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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: Request to Reinitiate Consultation Regarding the OCNGS Sea Turtle Incidental Take Statement

Reference:

- 1) Letter from P. Kurkul, NOAA National Marine Fisheries Service to A. Imboden, U.S. Nuclear Regulatory Commission - "Oyster Creek Nuclear Generating Station," dated November 21, 2011 (ML12006A217)
- 2) Letter from M. 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 (ML18141A590)

The Oyster Creek Nuclear Generating Station (OCNGS) Renewed Facility Operating License No. DPR-16 requires Exelon Generation Company, LLC (Exelon) to comply with the terms and conditions of the Incidental Take Statement (ITS) associated with certain sea turtles that is "in effect or as subsequently issued" by the National Oceanic and Atmospheric Administration's (NOAA) National Marine Fisheries Service (NMFS) in a Biological Opinion. The Biological Opinion most recently issued by NMFS in support of the U.S. Nuclear Regulatory Commission's (NRC) renewal of the OCNGS operating license is dated November 21, 2011 (Reference 1).

The purpose of this letter is to request that the NRC reinitiate the Endangered Species Act (ESA) Section 7 consultation that was the basis for the ITS issued on November 21, 2011 (2011 ITS). Such reinitiation would allow NMFS to consider amending the ITS to be more relevant to current circumstances at the OCNGS, which include permanent cessation of operation and the corresponding reduced effects on listed species.

Reinitiation of ESA Section 7 consultation between the NMFS and another federal agency is required if the other agency retains control over an action leading to an initial ESA Section 7 consultation, and if: (1) the amount or extent of taking specified in the ITS is exceeded (50 CFR 402.16(a)); (2) new information reveals effects of the action that may not have been previously considered (50 CFR 402.16(b)); (3) the identified action is subsequently modified in a manner that causes an effect to listed species or critical habitat that was not considered in the existing

biological opinion (50 CFR 402.16(c)); or (4) a new species is listed or critical habitat is designated that may be affected by the action leading to the initial ESA Section 7 consultation (50 CFR 402.16(d)).

Exelon has evaluated the current OCNGS operating status against these criteria and concluded that criterion (3) justifies reinitiation of the ESA Section 7 consultation between the NRC and NMFS that led to the 2011 ITS. The basis for this conclusion is summarized below.

First, no unconsidered effects on protected species have been revealed to trigger criterion (2). Regarding criterion (4), Exelon reviewed the U.S. Fish and Wildlife Service website during 2018 (Reference 2) for listed species that are known or believed to occur in New Jersey and found that the following species have been added to the list since the 2011 ITS was issued for OCNGS:

- Red Knot
- Northern Long-Eared Bat

According to the Red Knot profile on the website, Red Knot habitat includes Atlantic and bay beaches and mudflats. Threats to the Red Knot include sea level rise; coastal development; shoreline stabilization; dredging; reduced food availability at stopover areas; disturbance by vehicles, people, dogs, aircraft, and boats; and climate change. Other than the potential for dredging, the planned post-shutdown decommissioning activities at OCNGS will not create any of these threats to the Red Knot. Additionally, the Red Knot does not typically reside in water bodies like Oyster Creek or Forked River. As discussed in the OCNGS Post-Shutdown Decommissioning Activities Report (PSDAR) (Reference 2), if dredging is pursued between the barge landing and Barnegat Bay in order to provide enough depth for the barge shipment, it would be conducted under U.S. Army Corps of Engineers (USACE) and appropriate New Jersey Department of Environmental Protection (NJDEP) Division of Land Use Regulation permits. Exelon has reserved space for dredge spoils in an existing State of New Jersey dredge spoils basin on property adjacent to Oyster Creek. Because decommissioning activities at OCNGS would utilize an existing barge landing and dredge spoils basin, there would be no changes to offsite land use patterns.

The habitat of the Northern Long-Eared Bat includes caves and mines in the winter and wooded areas in the summer. White-nose syndrome, the cause of which is not related to any OCNGS decommissioning activity, is the predominant threat to this bat, according to the U.S. Fish and Wildlife Service Environmental Conservation Online System (ECOS). Hence, the planned post-shutdown decommissioning activities at OCNGS will not pose a threat to the Northern Long-Eared Bat.

Atlantic sturgeon and shortnose sturgeon are federally-listed endangered aquatic species found in the Delaware River in New Jersey. However, neither species was identified by resource agencies as being of concern when the NRC reviewed the OCNGS application for operating license renewal during 2006. In addition, no shortnose or Atlantic sturgeon have been collected at OCNGS since the 2011 ITS was issued (Reference 2).

