[7590-01-P]

NUCLEAR REGULATORY COMMISSION

[Docket No. 50-219; NRC-2018-0167]

Exelon Generation Company, LLC

Oyster Creek Nuclear Generating Station

AGENCY: Nuclear Regulatory Commission.

ACTION: Environmental assessment and finding of no significant impact; issuance.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC) is considering issuance of exemptions in response to a request from Exelon Generation Company, LLC (Exelon or the licensee) that would permit the licensee to reduce its emergency planning (EP) activities at the Oyster Creek Nuclear Generating Station (Oyster Creek). The licensee is seeking exemptions that would eliminate the requirements for the licensee to maintain offsite radiological emergency plans and reduce some of the onsite EP activities based on the reduced risks at Oyster Creek, which will be permanently shut down and defueled. However, requirements for certain onsite capabilities to communicate and coordinate with offsite response authorities would be retained. In addition, offsite EP provisions would still exist through State and local government use of a comprehensive emergency management plan process, in accordance with the Federal Emergency Management Agency's (FEMA's) Comprehensive Preparedness Guide (CPG) 101, "Developing and Maintaining Emergency Operations Plans." The NRC staff is issuing a final Environmental Assessment (EA) and final Finding of No Significant Impact (FONSI) associated with the proposed exemptions.

DATES: The EA and FONSI referenced in this document are available on **[INSERT DATE OF PUBLICATION IN THE *FEDERAL REGISTER*]**.

ADDRESSES: Please refer to Docket ID **NRC-2018-0167** when contacting the NRC about the availability of information regarding this document. You may obtain publicly-available information related to this document using any of the following methods:

- **Federal Rulemaking Web Site:** Go to http://www.regulations.gov and search for Docket ID **NRC-2018-0167**. Address questions about NRC dockets to Jennifer Borges; telephone: 301-287-9127; e-mail: Jennifer.Borges@nrc.gov. For technical questions, contact the individual listed in the **FOR FURTHER INFORMATION CONTACT** section of this document.

- **NRC's Agencywide Documents Access and Management System (ADAMS):** You may obtain publicly-available documents online in the ADAMS Public Documents collection at http://www.nrc.gov/reading-rm/adams.html. To begin the search, select "Begin Web-based ADAMS Search." For problems with ADAMS, please contact the NRC's Public Document Room (PDR) reference staff at 1-800-397-4209, 301-415-4737, or by e-mail to pdr.resource@nrc.gov. The ADAMS accession number for each document referenced (if it is available in ADAMS) is provided the first time that it is mentioned in this document. In addition, for the convenience of the reader, the ADAMS accession numbers are provided in a table in the "Availability of Documents" section of this document.

- **NRC's PDR:** You may examine and purchase copies of public documents at the NRC's PDR, Room O1-F21, One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852.

FOR FURTHER INFORMATION CONTACT: John G. Lamb, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington DC 20555-0001; telephone: 301-415-3100; e-mail: John.Lamb@nrc.gov.

SUPPLEMENTARY INFORMATION:

I. Introduction

By letter dated January 7, 2011 (ADAMS Accession No. ML110070507), Exelon notified the NRC that Oyster Creek will be permanently shut down no later than December 31, 2019, and subsequently the nuclear power plant will be in the process of decommissioning. By letter dated February 14, 2018 (ADAMS Accession No. ML18045A084), Exelon updated its notification and informed the NRC that Oyster Creek will be permanently shut down no later than October 31, 2018.

Oyster Creek is located in Ocean County, New Jersey, approximately 2 miles south of Forked River, New Jersey. Exelon is the holder of the Renewed Facility Operating License No. DPR-16 for Oyster Creek. Once Exelon submits a certification of permanent removal of fuel from the reactor vessel, pursuant to 10 CFR 50.82(a)(2) of title 10 of the *Code of Federal Regulations* (10 CFR), Oyster Creek will no longer be authorized to operate or to have fuel placed into its reactor vessel, but the licensee is still authorized to possess and store irradiated nuclear fuel. Irradiated nuclear fuel is currently stored onsite at Oyster Creek in a spent fuel pool (SFP) and in an independent spent fuel storage installation (ISFSI).

