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10 CFR 50.82(a)(4)

RA-18-087

September 24, 2018

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

Oyster Creek Nuclear Generating Station
Renewed Facility Operating License No. DPR-16
NRC Docket Nos. 50-219 and 72-15

Subject: Response to Request for Additional Information (RAI) Related to Oyster Creek Nuclear Generating Station – Post-Shutdown Decommissioning Activities Report

- Reference:
- 1) Letter from Michael P. Gallagher (Exelon Generation Company, LLC) to U.S. Nuclear Regulatory Commission – *"Oyster Creek Nuclear Generating Station – Post-Shutdown Decommissioning Activities Report,"* dated May 21, 2018 (ML18141A775)
 - 2) U.S. Nuclear Regulatory Commission Electronic Mail Request to David Helker, et al., (Exelon Generation Company, LLC) – *"Draft RAIs for Oyster Creek Post Shutdown Decommissioning Activities Report,"* dated July 11, 2018
 - 3) U.S. Nuclear Regulatory Commission Electronic Mail Request to David Helker, et al., (Exelon Generation Company, LLC) – *"Draft RAIs for Oyster Creek Post Shutdown Decommissioning Activities Report,"* dated August 30, 2018
 - 4) U.S. Nuclear Regulatory Commission Electronic Mail Request to David Helker (Exelon Generation Company, LLC) – *"For Your Action: Request for Additional Information for Oyster Creek Post Shutdown Decommissioning Activities Report (EPID: L-2018-LRO-0022),"* dated September 12, 2018 (ML18256A002)

By letter dated May 21, 2018 (Reference 1), Exelon Generation Company, LLC (Exelon) submitted a Post-Shutdown Decommissioning Activities Report (PSDAR) in accordance with 10 CFR 50.82(a)(4)(i) to the U.S. Nuclear Regulatory Commission (NRC). The NRC staff has

reviewed Exelon's submittal and determined that additional information is required to enable the NRC staff to make an independent assessment regarding its technical review.

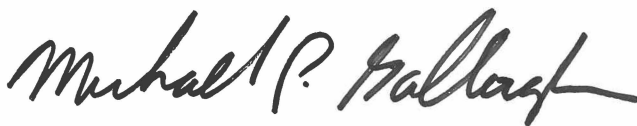
Subsequently, in electronic mail requests dated July 11 and August 30, 2018 (References 2 and 3), the NRC issued draft Request for Additional Information (RAI) questions. To ensure that the questions were understandable, the regulatory basis was clear, and to determine if the information was previously docketed, the draft RAI questions in References 2 and 3 were further discussed during teleconferences between Exelon and NRC representatives held on July 12 and September 12, 2018. As a result of the discussion on September 12, it was determined that no modifications to the August 30, 2018 version of the draft RAI questions (Reference 3) were needed. The NRC subsequently issued its formal RAI on September 12, 2018 (Reference 4). As indicated, Exelon is providing this response within 30 days of the date of the electronic mail request.

Accordingly, Exelon's response to the RAI questions contained in the Reference 4 electronic mail request are attached to this letter. Each RAI question is identified in the attachment followed by Exelon's response. Based on these responses, Exelon does not plan on revising the OCNGS PSDAR at this time. As required by 10 CFR 50.82(a)(7), Exelon will "notify the NRC, in writing and send a copy to the affected State(s), before performing any decommissioning activity inconsistent with, or making any significant schedule change from, those actions and schedules described in the PSDAR." As required, Exelon will verify that the decommissioning activities meet the requirements of 10 CFR 50.82(a)(6)(i) - (iii) or seek appropriate regulatory approval if needed.

This letter contains no regulatory commitments.

If you have any questions concerning this submittal, please contact Paul Bonnett at (610) 765-5264.

Respectfully,



Michael P. Gallagher
Vice President, License Renewal & Decommissioning
Exelon Generation Company, LLC

Attachment: Response to NRC's Request for Additional Information for OCNGS Post
Shutdown Decommissioning Activities Report

cc: w/Attachment

Regional Administrator - NRC Region I
NRC Senior Resident Inspector - Oyster Creek Nuclear Generating Station
NRC Project Manager, NRR - Oyster Creek Nuclear Generating Station
Director, Bureau of Nuclear Engineering - New Jersey Department of Environmental
Protection
Mayor of Lacey Township, Forked River, NJ

U.S. Nuclear Regulatory Commission
Response to Request for Additional Information
for OCNCS Post Shutdown Decommissioning Activities Report
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bcc: w/o Attachment