Hence, because the planned post-shutdown decommissioning activities at OCNGS are not anticipated to create or pose any threats to either the Northern Long-Eared Bat or the Red Knot, and both Atlantic and shortnose sturgeon continue to be absent at OCNGS, Exelon concludes that no newly listed species or newly identified critical habitat is present to trigger criterion (4).

Regarding criterion (3), OCNGS ceased power operations on September 17, 2018, defueled, and began execution of post-shutdown decommissioning activities as described in the OCNGS

PSDAR (Reference 2). Upon shutdown of the reactor, OCNGS discontinued the use of the Dilution Water System (DWS). This eliminated sea turtle impingement risk at the DWS. OCNGS will continue using two Circulating Water System (CWS) pumps (approximately 250,000 gpm [360 MGD]) for approximately 60 days after power operations ceased. Beyond the 60-day period, plant heat will be removed by the Service Water (SW) and Emergency Service Water (ESW) systems (approximately 12,000 gpm [17.3 MGD]) until all spent fuel has been moved from the Spent Fuel Pool to the Independent Spent Fuel Storage Installation (ISFSI), which is scheduled for approximately March 2024. This change represents a greater than 98% reduction in intake flow from full power operation, which significantly reduces sea turtle impingement risks. Hence, post-shutdown decommissioning activities will have meaningfully less effect on threatened and endangered sea turtles than was previously contemplated in the 2011 ITS. For that reason, Exelon believes reinitiation of the ESA Section 7 consultation under criterion (3) (50 CFR §402.16(c)) is justified in order to fashion a revised ITS that is more relevant to current OCNGS circumstances.

Regarding criterion (1), Table 2 in the Attachment indicates the number of loggerhead sea turtles taken at the OCNGS intake structures from 2012 through September 2018 exceeds the limit for full power operation specified in the 2011 ITS. Exelon, however, does not recommend reinitiation of the ESA Section 7 consultation based on criterion (1) because the permanent shutdown in September 2018 makes the exceedance of the incidental take limit irrelevant with respect to future effects of OCNGS on listed species.

The attachment to this letter provides additional supporting information. Express modifications to the "reasonable and prudent measures" as well as the mitigating "terms and conditions" enumerated in the 2011 ITS are also suggested in the attachment.

No commitments to the NRC are made in this letter.

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: Evaluation of Changed Circumstances That Affect Protected Sea Turtles at
Oyster Creek Nuclear Generating Station

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

ATTACHMENT

**Evaluation of Changed Circumstances That Affect Protected Sea Turtles at Oyster
Creek Nuclear Generating Station**

**EVALUATION OF CHANGED CIRCUMSTANCES
 THAT AFFECT PROTECTED SEA TURTLES AT
 OYSTER CREEK NUCLEAR GENERATING STATION**

BACKGROUND

The Oyster Creek Nuclear Generating Station (OCNGS) began commercial operation in 1969. No observed takes of endangered or threatened species occurred at the OCNGS prior to 1992. However, following dredging in the intake and discharge canals in early 1992, sea turtle impingements began occurring at the OCNGS intake structure. A detailed summary of such impingements from 1992 through 2011 is provided in the 2011 Biological Opinion and its accompanying Incidental Take Statement (ITS) (Reference 1), which specifies cumulative take limits for the period from 2012 through 2029 and was used to support the NRC's first renewal of the OCNGS operating license. The table below summarizes sea turtle impingements from 1992 through September 2018.

Table 1: OCNGS Sea Turtle incidental take data from 1992 through September 2018

	Kemp's ridley	Loggerhead	Green	TOTAL
1992 to 2010	50	11	8	69
2011	6	1	1	8
2012	4	0	1	5
2013	7	2	0	9
2014	7	1	0	8
2015	8	0	4	12
2016	1	1	1	3
2017	2	1	1	4
Jan to Sept 2018	2	2	0	4
TOTAL (1992 to 2018)	87	19	16	122

PROPOSED ACTION

On December 9, 2010, Exelon became a party to an Administrative Consent Order (ACO) with the New Jersey Department of Environmental Protection (NJDEP) (Reference 2). In the ACO, Exelon agreed to cease power production at OCNGS no later than December 31, 2019, rather than operate the facility until 2029, when the station's renewed U.S. Nuclear Regulatory Commission (NRC) operating license expires. Accordingly, NJDEP agreed to issue a new draft New Jersey Pollutant Discharge Elimination System (NJPDES) permit containing a determination, pursuant to the Clean Water Act Section 316(b), that existing measures being taken at OCNGS to mitigate fish and shellfish impingement and entrainment effects represent the best technology available for the facility's cooling water intake through the time of permanent cessation of power

generation operations (i.e., shutdown) at the facility and the associated reduction in intake volume commensurate with post-shutdown activities.