The licensee has requested exemptions for Oyster Creek from certain EP requirements in 10 CFR part 50, “Domestic Licensing of Production and Utilization Facilities,” once Exelon submits its certification of permanent removal of fuel from the reactor vessel. The NRC regulations concerning EP do not recognize the reduced risks after a reactor is permanently shut down and defueled. As such, a permanently shut down and defueled reactor, must continue to maintain the same EP requirements as an operating power reactor under the existing regulatory requirements. To establish a level

of EP commensurate with the reduced risks of a permanently shut down and defueled reactor, Exelon requires exemptions from certain EP regulatory requirements before it can change its emergency plans.

The NRC is considering issuing to Exelon exemptions from portions of 10 CFR 50.47, "Emergency plans," and appendix E to 10 CFR part 50, "Emergency Planning and Preparedness for Production and Utilization Facilities," which would eliminate the requirements for Exelon to maintain offsite radiological emergency plans in accordance with part 350, "Review and Approval of State and Local Radiological Emergency Plans and Preparedness," of 44 CFR, "Emergency Management and Assistance," and reduce some of the onsite EP activities based on the reduced risks at Oyster Creek, once the reactor has been permanently shut down and defueled for a period of 12 months.

Consistent with 10 CFR 51.21, the NRC has determined that an EA is the appropriate form of environmental review for the requested action. Based on the results of the EA, which is provided in Section II of this document, the NRC has determined not to prepare an environmental impact statement for the proposed action, and is issuing a FONSI.

II. Environmental Assessment

Description of the Proposed Action

The proposed action would exempt Exelon from (1) certain standards as set forth in 10 CFR 50.47(b) regarding onsite and offsite emergency response plans for nuclear power reactors; (2) requirements in 10 CFR 50.47(c)(2) to establish plume exposure and ingestion pathway emergency planning zones (EPZs) for nuclear power reactors; and (3) certain requirements in 10 CFR part 50, appendix E, section IV, which establishes

the elements that make up the content of emergency plans. The proposed action of granting these exemptions would eliminate the requirements for Exelon to maintain offsite radiological emergency plans in accordance with 44 CFR 350 and reduce some of the onsite EP activities at Oyster Creek, based on the reduced risks once the reactor has been permanently shut down and defueled for a period of 12 months. However, requirements for certain onsite capabilities to communicate and coordinate with offsite response authorities would be retained to an extent consistent with the approved exemptions. Additionally, if necessary, offsite protective actions could still be implemented using a comprehensive emergency management plan (CEMP) process. A CEMP in this context, also referred to as an emergency operations plan (EOP), is addressed in FEMA's CPG 101, "Developing and Maintaining Emergency Operations Plans." The CPG 101 is the foundation for State, territorial, tribal, and local EP in the United States under the National Preparedness System. It promotes a common understanding of the fundamentals of risk-informed planning and decision making, and helps planners at all levels of government in their efforts to develop and maintain viable, all-hazards, all-threats emergency plans. An EOP is flexible enough for use in all emergencies. It describes how people and property will be protected; details who is responsible for carrying out specific actions; identifies the personnel, equipment, facilities, supplies, and other resources available; and outlines how all actions will be coordinated. A CEMP is often referred to as a synonym for "all-hazards" planning. The proposed action is in accordance with the licensee's application dated August 22, 2017 (ADAMS Accession No. ML17234A082), as supplemented December 6, 2017 (ADAMS Accession No. ML17340A708) and March 8 and 19, 2018 (ADAMS Accession Nos. ML18067A087 and ML18078A146, respectively).

Need for the Proposed Action

The proposed action is needed for Exelon to revise the Oyster Creek Emergency Plan once the reactor has been permanently shutdown and defueled for a period of 12 months. The EP requirements currently applicable to Exelon are for an operating power reactor. Once Oyster Creek reaches permanently shutdown and defueled status, as specified in 10 CFR 50.82(a)(2), Oyster Creek will no longer be authorized operation of the reactor or emplacement or retention of fuel into the reactor vessel therefore, the occurrence of postulated accidents associated with reactor operation is no longer credible. However, there are no explicit regulatory provisions distinguishing EP requirements for a power reactor that has been permanently shut down and defueled from those for an operating power reactor.

