



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

April 2, 2014

Mr. Michael P. Gallagher
Vice President, License Renewal Projects
Exelon Generation Company, LLC
200 Exelon Way
Kennett Square, PA 19348

SUBJECT: REQUESTS FOR ADDITIONAL INFORMATION FOR THE REVIEW OF THE
BRAIDWOOD STATION LICENSE RENEWAL APPLICATION
ENVIRONMENTAL REPORT

Dear Mr. Gallagher:

By letter dated May 29, 2013, Exelon Generation Company, LLC (Exelon), submitted for review by the U.S. Nuclear Regulatory Commission (NRC or the staff) an application pursuant to Title 10 of the *Code of Federal Regulations* Part 54, to renew operating licenses NPF-72 and NPF-77 for Braidwood Station, Units 1 and 2. The staff is reviewing the information contained in the license renewal application environmental report and has identified, in the enclosure to this letter, areas where additional information is needed to complete the review.

These requests for additional information were discussed with Ms. Nancy Ranek, and a mutually agreeable date for the response is within 30 days from the date of this letter. If you have any questions, please contact me by phone at 301-415-3617 or by e-mail at Tam.Tran@nrc.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Tam Tran", is positioned above the typed name.

Tam Tran, Environmental Project Manager
Projects Branch 2
Division of License Renewal
Office of Nuclear Reactor Regulation

Docket Nos. 50-456 and 50-457

Enclosure:
Requests for Additional Information

cc w/encl: Listserv

April 2, 2014

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Vice President, License Renewal Projects
Exelon Generation Company, LLC
200 Exelon Way
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Sincerely,
/RA/
Tam Tran, Project Manager
Projects Branch 2
Division of License Renewal
Office of Nuclear Reactor Regulation

Docket Nos. 50-456 and 50-457

Enclosure:
Requests for Additional Information

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DISTRIBUTION: See next page

ADAMS Accession No.: ML14087A432

*concurring via email

OFFICE	LA:DLR	PM:RPB2:DLR	BC:RPB2:DLR	PM:RPB2:DLR
NAME	YEdmonds	TTran	BWittick	TTran
DATE	4/1/14	4/1/14	4/2/14	4/2/14

OFFICIAL RECORD COPY

Letter to M. Gallagher from T. Tran dated April 2, 2014

SUBJECT: REQUESTS FOR ADDITIONAL INFORMATION FOR THE REVIEW OF THE
BRAIDWOOD STATION, LICENSE RENEWAL APPLICATION
ENVIRONMENTAL REPORT

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BRAIDWOOD STATION
LICENSE RENEWAL APPLICATION ENVIRONMENTAL REPORT
REQUESTS FOR ADDITIONAL INFORMATION

Aquatic Resources

RAI # AQ-11

Section 2.2.5, Page 2-15 of the Environmental Report (ER) discusses fish kill events in the Braidwood cooling pond.

- a. The ER states that five fish kills occurred between 2001 and 2007. NRC staff is aware of the fish kill events that occurred on July 22, 2001 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML012390121), August 27, 2001 (ADAMS Accession No. ML012680140), and June 28, 2005 (ADAMS Accession No. ML052160140). Provide the dates of the remaining two events as well as copies of the non-routine event reports associated with each event.
- b. Provide the dates of all fish kill events for the period 2008 through present as well as copies of the associated non-routine event report. The NRC staff is aware of the June 24, 2009, fish kill event and associated non-routine event report (ADAMS Accession No. ML092390348).

RAI # AQ-12

Section 2.2.5, Page 2-16 of the ER states that "HDR [HDR Engineering] assessed water quality and fish populations in the cooling pond in late summer 2009 and 2010 to develop a better understanding of the factors contributing to fish kills and design a water quality or fish monitoring program that could be used to predict (and conceivably mitigate) fish kills in the pond."

- a. Provide copies of the 2009 and 2010 HDR studies mentioned in the ER.
- b. Has Exelon designed a water quality or fish monitoring program for the cooling pond, as mentioned in the ER? If so, provide a brief description of the program and any associated monitoring reports for available data years.
- c. Has Exelon implemented any mitigation to reduce the number of fish kills in the cooling pond? If so, describe such mitigation.

RAI # AQ-13

Sections 4.2 and 4.3 of the ER discuss the effects resulting from entrainment and impingement of Kankakee River aquatic biota at the makeup water intake or associated river screen house. In its analysis of entrainment and impingement, the NRC will consider the effects of entrainment and impingement that occurs at both the river screen house and the lake screen house. To support this analysis, please provide any studies that assess entrainment or impingement at the cooling pond's lake screen house.

ENCLOSURE

RAI # AQ-14

Section 4.4 of the ER considers the effects of heat shock on aquatic biota in the Kankakee River. In its analysis, the NRC will consider the effects of heat shock on aquatic biota in both the Kankakee River and the cooling pond. To support this analysis, please provide any thermal studies that have been conducted on the cooling pond.

RAI # AQ-15

Submit the following ER references for docketing:

- a. (Exelon Nuclear 2011c) Exelon Nuclear. 2011. Braidwood Station - Braidwood Lake Additional Biological Sampling Program, 2010.