In the 2011 Biological Opinion, NMFS explains that:

"On October 12, 2011, the NRC issued a letter to Exelon confirming that, NRC had received Exelon's notice of intent to permanently cease operations of the OCNGS by no later than December 31, 2019. NMFS requested clarification from the NRC on the status of the OCNGS license after 2019. NRC has indicated that the operating license will remain in effect until April 2029, regardless of Exelon's stated plans to cease operations early. As the term of the license has not changed and because, under the terms of the existing license, operations are authorized until April 9, 2029, NMFS has considered the potential impacts of the continued operation of the facility through, the end of its operating license. NMFS anticipates that, a future Section 7 consultation between NMFS and NRC would consider effects to listed species from any decommissioning plans or other activities associated with the future termination of operations at OCNGS." (Reference 1)

By letter dated February 14, 2018, Exelon certified, pursuant to 10 CFR 50.82(a)(1)(i) and 10 CFR 50.4(b)(8), that OCNGS would permanently cease operations no later than October 31, 2018 (Reference 3). On May 21, 2018, OCNGS submitted to the NRC the Post-Shutdown Decommissioning Activities Report (PSDAR) (Reference 4). Subsequently, the OCNGS ceased operations on September 17, 2018 (Reference 5). Exelon has provided the NRC certification pursuant to 10 CFR 50.82(a)(1)(ii) that all fuel has been removed from the reactor vessel and placed in the Spent Fuel Pool (Reference 6). Based on the latter two submittals, in accordance with 10 CFR 50.82(a)(2) OCNGS is no longer authorized to operate the reactor.

Upon shutdown of the reactor, OCNGS discontinued the use of the Dilution Water System (DWS). This eliminated sea turtle impingement risk at the DWS. OCNGS will continue using two Circulating Water System (CWS) pumps (approximately 250,000 gpm [360 MGD]) for approximately 60 days after power operations ceased. Beyond the 60-day period, plant heat will be removed by the Service Water (SW) and Emergency Service Water (ESW) systems (approximately 12,000 gpm [17.3 MGD]) until all spent fuel has been moved from the Spent Fuel Pool, to the Independent Spent Fuel Storage Installation (ISFSI), which is scheduled for approximately March 2024. This change represents a greater than 98% reduction in intake flow from full power operation, which significantly reduces sea turtle impingement risks.

Considering the above information, Exelon submits that actual cessation of OCNGS operations on September 17, 2018, and certification of permanent fuel removal on September 25, 2018, removes all options involving continued operation of the facility through the end of its renewed operating license term on April 9, 2029. Because, cessation of power operations has less effect than the continued power operations contemplated in the 2011 ITS, Exelon is requesting that the NRC reinitiate the formal consultation with NMFS that concluded with NMFS issuance of the 2011 Biological Opinion and ITS with respect to NRC's action to extend the OCNGS operating license for an additional 20 years beyond the initial licensed term. Because the OCNGS licensed term remains unmodified, this reinitiation request is appropriate to address changed circumstances regarding effects on threatened and endangered sea turtles during the extended license term.

EVALUATION

The 2011 Biological Opinion examined the likely effects (direct and indirect) of OCN GS full power operation through April 9, 2029. At the time the 2011 Biological Opinion was written, the potential ways in which OCN GS operation was expected to affect threatened and endangered sea turtles included: impingement at either the circulating water system or dilution water system intake trash racks; capture of free swimming sea turtles in the intake bays; altering the abundance or availability of sea turtle prey items; and altering water quality through the discharge of heated and chlorinated effluent.

Impingement and Capture of Sea Turtles (September 2018 through Q1 2024)

According to the 2011 Biological Opinion, "[i]t is unclear why sea turtles enter the Forked River and encounter the OCN GS intake structures. In order to be present at the intake bays, live sea turtles must actively swim from Barnegat Bay into the Forked River and continue downstream to the intake bays. As the current velocity does not increase until within several meters of the intakes, it does not appear that sea turtles are subject to inescapable currents in the Forked River which would draw them to the intakes." Hence, only when sea turtles approach within relatively close proximity to the OCN GS intake structures does impingement become a concern. And even then, the 2011 Biological Opinion concludes that it is likely that sea turtles impinged on the intake trash bars are already stressed, which may increase the turtles' susceptibility to suffocation or drowning. Furthermore, in the plant discharge canal, sea turtles have never been vulnerable to impingement because water flow is away from the plant equipment.