Senior Vice President Mid-Atlantic Operations - KSA
Vice President Licensing and Regulatory Affairs - KSA
Site Vice President - Oyster Creek Nuclear Generating Station
Plant Manager - Oyster Creek Nuclear Generating Station
Director, Operations - Oyster Creek Nuclear Generating Station
Director, Training - Oyster Creek Nuclear Generating Station

w/Attachment

Site Director Decommissioning - Oyster Creek Nuclear Generating Station
Senior Manager, Decommissioning - Cantera
Regulatory Assurance Manager - Oyster Creek Nuclear Generating Station
Manager, Licensing and Regulatory Affairs - KSA
Licensing Records - KSA
Commitment Tracking Coordinator - East

Attachment

**Response to NRC's Request for Additional Information for
OCNGS Post-Shutdown Decommissioning Activities Report**

SUMMARY

By letter dated May 21, 2018 (Reference 1), Exelon Generation Company, LLC (Exelon) submitted a Post-Shutdown Decommissioning Activities Report (PSDAR) in accordance with 10 CFR 50.82(a)(4)(i) to the U.S. Nuclear Regulatory Commission (NRC). The NRC staff has reviewed Exelon's submittal and determined that additional information is required to enable the NRC staff to make an independent assessment regarding its technical review.

Subsequently, in electronic mail requests dated July 11 and August 30, 2018 (References 2 and 3), the NRC issued draft Request for Additional Information (RAI) questions. To ensure that the questions were understandable, the regulatory basis was clear, and to determine if the information was previously docketed, the draft RAI questions in References 2 and 3 were further discussed during teleconferences between Exelon and NRC representatives held on July 12 and September 12, 2018. As a result of the discussion on September 12, it was determined that no modifications to the August 30, 2018, version of the draft RAI questions (Reference 3) were needed. The NRC subsequently issued its formal RAI on September 12, 2018 (Reference 4). As indicated, Exelon is providing this response within 30 days of the date of the electronic mail request.

Accordingly, this attachment provides Exelon's response to the RAI questions contained in the Reference 4 electronic mail request. Each question is identified below followed by Exelon's response.

Aquatic and Terrestrial Resources

1. RAI-OCNGS-A/T-1

In Section 5.1.5, "Aquatic Ecology," and Section 5.1.6, "Terrestrial Ecology," of Exelon's PSDAR (ADAMS Accession No. ML18141A775), Exelon states that offsite impacts to aquatic and terrestrial resources may result from dredging and from ground disturbing activities associated with moving large plant components from the Oyster Creek Nuclear Generating Station (OCNGS) powerblock area to the barge landing, which is outside of the operational area. Exelon concludes that the offsite impacts from dredging are bounded by the impacts in the NRC's GEIS for License Renewal of Nuclear Plants (NUREG-1437, Revision 1). Exelon concludes that the impacts from erosion and sedimentation on aquatic resources and that the impacts from decommissioning activities on terrestrial resources outside of the operational area would be small and bounded by the analysis in the decommissioning GEIS.

The decommissioning GEIS, however, states that the issues of aquatic and terrestrial ecology for activities beyond the operational area are conditionally site-specific and that any planned decommissioning activity would require a site-specific analysis along with a license amendment request prior to undertaking the proposed activity.

Question:

Consistent with 10 CFR 50.82(a)(4)(i), please provide the reasons for concluding that the environmental impacts to aquatic and terrestrial ecology associated with ground disturbing activities beyond the operational area will be bounded by appropriate previously issued environmental impact statements. Please explain why the decommissioning GEIS bounds these impacts despite its statement that the issues of aquatic and terrestrial ecology for activities beyond the operational area are conditionally site-specific and/or explain how any significant environmental impacts not previously reviewed will be addressed before the

activities are performed (e.g., through the prior approval of a license amendment request or an exemption request).

Exelon Response:

Exelon prepared a PSDAR Environmental Report, which contains analyses of OCNGS decommissioning impacts on environmental resources, which were summarized in the PSDAR Sections 5.1.5 and 5.1.6 with respect to the resource areas of aquatic and terrestrial ecology, respectively. The PSDAR Environmental Report describes analyses and conclusions from various sections of the decommissioning GEIS (NUREG-0586, Supplement 1) that were believed, in the aggregate, to support the overall conclusion in the PSDAR that impacts outside of the operational area from erosion and sedimentation associated with moving large plant components from the OCNGS power block to the barge landing on aquatic resources and from decommissioning activities on terrestrial resources would be small and bounded by the analyses of similar activities in the decommissioning GEIS. However, the PSDAR Environmental Report does not discuss whether such impacts might also be bounded by the U.S. Atomic Energy Commission's *"Final Environmental Impact Statement Related to Operation of the OCNGS"* (OL-FES) (Reference 5). Accordingly, Exelon reviewed the OCNGS OL-FES in preparing this RAI response.

