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10 CFR 50
10 CFR 51
10 CFR 54

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May 12, 2014

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

Byron Station, Units 1 and 2
Facility Operating License Nos. NPF-37 and NPF-66
NRC Docket Nos. 50-454 and 50-455

Subject: Update to Chapter 9 of Byron and Braidwood Stations, Units 1 and 2 License Renewal Application, Byron Station Applicant's Environmental Report

References: Exelon Generation Company, LLC letter from Michael P. Gallagher to NRC Document Control Desk, "Application for Renewed Operating Licenses", dated May 29, 2013

In the referenced letter, Exelon Generation Company, LLC (Exelon Generation) submitted the License Renewal Application (LRA) for the Byron and Braidwood Stations, Units 1 and 2, including Appendix E, Item E-1 to the LRA, which is the Byron Station Applicant's Environmental Report.

The enclosure to this letter provides an updated version of Chapter 9 (Status of Compliance) in the Byron Station Applicant's Environmental Report.

This letter and its enclosure contain no regulatory commitments.

If you have any questions, please contact Mr. Al Fulvio, Manager, Exelon Generation License Renewal, at 610-765-5936.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on: 5-12-2014

Respectfully,

A handwritten signature in black ink, appearing to read "Michael P. Gallagher", with a long horizontal flourish extending to the right.

Michael P. Gallagher
Vice President – License Renewal Projects
Exelon Generation Company, LLC

Enclosure – Update to Chapter 9 of Byron Station Applicant's Environmental Report

cc: Regional Administrator- NRC Region III
NRC Project Manager (Environmental Review), NRR-DLR
NRC Project Manager (Safety Review), NRR-DLR
NRC Project Manager, NRR-DORL Byron Station
NRC Senior Resident Inspector, Byron Station
Illinois Emergency Management Agency- Division of Nuclear Safety

Enclosure

**Byron and Braidwood Stations, Units 1 and 2
License Renewal Application
Byron Station Environmental Report**

**Update to Chapter 9 of Byron Station
Applicant's Environmental Report**

Chapter 9

Status of Compliance

Byron Station Environmental Report

NOTE: Insertions and modifications in this updated version of Chapter 9 are shown in RED font. Also, vertical lines in the right-hand margin indicate the locations of such insertions and modifications.

9.1 Proposed Action

NRC

“The environmental report shall list all federal permits, licenses, approvals and other entitlements which must be obtained in connection with the proposed action and shall describe the status of compliance with these requirements. The environmental report shall also include a discussion of the status of compliance with applicable environmental quality standards and requirements including, but not limited to, applicable zoning and land-use regulations, and thermal and other water pollution limitations or requirements which have been imposed by Federal, State, regional, and local agencies having responsibility for environmental protection.” 10 CFR 51.45(d), as adopted by 10 CFR 51.53(c)(2)

9.1.1 General

Table 9.1-1 lists environmental authorizations Exelon Generation has obtained for current Byron operations. In this context, Exelon Generation uses “authorizations” to include any permits, licenses, approvals, or other entitlements. Exelon Generation expects to continue renewing these authorizations, where appropriate, during the current license period and throughout the period of extended operation associated with renewal of the Byron operating license. Because the NRC regulatory focus is prospective, Table 9.1-1 does not include authorizations that Exelon Generation obtained for past activities that did not include continuing obligations.

Preparatory to applying for renewal of the Byron license to operate, Exelon Generation conducted an assessment to identify new and significant environmental information (Chapter 5). The assessment included interviews with subject experts, review of Byron environmental documentation, and communication with state and federal environmental protection agencies. Based on this assessment, Exelon Generation concludes that Byron is in substantive compliance with applicable environmental standards and requirements. Minor deviations from applicable standards or requirements are corrected, and notification is provided to regulatory agencies, as required. Table 9.1-2 lists additional environmental authorizations and consultations related to NRC renewal of the Byron license to operate. As indicated, Exelon Generation anticipates needing relatively few such additional authorizations and consultations. Sections 9.1.2 through 9.1.5 discuss some of these items in more detail.