During full power operation, the total maximum intake water flow from Barnegat Bay via the south branch of the Forked River was approximately 1 million gallons per minute (gpm). At that flow rate, velocity in the intake canal was typically less than 2.0 feet per second (fps). Since power operations have ceased, the intake flow rate has been reduced to 250,000 gpm. In December 2018, intake flow will be reduced to 12,000 gpm, which is attributed to the Service Water System pumps that continue to provide cooling for the Spent Fuel Pool. The Spent Fuel Pool cooling will be needed until all spent fuel has been moved into dry storage, which is projected to occur by approximately March 2024, which is about 5.5 years after plant shut down (Reference 4, Table 2). Hence, the OCN GS intake flow rate between December 2018 and the first quarter of 2024 will be reduced to less than two percent of the flow rate during full power operation (i.e., $12,000 \div 1 \times 10^6 = 0.012$). The accompanying flow velocity in the intake canal at this reduced intake flow rate will be less than 0.02 fps.

Exelon submits that the significantly reduced intake water volume and flow rate in the intake canal should reduce impingement effects on threatened and endangered sea turtles by a directly proportional percentage during the 5.5 years following plant shut down. Accordingly, Exelon anticipates the reduced cumulative impact indicated in Table 2 on two federally endangered species (Kemp's ridley sea turtle and green sea turtle) and one federally threatened species (loggerhead sea turtle).

Table 2: Projected OCN GS Sea Turtle Incidental Take (December 2018 through Q1 2024)

Cumulative Take Limits at 100% Power Intake Flow from 2012 to 2028* (from 2011 ITS)	Listed Sea Turtle Species	Derived Annual Take at 100 % Power Intake Flow from 2012 to 2028 (= Cumulative Limit ÷ 16 sea turtle seasons)	Calculated Annual Take at Post-Shutdown Intake Flow (= 2% of Derived Annual Take)	5.5-Year Cumulative Take at Post-Shutdown Intake Flow (= Calculated Annual Take x 5.5)
71	Kemps Ridley	4.4	0.88	0.48
6	Loggerhead	0.38	0.0076	0.042
11	Green	0.69	0.014	0.077

* The OCN GS renewed operating license will expire in April 2029. As sea turtles are only present from May to October, NMFS concluded that no sea turtles are likely to be captured or impinged in 2029. Thus, NMFS considered cumulative impacts over the 16 "sea turtle seasons" in 2012 through 2028.

Effects on Prey and Water Quality (December 2018 through Q1 2024)

NMFS evaluated both direct and indirect effects of OCN GS full power operation during 2012 through 2029 on protected sea turtles resulting from OCN GS effects on water temperature and water quality. Regarding prey, the 2011 Biological Opinion states that there is no evidence that sea turtles have been affected by impacts on sea turtle prey caused by either impingement and entrainment or elevated discharge water temperatures associated with OCN GS. Also, the 2011 Biological Opinion states that the level of chlorination at the OCN GS is believed to have an insignificant effect on the ability of sea turtles to successfully forage, and there is no evidence that the OCN GS heated effluent has increased sea turtle vulnerability to cold stunning.

During the post-shutdown period from December 2018 through the first quarter (Q1) of 2024, impacts on sea turtle prey caused by either impingement and entrainment or discharge water chlorination will be a miniscule fraction of such impacts during full power operation.

Effects After Q1 2024 Until License Termination

All spent fuel will have been moved from the Spent Fuel Pool to the ISFSI pad by the end of the first quarter in 2024. Therefore, after that time no effects resulting from OCN GS cooling water systems will continue, and other decommissioning activities are not likely to adversely impact any protected sea turtle species (Reference 4, p. 33).

CONCLUSIONS

During the post-shutdown period from September 2018 through the first quarter of 2024, the cumulative effects of impingement and capture of sea turtles will be a small fraction of full power

operational impacts. The greatly reduced intake flow rate due to the suspension of the DWS and CWS flows and only the use of the SW and/or ESW systems reduces the risk of sea turtle impingements caused by the OCNGS intake structures to essentially zero in any particular year. Therefore, captures, injuries and deaths of sea turtles are not expected to occur as a result of intake flows at OCNGS. Furthermore, effects on sea turtle prey and water quality during that same period will be immeasurable or nonexistent.

Between the end of the first quarter in 2024 and license termination, endangered and threatened sea turtles will be unaffected by OCNGS cooling water systems, and other decommissioning activities are not likely to adversely impact any protected sea turtle species (Reference 4). Accordingly, Exelon requests that the NRC seek reinitiation by NMFS of ESA Section 7 consultation for the purpose of reevaluating the cumulative take of threatened and endangered sea turtles expected to occur between September 17, 2018 and termination of the OCNGS operating license. Table 3 itemizes Exelon's proposed changes to the "reasonable and prudent measures" (RPMs) identified in the 2011 ITS (Reference 1), and Table 4 itemizes Exelon's proposed changes to the "Terms and Conditions" set forth in the 2011 ITS for implementing the RPMs.