In its exemption request, the licensee identified four possible radiological accidents at Oyster Creek in its permanently shutdown and defueled condition. These are: (1) a fuel-handling accident; (2) a radioactive waste-handling accident; (3) a loss of SFP normal cooling (i.e., boil off); and (4) an adiabatic heat up of the hottest fuel assembly. The NRC staff evaluated these possible radiological accidents in the Commission Paper (SECY) 18-0062, "Request by the Exelon Generation Company, LLC for Exemptions from Certain Emergency Planning Requirements for the Oyster Creek Nuclear Generating Station," dated May 31, 2018 (ADAMS Package Accession No. ML18030B340). In SECY-18-0062, the NRC staff verified that Exelon's analyses and calculations provided reasonable assurance that if the requested exemptions were granted, then: (1) for a design-basis accident (DBA), an offsite radiological release will not exceed the early phase protective action guides (PAGs) at the site boundary, as

detailed in Table 1-1 to the U.S. Environmental Protection Agency's (EPA's), "PAG Manual: Protective Action Guides and Planning Guidance for Radiological Incidents," EPA-400/R-17/001, dated January 2017, and (2) in the unlikely event of a beyond DBA resulting in a loss of all SFP cooling, there is sufficient time to initiate appropriate mitigating actions, and in the event a radiological release has or is projected to occur, there would be sufficient time for offsite agencies to take protective actions using a CEMP to protect the health and safety of the public if offsite governmental officials determine that such action is warranted. The Commission approved the NRC staff's recommendation to grant the exemptions based on this evaluation in its Staff Requirements Memorandum (SRM) to SECY-18-0062, dated July 17, 2018 (ADAMS Accession No. ML18198A449).

Based on these analyses, Exelon states that complete application of the EP rule to Oyster Creek, when it is permanently shutdown and defueled would not serve the underlying purpose of the rule or is not necessary to achieve the underlying purpose of the rule. Exelon also states that it would incur undue costs in the application of operating plant EP requirements for the maintenance of an emergency response organization in excess of that actually needed to respond to the diminished scope of credible accidents for a permanently shutdown and defueled reactor.

Environmental Impacts of the Proposed Action

The NRC staff has completed its evaluation of the environmental impacts of the proposed action.

The proposed action consists mainly of changes related to the elimination of requirements for the licensee to maintain offsite radiological emergency plans in

accordance with 44 CFR 350 and reduce some of the onsite EP activities at Oyster Creek, based on the reduced risks once the reactor has been permanently shutdown and defueled for a period of 12 months. However, requirements for certain onsite capabilities to communicate and coordinate with offsite response authorities will be retained and offsite EP provisions to protect public health and safety will still exist through State and local government use of a CEMP.

With regard to potential nonradiological environmental impacts, the proposed action would have no direct impacts on land use or water resources, including terrestrial and aquatic biota, as it involves no new construction or modification of plant operational systems. There would be no changes to the quality or quantity of nonradiological effluents and no changes to the plants' National Pollutant Discharge Elimination System permits would be needed. In addition, there would be no noticeable effect on socioeconomic conditions in the region, no environment justice impacts, no air quality impacts, and no impacts to historic and cultural resources from the proposed action. Therefore, there are no significant nonradiological environmental impacts associated with the proposed action.

With regard to potential radiological environmental impacts, as stated above, the proposed action would not increase the probability or consequences of radiological accidents. Additionally, the NRC staff has concluded that the proposed action would have no direct radiological environmental impacts. There would be no change to the types or amounts of radioactive effluents that may be released and, therefore, no change in occupational or public radiation exposure from the proposed action. Moreover, no changes would be made to plant buildings or the site property from the

proposed action. Therefore, there are no significant radiological environmental impacts associated with the proposed action.

Environmental Impacts of the Alternatives to the Proposed Action

As an alternative to the proposed action, the NRC staff considered the denial of the proposed action (i.e., the "no-action" alternative). The denial of the application would result in no change in current environmental impacts. Therefore, the environmental impacts of the proposed action and the alternative action are similar.

Alternative Use of Resources

There are no unresolved conflicts concerning alternative uses of available resources under the proposed action.

Agencies or Persons Consulted

No additional agencies or persons were consulted regarding the environmental impact of the proposed action. On July 27, 2018, the New Jersey state representative was notified of this EA and FONSI.

III. Finding of No Significant Impact

The licensee has proposed exemptions from: (1) certain standards in 10 CFR 50.47(b) regarding onsite and offsite emergency response plans for nuclear power reactors; (2) requirement in 10 CFR 50.47(c)(2) to establish plume exposure and ingestion pathway EPZs for nuclear power reactors; and (3) certain requirements in 10 CFR part 50, appendix E, section IV, which establishes the elements that make up the content of emergency plans. The proposed action of granting these exemptions would eliminate the requirements for the licensee to maintain offsite radiological emergency

plans in accordance with 44 CFR 350 and reduce some of the onsite EP activities at Oyster Creek, based on the reduced risks once the reactor has been permanently shutdown and defueled for a period of 12 months. However, requirements for certain onsite capabilities to communicate and coordinate with offsite response authorities will be retained and offsite EP provisions to protect public health and safety will still exist through State and local government use of a CEMP.