9.1.2 Threatened or Endangered Species

Section 7 of the Endangered Species Act (16 USC 1531 et seq.) requires federal agencies to ensure that their actions are not likely to jeopardize the continued existence of species that are listed, or proposed for listing, as endangered or threatened. Depending on the action involved, the Act requires consultation with the U.S. Fish and Wildlife Service (USFWS), regarding effects on non-marine species, and with National Marine Fisheries Service (NMFS), when marine species could be affected. USFWS and NMFS have issued joint procedural regulations at Title 50 CFR Part 402, Subpart B, that address consultation, and USFWS maintains the joint list of threatened or endangered species at 50 CFR Part 17. Because Byron’s continued operations

would not affect any endangered or threatened marine species, consultation with NMFS is not required and was not done.

Although not required of an applicant by federal law or NRC regulation, Exelon Generation has chosen to invite comment from USFWS regarding potential effects that Byron license renewal might have. Appendix C includes copies of Exelon Generation correspondence with USFWS.

9.1.3 Historic Preservation

Section 106 of the National Historic Preservation Act (16 USC 470 et seq.) requires federal agencies having the authority to license any undertaking to take into account the effect of the undertaking on historic properties and to afford the Advisory Council on Historic Preservation an opportunity to comment on the undertaking, prior to the agency issuing the license. Advisory Council regulations provide for the State Historic Preservation Officer (SHPO) to have a consulting role (35 CFR 800.2). Although not required of an applicant by federal law or NRC regulation, Exelon Generation has chosen to invite comment on the proposed license renewal for Byron from the Illinois SHPO. [Appendix D](#) includes copies of Exelon Generation correspondence with the SHPO regarding potential effects that Byron license renewal might have on historic or cultural resources.

9.1.4 Water Quality (401) Certification

Federal Clean Water Act Section 401 requires an applicant seeking a federal license for an activity that may result in a discharge to navigable waters to provide the federal licensing agency with a certification, or a waiver of certification, by the state where the discharge would originate. If no waiver is issued by the state, its certification must indicate that applicable state water quality standards will not be violated as a result of the discharge (33 USC 1341).

The NRC indicated in its GEIS that issuance of an NPDES permit by a state implies continued Section 401 certification by the state ([NRC 1996b](#)). Section 402(b) of the Clean Water Act provides that the Governor of any state can apply to the Administrator of the EPA to administer the NPDES Program in the State. On October 23, 1977, the Illinois State NPDES Permit Program was approved by the EPA, giving Illinois authorization to implement the NPDES permitting program. Accordingly, as evidence of Section 401 certification by Illinois for plant operations during the initial license term, Exelon Generation is providing the existing Byron NPDES permit (IL0048313) (included in [Appendix B](#)). The existing NPDES permit was issued January 24, 2011, modified on July 15, 2011, and has an expiration date of December 31, 2015.

In accordance with CWA Section 401 and Illinois EPA guidance, by letter dated July 2, 2012 (see [Appendix G](#)), Exelon Generation filed with Illinois EPA, Illinois DNR, and the Army Corps of Engineers, an application for certification that plant operation during the Byron license renewal terms will also comply with Illinois state water quality standards. Determination by Illinois EPA of the application's completeness and initiation of the agency's technical review are expected to occur upon Exelon Generation's filing with the NRC of the Byron and Braidwood Stations, Units 1 and 2 License Renewal Application. Responses from the Illinois DNR and Army Corps of Engineers (see [Appendix G](#)) indicate that permits from these agencies are not required to support renewal of the Byron NRC operating licenses, and neither agency objects to issuance of the requested CWA Section 401 certification. **By letter to the NRC dated July 5, 2013, Illinois EPA issued the CWA Section 401 certification for operation of Byron during the license renewal term (ML14113A544).**

9.1.5 Coastal Zone Management Program

The Federal Coastal Zone Management Act (CZMA) (16 USC 1451 et seq.) imposes requirements on applicants for a federal license to conduct an activity that could affect a state's coastal zone ([NRC 2009c](#)). The Act requires the applicant to certify to the licensing agency that the proposed activity would be consistent with the state's federally approved coastal zone management program [16 USC 1456(c)(3)(A)]. The National Oceanic and Atmospheric Administration has promulgated implementing regulations that indicate that the requirement is applicable to renewal of federal licenses for activities not previously reviewed by the state [15 CFR 930.51(b)(1)]. The regulation requires that the license applicant provide its certification to the federal licensing agency and a copy to the applicable state agency [15 CFR 930.57(a)].