Table 3: Proposed Changes to "Reasonable and Prudent Measures" Stated In the 2011 ITS

Text of "Reasonable and Prudent Measures" from the 2011 ITS	Suggested Revised Text of "Reasonable and Prudent Measures"	Explanatory Comments
1. OCNGS must continue to implement a NMFS approved program to prevent, monitor, minimize, and mitigate the incidental take of sea turtles at the CWS and DWS intake structures.	OCNGS shall monitor and mitigate the incidental take of sea turtles at the facility intake structures.	<p>Upon shutdown of the reactor on September 17, 2018, OCNGS discontinued the use of the Dilution Water System (DWS). The use of all Circulating Water System (CWS) pumps will be discontinued by approximately December 1, 2018. At that time plant heat removal will be accomplished only by the Service Water (SW) and/ or Emergency Service Water (ESW) systems (approximately 12,000 gpm or 17.3 MGD) until all spent fuel has been moved from the Spent Fuel Pool to the Independent Spent Fuel Storage Installation (ISFSI) Pad (approximately March 2024).</p> <p>Accordingly, incidental take of sea turtles after December 2018 will not be caused by the CWS and DWS intake flows. The greatly reduced intake flow rate from using the SW and/or ESW systems reduces the risk of sea turtle impingements caused by the OCNGS intake structures to essentially zero in any particular year. Thus, prevention and minimization of incidental sea turtle takes will</p>

Text of "Reasonable and Prudent Measures" from the 2011 ITS	Suggested Revised Text of "Reasonable and Prudent Measures"	Explanatory Comments
		no longer be within OCNGS control, and the mandatory program should be modified to focus on monitoring and mitigation.
2. All sea turtle impingements associated with the OCNGS and sea turtle sightings in the action area must be reported to NMFS.	NMFS must be notified if a sea turtle is recovered at OCNGS intake structures.	The greatly reduced intake flow rate beginning in December 2018 will reduce the risk of sea turtle impingements caused by the OCNGS intake structures to essentially zero in any particular year. Accordingly, merely sighting a sea turtle near the intake structures should not warrant reporting. However, if a sea turtle is recovered at the OCNGS intake structures, Exelon agrees that NMFS must be notified, regardless of the condition of the turtle.
3. All live sea turtles must be transported to an appropriate facility for necessary rehabilitation and release into the wild.	Sea turtles recovered at OCNGS intake structures shall be transported to an appropriate facility for further evaluation.	The greatly reduced OCNGS intake water flow rate after December 2018 will reduce the risk of sea turtle impingements caused by the OCNGS intake structures to essentially zero in any particular year. Even so, Exelon agrees that notification of NMFS would be required upon recovery of a sea turtle at an OCNGS intake structure, and Exelon agrees to transport recovered sea turtles to an appropriate facility for evaluation.
4. A necropsy of any dead sea turtles must be undertaken promptly. to attempt to identify the cause of death, particularly whether the sea turtle died as a result of interactions with the intakes.	<i>N/A - This measure is no longer necessary</i>	The greatly reduced OCNGS intake flow rate beginning in December 2018 is not expected to cause the death of a healthy sea turtle; therefore, OCNGS should not be required to necropsy recovered sea turtles that die. Even so, Exelon agrees that notification of NMFS would be required upon recovery of a dead sea turtle, regardless of the cause of death, and Exelon agrees to transport such sea turtles to an appropriate facility for evaluation as a measure for implementing RPM #3.