As depicted by Figure 3.4 of the OL-FES (provided herein as Figure 1), the area within the OCNGS site boundary disturbed by original construction extended beyond the operational area defined in the PSDAR. In fact, the area assumed in the PSDAR for moving large plant components during decommissioning from the OCNGS power block to the barge landing was used during original construction for similar activities, even though it is described for the purposes of the PSDAR as being outside the operational area. It was used during transport of the reactor pressure vessel to the site more than 50 years ago, and it has been used as needed during removal and delivery of other large plant components since then.

Impacts of original construction activities on terrestrial and aquatic resources are described in Sections 4.3.1 and 4.3.2 of the OL-FES. Such impacts include the effects of erosion and siltation on the aquatic environment, as well as effects of habitat destruction on the terrestrial environment within the original OCNGS site boundary. Sections 5.1.5 and 5.1.6 in the PSDAR note that these are the types of impacts that would also occur during decommissioning activities. As noted in the PSDAR Section 5.1.5, ground disturbance outside the operational area during decommissioning would be minor and of relatively brief duration. Any impact on benthic organisms and fish in the aquatic environment from soil disturbance would be correspondingly minor, and Best Management Practices (BMPs) would be employed, as necessary, to limit erosion and sedimentation. As noted in the PSDAR Section 5.1.6, any transfer of a large plant component during decommissioning would be of short duration and would have minimal impact on terrestrial resources because the components will be transported across (1) a heavy-industrial area, (2) a highway, and (3) a previously-disturbed area that contains no unusual, rare, or sensitive plants or animals, and no important / sensitive habitats. Because no high-value terrestrial habitats (such as native prairie, open-canopy savannah, bog, pocosin, white cedar swamp, or mature forest) will be disturbed, impacts are expected to be small and should not require mitigation, beyond routine construction BMPs.

In conclusion, Exelon asserts that impacts of OCNGS decommissioning on aquatic and terrestrial resources from activities located outside of the operational area, would be small, and are bounded by the analyses in the OCNGS OL-FES (Reference 5).



FIGURE 1 (Source: Reference 5, Figure 3.4, p. 3-7)

Special Status Species & Habitats

2. RAI-OCNGS-SS-1

The OCNGS license states that Exelon shall comply with the terms and conditions of the Incidental Take Statement associated with certain sea turtles in the Biological Opinion in effect or as subsequently issued by the National Marine Fisheries Service (NMFS) regarding operation of the facility.

The Biological Opinion in effect regarding operation of the OCNGS contains an Incidental Take Statement with 12 terms and conditions. The Biological Opinion, however, did not consider effects to listed species from any decommissioning plans or other activities associated with the future termination of operations at OCNGS because "[a]s there is no information on future activities currently available, any effects of decommissioning or activities associated with the termination of operation are not knowable at this time." (ADAMS Accession No. ML12006A217, p. 8).

Question:

Please explain how Exelon will continue to comply with each of the 12 terms and conditions during decommissioning. For instance, Term and Condition 2 states that inspection of the cooling water system and dilution water system intake trash bars and immediate area upstream must be conducted at least once every 4 hours from June 1 through October 31. How would decommissioning affect Exelon's continued conduct of such inspections? Alternatively, should the NRC reinitiate consultation with the NMFS in order to amend these terms and conditions for the decommissioning period?

Exelon Response:

License Condition 2.C.(17) of the OCNGS Renewed Facility Operating License No. DPR-16 (issued April 8, 2009) requires that Exelon "comply with the terms and conditions of the Incidental Take Statement associated with certain sea turtles in the Biological Opinion in effect or as subsequently issued by the National Marine Fisheries Service (NMFS) regarding operation of the facility." The Biological Opinion / Incidental Take Statement (ITS) most recently issued by NMFS in support of the NRC's renewal of the OCNGS operating license is dated November 21, 2011. Exelon intends to comply with the 2011 Biological Opinion / ITS until either the ITS is modified or the license condition is eliminated. Even so, Exelon submits that actual cessation of OCNGS power operations on September 17, 2018, removes all options involving continued operation of the facility through the end of its renewed operating license term on April 9, 2029. Therefore, cessation of operations should be considered "new information [that] reveals effects of the [license renewal] action [addressed by the 2011 Biological Opinion / ITS] that may affect listed species or critical habitat in a manner or to an extent not previously considered" (50 CFR §402.16(b)). Accordingly, Exelon intends to request that the NRC reinitiate formal consultation with NMFS with respect to its action to renew the OCNGS operating license. Because post-shutdown decommissioning activities will have less effect on protected species than contemplated in the 2011 Biological Opinion / ITS, Exelon believes it would be appropriate for the NMFS to fashion a revised ITS that is more relevant to such current circumstances.