The NRC is considering issuing the exemptions. The proposed action would not significantly affect plant safety, would not have a significant adverse effect on the probability of an accident occurring, and would not have any significant radiological or nonradiological impacts. This FONSI incorporates by reference the EA in Section II of this document. Therefore, the NRC concludes that the proposed action will not have a significant effect on the quality of the human environment. Accordingly, the NRC has determined not to prepare an environmental impact statement for the proposed action.

The related environmental document is the "Generic Environmental Impact Statement for License Renewal of Nuclear Plants: Regarding Oyster Creek Nuclear Generating Station, Final Report," NUREG-1437, Supplement 28, Volumes 1 and 2, which provides the latest environmental review of current operations and description of environmental conditions at Oyster Creek.

The finding and other related environmental documents may be examined, and/or copied for a fee, at the NRC's Public Document Room (PDR), located at One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852. Publicly-available records are accessible electronically from ADAMS Public Electronic Reading Room on the Internet at the NRC's Web Site: http://www.nrc.gov/reading-rm/adams.html.

Persons who do not have access to ADAMS or who encounter problems in accessing the documents located in ADAMS should contact the NRC's PDR Reference staff by telephone at 1-800-397-4209 or 301-415-4737, or by e-mail to pdr.resource@nrc.gov.

IV. Availability of Documents

The documents identified in the following table are available to interested persons through one or more of the following methods, as indicated.

Document	ADAMS Accession No. / Web link
Developing and Maintaining Emergency Operations Plans, Comprehensive Preparedness Guide (CPG) 101, Version 2.0, November 2010	http://www.fema.gov
Docket No. 50-219, Request for Exemptions from Portions of 10 CFR 50.47 and 10 CFR part 50, Appendix E, Oyster Creek Nuclear Generating Station, August 22, 2017	ML17234A082
Docket No. 50-219, Response to Request for Additional Information (RAI) Regarding Request for Exemption from Portions of 10 CFR 50.47 and 10 CFR part 50, Appendix E, Oyster Creek Nuclear Generating Station, December 6, 2017	ML17340A708
Docket No. 50-219, Supplement to Request for Exemption from Portions of 10 CFR 50.47 and 10 CFR part 50, Appendix E, Oyster Creek Nuclear Generating Station, March 8, 2018	ML18067A087
Docket No. 50-219, Response to Request for Additional Information (RAI) Related to Exemption Request from Portions of 10 CFR 50.47 and 10 CFR part 50, Appendix E, Oyster Creek Nuclear Generating Station, March 19, 2018	ML18078A146
Docket No. 50-219, Certification of Permanent Cessation of Operations at Oyster Creek Nuclear Generating Station, January 7, 2011	ML110070507
Docket No. 50-219, Certification of Permanent Cessation of Power Operations for Oyster Creek Nuclear Generating Station, February 14, 2018.	ML18045A084

Document	ADAMS Accession No. / Web link
PAG Manual: Protective Action Guides and Planning Guidance for Radiological Incidents, U.S. Environmental Protection Agency, January 2017	http://www.epa.gov
SECY-18-0062, "Request by the Exelon Generation Company, LLC for Exemptions from Certain Emergency Planning Requirements for the Oyster Creek Nuclear Generating Station," May 31, 2018	ML18030B340
Staff Requirements Memorandum to SECY-18-0062, "Request by the Exelon Generation Company, LLC for Exemptions from Certain Emergency Planning Requirements for the Oyster Creek Nuclear Generating Station," July 17, 2018	ML18198A449
Docket No. 50-219, "Final Environmental Statement – related to operation of Oyster Creek Nuclear Generating Station," December 1974	ML072200150
NUREG-1437, Supplement 28, "Generic Environmental Impact Statement for License Renewal of Nuclear Plants Regarding Oyster Creek Nuclear Generating Station," January 2007	ML070100234

Dated at Rockville, Maryland, this 8th day of August, 2018.

For the Nuclear Regulatory Commission.

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[FR Doc. 2018-17327 Filed: 8/10/2018 8:45 am; Publication Date: 8/13/2018]