Table 4: Proposed Changes to "Terms and Conditions" Stated In the 2011 ITS

Text of Terms and Conditions From the 2011 ITS	Suggested Revised Text	Explanatory Comments
1. To implement RPM #1, the CWS and DWS (when operational) intake trash bars must be cleaned daily from June 1 to October 31.	To implement RPM #1, cleaning of the intake trash bars will occur as-needed to support facility operations.	After the CWS and DWS cease operating, sea turtles will not be captured by CWS and DWS intake flows. Therefore, mitigation of turtle impingements through daily trash bar cleaning from June 1 to October 31 should not be mandatory. Instead, Exelon proposes to clean the trash bars only as often as needed to support facility operations.
a) Cleaning must include the full length of the trash rack, i.e., down to the bottom of each intake bay. To lessen the possibility of injury to a turtle, the raking process must be closely monitored so that it can be stopped immediately if a turtle is sighted.	To lessen the possibility of injury to a turtle when trash bar cleaning occurs, the raking process shall be monitored so it can be stopped if a turtle is sighted.	Although the greatly reduced OCNGS intake water flow rate after December 2018 is not expected to capture sea turtles, if a sea turtle is present during trash bar cleaning, it could be incidentally affected by the raking process. Accordingly, Exelon agrees that monitoring for the presence of sea turtles when the raking process is performed to support facility operation would be prudent. However, cleaning of the full length of the trash rack should not be mandatory.
b) Personnel must be instructed to look beneath surface debris before the rake is used to lessen the possibility of injury to a turtle.	Personnel shall examine surface debris before the rake is used to lessen the possibility of injury to a turtle.	Although the greatly reduced OCNGS intake water flow after December 2018 is not expected to capture sea turtles, if a sea turtle is present during trash bar cleaning, it could be incidentally affected by the raking process. Accordingly, Exelon agrees that examining surface debris for the presence of sea turtles before the raking process begins would be prudent.
c) Personnel cleaning the racks must inspect all trash that is dumped to ensure that no sea turtles are present within the debris.	Personnel shall examine debris container contents to ensure that no sea turtles are present within the debris.	Although the greatly reduced OCNGS intake water flow after December 2018 is not expected to capture sea turtles, a sick, injured, or deceased sea turtle could be among debris collected by the raking process. Accordingly, Exelon agrees that examining the contents dumped from the debris container would be prudent.
d) An alternative method of daily cleaning of the full length of the trash racks must be developed for use between June 1 through October 31 when the trash rake is unavailable due to necessary repair or maintenance or is otherwise inoperable. If the trash rake will be inoperable for more than 24 hours, Exelon or NRC must	<i>N/A - This term and condition is no longer necessary.</i>	The greatly reduced OCNGS intake water flow after December 2018 is not expected to capture sea turtles. Therefore, mitigation of sea turtle impingements through daily trash bar cleaning from June 1 to October 31 should not be mandatory, and the requirement for an alternative method of daily cleaning to be available within 24-hours if the trash raking system becomes inoperable between June 1 and October 31 also should not be mandatory.

Text of Terms and Conditions From the 2011 ITS	Suggested Revised Text	Explanatory Comments
<p>contact NMFS and explain what alternate arrangements have been made to ensure that the full length of the trash racks is cleaned at least once per 24 hours</p>		<p>Exelon proposes to clean the trash rack only as often as needed to support facility operations.</p>
<p>2. To implement RPM #1, inspection of CWS and DWS cooling water intake trash bars (and immediate area upstream) must continue to be conducted at least once every 4 hours (three times per 12-hour shift) from June 1 through October 31. NRC must ensure that inspections follow a set schedule so that they are regularly spaced rather than clumped. Inspections must occur at least three times during each 12-hour shift. A proposed schedule would be to schedule inspections 2 hours after the start of each shift and then every 4 hours during the shift. Times of inspections, including those when no turtles were sighted, must be recorded.</p>	<p><i>N/A - This term and condition is no longer necessary.</i></p>	<p>The greatly reduced OCNGS intake water flow after December 2018 is not expected to capture sea turtles. Therefore, mitigation of sea turtle impingements through inspections and recordkeeping should not be mandatory. Exelon proposes to inspect the trash racks only as often as needed to support facility operations.</p> <p>Adequate facility personnel shall remain available to support RPM#1.</p>
<p>3. To implement RPM #1, lighting must be maintained at the intake bays to enable inspection personnel to see the surface of each intake bay and to facilitate safe handling of turtles which are discovered at night. Portable spotlights must be available at both the CWS and the DWS for times when extra lighting is needed.</p>	<p><i>N/A - This term and condition is no longer necessary.</i></p>	<p>The greatly reduced OCNGS intake water flow after December 2018 is not expected to capture sea turtles. Therefore, nighttime inspections of the intake bays should not be mandatory. Exelon proposes to maintain adequate lighting at the intake bays to assure personnel safety. If a sea turtle is recovered at the OCNGS intake structures, it would be handled during daylight hours to support RPM#1.</p>
<p>4. To implement RPM #1, dip nets, baskets, and other equipment must be available at both the CWS and the DWS and must be used to remove smaller sea turtles from the OCNGS intake structures to reduce trauma caused by the existing cleaning mechanism. Equipment suitable for</p>	<p>To implement RPM #1, dip nets, baskets, slings, and other equipment shall be available at the facility for use in removal</p>	<p>Although the greatly reduced OCNGS intake water flow after December 2018 is not expected to capture sea turtles, Exelon agrees that equipment should be maintained for use by OCNGS personnel if a sea turtle requires rescue or recovery at the OCNGS intake structures.</p>