3. RAI-OCNGS-SS-2

In its PSDAR, Exelon describes several State and Federally listed species with the potential to occur within the vicinity of OCNGS (see Table 5.1). In addition, Exelon provides a site-specific assessment of environmental impacts associated with decommissioning activities at OCNGS. Exelon concludes that OCNGS decommissioning activities are unlikely to adversely affect any threatened or endangered species and will have no effect on any designated critical habitat.

The regulation 10 CFR 50.82(a)(4)(i), however, requires that the PSDAR provide the reasons for concluding that the environmental impacts associated with site-specific decommissioning activities will be bounded by appropriate previously issued environmental impact statements.

Question:

Consistent with 10 CFR 50.82(a)(4)(i), please explain whether the impacts to the State and Federally listed species with the potential to occur within the vicinity of OCNGS are bounded by appropriate previously issued environmental impact statements. If these impacts are not bounded by appropriate previously issued environmental impact statements, how will Exelon ensure that they will be bounded? For instance, will Exelon complete a site-specific analysis of the issue along with a license amendment request, as discussed in the decommissioning GEIS, before performing any decommissioning activities that result in significant impacts to threatened and endangered species?

Exelon Response:

As discussed in PSDAR Section 5.1.7, a site-specific assessment for threatened and endangered species was conducted for OCNGS. Based on this evaluation, it is anticipated that none of the planned decommissioning activities at OCNGS would encroach on the habitat of any State or Federally-listed terrestrial species. However, in the future, when OCNGS decommissioning activities such as demolition or disturbance of land areas, that could affect a protected species have been finally determined and scheduled, Exelon will update the site-specific assessment of environmental impacts to protected species in the PSDAR. To comply with its continuing obligation under 10 CFR 50.82(a)(6) to assure that no decommissioning activity that would result in significant environmental impacts would be performed without NRC review, the results of the assessment would be provided to with the NRC in accordance with applicable NRC regulations.

Historic and Cultural Resources

4. RAI-OCNGS-HC-1

Section 5.1.14 of the PSDAR provides an analysis of potential impacts to cultural, historic, and archeological resources, and indicates that Exelon's review of available information identified no historic properties present within the OCGNS operational area.

The decommissioning GEIS states:

In a few situations, the nuclear facility itself could be potentially eligible for inclusion in the National Register of Historic Places, especially if it is older than 50 years and represents a significant historic or engineering achievement. In this case, appropriate mitigation would be developed in consultation with the SHPO [State Historic Preservation Officer]. Even for buildings that are less than 50 years old, the processes and engineering that were employed may be of interest and may be eligible for the Historic American Engineering Record.

Question:

Does Exelon plan to address with the New Jersey SHPO the potential eligibility of all or portions of the OCNGS facility itself for inclusion in the the National Register of Historic Places or Historic American Engineering Record, and identify appropriate mitigation measures potentially resulting from this consultation in the PSDAR?

Exelon Response:

Exelon recognizes that, although OCNGS is a typical mid-twentieth century light water reactor, as New Jersey's first nuclear power station, it may be of some historical interest at the State or local level. Recognizing its importance to local history and former employees, Exelon began a collection of memorabilia, artifacts, videos and photos that chronicle OCNGS. The collection is intended for eventual donation to local historical societies (e.g., Lacey Township, Waretown and Ocean County Historical societies) for their collections and archives. Station representatives have already been in contact with local historical experts to partner with and assist the station in these efforts. In addition, engineering drawings from the station have been archived by Exelon records management.

No Historic American Buildings Survey/Historic American Engineering Record documentation of the OCNGS has been prepared to date, and although it is well known that the plant is destined for decommissioning, there has been no request from the New Jersey Historic Preservation Office or other agencies to do so.

The design, engineering processes, construction, and history of the facility are typical in the industry. However, if Exelon becomes aware of a previously unidentified proposal for mitigation of a historic resource at the OCNGS site, due consideration will be given to the proposal at that time.

REFERENCES

- 1) Letter from Michael P. Gallagher (Exelon Generation Company, LLC) to U.S. Nuclear Regulatory Commission – *"Oyster Creek Nuclear Generating Station – Post-Shutdown Decommissioning Activities Report,"* dated May 21, 2018, (ML18141A775)
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- 5) U.S. Atomic Energy Commission. 1974. Final Environmental Statement related to the Operation of Oyster Creek Nuclear Generating Station. December (ML072200150)