this opposition to be considered. However, among segments of the public concerned about the cost and availability of clean reliable electricity, the exact opposite would be true; this segment of the public would not want the licensing of generating facilities they support to become protracted by unnecessary and duplicative environmental reviews. The dilemma then becomes to which group's perception does the NRC ascribe a given cost or benefit. If the answer to this question is to be that the perception held by the majority of the public should prevail, then the NRC's decision to associate costs and benefits with the views of those who oppose nuclear power plants is considered to be incorrect, according to recent public opinion surveys. Exelon reviewed a recent survey noting that 69 percent now favor the use of nuclear energy as one of the ways to produce electricity. But even though such poll results have been consistently typical for a number of years, it is probably not appropriate for the NRC, an independent safety regulator, to base its cost benefit analyses on the results of public opinion surveys. Rather, it would seem more appropriate for the NRC to avoid attempting to quantify perception costs and benefits altogether.

7. Exelon believes that the NRC appropriately addresses concerns being raised about Stress Corrosion Cracking (SCC) of dry storage canisters by citing the manner in which these concerns are being resolved as an example of how the regulatory process responds to emerging events. The significant efforts that the industry has already taken,

and is continuing to take, to address this concern and assure the longevity of these canisters should also be mentioned.

8. Exelon considers that dry used fuel storage and transportation are among the safest of all industrial activities, as tens of thousands of tons of used fuel have been stored and shipped around the world in many thousands of storage and transportation packages, without a radiation-induced injury or fatality. Used fuel and radioactive material packages have a unique characteristic among all other hazardous material packages (i.e., the need for gamma radiation shielding). Gamma-shielding materials are dense and strong, and since the shielding, by regulation, must remain attached even following accident conditions, it therefore, provides enhanced robustness with larger structural safety margins than other packages.

9. Exelon agrees with the NRC's determination that it is feasible to have a repository "within 60 years following the licensed life for operation of a reactor." This is strongly supported by international experience. Sweden, Finland, and France all expect to have operating repositories in the first quarter of this century. The primary purpose of predicting a timeframe for repository availability is to provide a reasonable analytical timeline that ensures that all periods of continued storage are evaluated. The NRC has done this. Therefore, the environmental impacts of continued storage, for any length of time, are appropriately analyzed.

10. Exelon believes that the NRC has met the requirements specified for development of this generic environmental impact statement, in that:

    - The GEIS addresses the environmental impacts of storage of spent nuclear fuel beyond the licensed operating life of a reactor; and

    - It is shown to be "feasible" to safely store spent nuclear fuel following the licensed life for operations of a reactor and to have a mined geologic repository within 60 years following the licensed life for operation of a reactor.

11. Finally, Exelon is in favor of changing the name of this rulemaking from Waste Confidence to a more factual name such as "Storage of Spent Fuel after Licensed Term of Operation." The term "waste confidence" now fails to transparently capture the purpose of the proposed rule, which relates primarily to the storage of spent fuel after the end of a reactor's operating life.