Text of Terms and Conditions From the 2011 ITS	Suggested Revised Text	Explanatory Comments
rescuing large turtles (e.g., rescue sling or other provision) must be available at OCNCS and readily accessible from the CWS and DWS.	of sea turtles from the intake.	
5. To implement RPM #1, an attempt to resuscitate comatose sea turtles must be made according to the procedures described in Appendix II. These procedures must be posted in appropriate areas such as the intake bay areas for both the CWS and the DWS, any other area where turtles would be moved for resuscitation, and the CWS and DWS operator's office(s).	<i>N/A - This term and condition is no longer necessary.</i>	Although Exelon agrees that notification of NMFS would be required upon recovery of a sea turtle at the OCNCS intake structures, and Exelon agrees to implement RPM #1 by transporting recovered sea turtles to an appropriate facility for evaluation, OCNCS personnel should not be required to resuscitate comatose sea turtles because the greatly reduced OCNCS intake water flow after December 2018 is not expected to capture turtles, and therefore, not expected to cause them to become comatose.
6. To implement RPM #2, OCNCS personnel must observe the canal area for sea turtles where and when possible (i.e., during the daylight hours). Any sea turtles sighted in the canal and in vicinity of OCNCS (not necessarily only near the intake structures) must be reported to NMFS within 24 hours of the observation (NMFS Section 7 Coordinator at (978) 281-9328 or FAX (978) 281-9394).	<i>N/A - This term and condition is no longer necessary.</i>	The greatly reduced OCNCS intake water flow after December 2018 is not expected to capture sea turtles. Accordingly, requiring OCNCS personnel to notify NMFS within 24 hours of every sea turtle sighting in the OCNCS vicinity is not warranted due to the reduced risk of capture.
7. To implement RPM #2, if any live or dead sea turtles are taken at OCNCS, plant personnel must notify NMFS within 24 hours of the take (NMFS Endangered Species Coordinator at 978-281-9208). An incident report for sea turtle take (Appendix III) must also be completed by plant personnel and sent to the NMFS Section 7 Coordinator via FAX (978-281-9394) within 24 hours of the take. Every sea turtle must be photographed. Information in Appendix IV will assist in	To implement RPM #2, the NMFS must be notified if a sea turtle is recovered at the DWS or CWS intake structure (NMFS Endangered Species Coordinator at 978-281-9208). If a recovered sea turtle has	The greatly reduced OCNCS intake water flow after December 2018 is not expected to capture sea turtles. However, if a sea turtle is recovered at an OCNCS intake structure, Exelon agrees that notification of NMFS would be required, and additional documentation is warranted for circumstances in which a recovered sea turtle has been incidentally harmed by facility components.

Text of Terms and Conditions From the 2011 ITS	Suggested Revised Text	Explanatory Comments
<p>identification of species impinged. All sea turtles that are sighted within the vicinity of OCNGS (including the intake and discharge structures) must also be recorded, and this information must be submitted in the annual report.</p>	<p>been impaired by OCNGS components or equipment, a sea turtle incident report and photographs (Appendix III) shall be completed by plant personnel and sent to the NMFS Section 7 Coordinator via FAX (978-281-9394).</p>	
<p>8. To implement RPM #2, an annual report of incidental takes must be submitted to NMFS by January 1 of each year. This report will be used to identify trends and further must include, as detailed above, all necropsy reports, incidental take reports, photographs (if not previously submitted), a record of all sightings in the vicinity of OCNGS, and a record of when inspections of the intake trash bars were conducted for the 24 hours prior to the take. The annual report must also include any potential measures to reduce sea turtle impingement or mortality at the intake structures. This annual report must also include information on arrangements made with a STSSN facility to handle sea turtles taken in the coming year. The report must also include all necropsy reports. At the time the report is submitted, NMFS will supply NRC and Exelon with any information on changes to reporting requirements (i.e., staff changes, phone or fax</p>	<p><i>N/A - This term and condition is no longer necessary.</i></p>	<p>The greatly reduced OCNGS intake water flow after December 2018 is not expected to capture sea turtles. However, if a sea turtle is recovered at an OCNGS intake structure, Exelon agrees that notification of NMFS would be required. Furthermore, additional documentation would be provided to NMFS for circumstances in which the recovered sea turtle has been incidentally harmed by facility components. Nevertheless, Exelon anticipates that during the post-shutdown period from December 2018 through license termination the number of sea turtles recovered at OCNGS intake structures will be so small that the requirement for submittal of an annual summary report is no longer warranted.</p>

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<p>numbers, e-mail addresses) for the coming year.</p>		
<p>9. To implement RPM #2, OCNGS personnel or NRC must notify NMFS when the OCNGS reaches 50% of the incidental take level for any species of sea turtle. At that time, NRC and NMFS will determine if additional measures are needed to minimize impingement at the CWS or DWS intake structures.</p>	<p><i>N/A - This term and condition is no longer necessary.</i></p>	<p>Exelon agrees that NMFS must be notified if sea turtles are recovered at an OCNGS intake structure, and that records of such notifications must be available to the NRC upon request in support of RPM#2. Nevertheless, because the greatly reduced OCNGS intake water flow after December 2018 is not expected to capture sea turtles, Exelon anticipates that during the post-shutdown period from December 2018 through license termination the number of sea turtles recovered at OCNGS intake structures will be so small that a requirement to evaluate the need for additional mitigation measures will not be needed.</p>
<p>10. To implement RPM#2, in any year when the estimated annual level of take (lethal and non-lethal) is exceeded, NRC must work with NMFS to determine whether the additional take represents new information revealing effects of the action that may not have been previously considered.</p>	<p><i>N/A - This term and condition is no longer necessary.</i></p>	<p>The greatly reduced intake flow rate at the OCNGS intake structures beginning in December 2018 is not expected to capture sea turtles. Even so, if a sea turtle is recovered at an OCNGS structure, Exelon agrees that notification of NMFS would be required. However, since operation of the OCNGS would not be the cause of any reported sea turtle recovery, it should not be necessary to evaluate whether the level of turtle recoveries represents "new information revealing effects of the action."</p>
<p>11. To implement RPM #3, a stranding/rehabilitation facility with the appropriate ESA authority must be contacted immediately following any live sea turtle take. Appropriate transport methods must be employed following the stranding facilities protocols, to transport the animal to the care of the stranding/rehabilitation personnel for evaluation, necessary veterinary care, tagging, and release in an appropriate location and habitat.</p>	<p>To implement RPM #3, a stranding/rehabilitation facility with the appropriate ESA authority shall be contacted immediately following any live sea turtle take. Appropriate transport methods shall be employed following the stranding facility's protocols, to transport the animal to the care of the</p>	<p>No change to this term and condition is proposed beyond minor clarifying edits. Exelon agrees that this condition is appropriate as a measure for implementing RPM #3, as revised.</p>

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	stranding/ rehabilitation personnel for evaluation, necessary veterinary care, tagging, and release in an appropriate location and habitat.	
<p>12. To implement RPM #4, all dead sea turtles must be necropsied by qualified personnel. The OCNGS must coordinate with a qualified facility or individual to perform the necropsies on sea turtles impinged at OCNGS, prior to the incidental turtle take, so that there is no delay in performing the necropsy or obtaining the results. The necropsy results must identify, when possible, the sex of the turtle, stomach contents, and the estimated cause of death. Necropsy reports must be submitted to the NMFS Northeast Region with the annual review of incident reports or, if not yet available, within 60 days of the incidental take.</p>	<p><i>N/A - This term and condition is no longer necessary.</i></p>	<p>As explained above in the <i>Suggested Revised Text of "Reasonable and Prudent Measures"</i> for RPM #4, OCNGS should not be required to necropsy dead sea turtles recovered at the OCNGS intake structures because the greatly reduced OCNGS intake flow rate beginning in December 2018 is not expected to cause the death of a sea turtle.</p> <p>However, if recovered sea turtles are incidentally harmed by facility components or equipment, a sea turtle incident report and photographs (Appendix III) shall be completed by plant personnel and sent to the NMFS Section 7 Coordinator via FAX (978-281-9394) as required by Item 7 in these Terms and Conditions.</p>

REFERENCES

- 1) Letter from P. Kurkul, NOAA National Marine Fisheries Service to A. Imboden. U.S. Nuclear Regulatory Commission - "Oyster Creek Nuclear Generating Station," dated November 21, 2011 (ML12006A217)
- 2) New Jersey Department of Environmental Protection – "Administrative Consent Order in The Matter Of Exelon Generation Company, LLC. Oyster Creek Generating Station," December 9, 2010.
- 3) Letter from Michael P. Gallagher, Exelon Generation Company, LLC to U.S. Nuclear Regulatory Commission – "Certification of Permanent Cessation of Power Operations

for Oyster Creek Nuclear Generating Station," dated February 14, 2018 (ML18045A084)

- 4) Letter from M. 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 (ML18141A590)
- 5) Electronic Mail Capture from John Lamb (U.S. Nuclear Regulatory Commission) to David Helker (Exelon Generation Company, LLC), "Oyster Creek Permanently Ceases Power Operations," dated September 17, 2018 (ML18263A163)
- 6) Letter from Michael P. Gallagher, Exelon Generation Company, LLC to U.S. Nuclear Regulatory Commission – "Certification of Permanent Removal of Fuel from the Reactor Vessel for Oyster Creek Nuclear Generating Station," dated September 25, 2018 (ML18268A258)