Participation in the National Oceanic and Atmospheric Administration (NOAA) Coastal Zone Management Program is voluntary; federal assistance is given to states willing to develop and implement a comprehensive coastal management program. Illinois Department of Natural Resources (IDNR) is the lead agency for implementing a comprehensive coastal management program for protection of the Great Lakes in Illinois. In January 2009, IDNR submitted a draft program document to NOAA's Ocean and Coastal Resource Management's Coastal Programs Division. NOAA approved it on January 31, 2012 ([NOAA 2012](#)).

The inland boundary of the Illinois coastal zone includes parts of Cook and Lake Counties and of the Chicago and Calumet River watersheds ([NOAA 2011](#)). Byron is outside the boundaries of the Illinois coastal zone, and therefore, no certification of consistency with the Illinois coastal zone management program is required.

Byron Station Environmental Report
Section 9.1 Proposed Action

Table 9.1-1 Environmental Authorizations for Current Byron Operations

Agency	Authority	Requirement	Number	Issue or Expiration Date	Activity Covered
Federal and State Requirements					
U.S. Nuclear Regulatory Commission	Atomic Energy Act (42 USC 2011, et seq.), 10 CFR 50.10	License to operate	NPF-37	Issued: 02/14/1985	Operation of Byron Station Unit 1
			NPF-66	Expires: 10/31/2024 Issued: 01/30/1987 Expires: 11/06/2026 (Sciencetech 2010)	Operation of Byron Station Unit 2
Illinois Environmental Protection Agency, Division of Water Pollution Control	Clean Water Act (33 USC Section 1251 et seq.), Illinois Administrative Code Title 35, Part 309	NPDES Permit	IL0048313 (IEPA 2011b)	Issued: 01/24/2011 Expires: 12/31/2015	Discharges to Rock River or its tributaries of: (1) cooling tower blowdown water mixed with other processes. and (2) storm water runoff
Illinois Environmental Protection Agency, Division of Water Pollution Control	Environmental Protection Act [415 ILCS 5/13, 13.3 and 27]	Water Pollution Control Permit	2011-EP-1250 (IEPA 2011c)	Issued: 02/16/2011 Expires: 01/31/2016	Hauling of sanitary wastewater to the City of Oregon Wastewater Treatment Facility

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Table 9.1-1 Environmental Authorizations for Current Byron Operations (Continued)

Agency	Authority	Requirement	Number	Issue or Expiration Date	Activity Covered
Federal and State Requirements					
U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration	49 USC 5108, Transportation registration; 49 CFR Part 107, Subpart G, Hazardous material shipper/carrier registration	Hazardous Materials Certificate of Registration	051713550083VX	Issued: 05/17/2013 Expires: 06/30/2016	Transportation of hazardous materials.
Illinois Environmental Protection Agency, Division of Air Pollution Control	Federal Clean Air Act (42 USC 7401), 40 CFR Part 70, and Illinois Administrative Code 35 IAC 201	FESOP	Application #78090018 9/11/2007; supplemented 12/10/2007 ID# 141820AA (IEPA 2002)	Issued: 12/01/2001 Expires: 12/13/2007 ¹	Air emissions from auxiliary boilers, emergency generators, radwaste volume reduction system, cooling towers, and ancillary operations
Illinois Environmental Protection Agency, Bureau of Land	35 IAC 722	Notification of Hazardous Waste Activity	ILD000806521 (Exelon Nuclear 2003b)	Not Applicable	Small quantity generator of hazardous and mixed waste
Illinois Environmental Protection Agency, Bureau of Land	35 IAC 391	Land application of sludge	2009-SC-2169-1 (IEPA 2010b)	Issued: 04/20/2010 Expires: 05/31/2014 ²	Land application of river sediment that accumulates in the cooling towers

¹ 415 Illinois Compiled Statutes 5/-. Title II, Air Pollution, Sec. 39(x), extends the effective term of the FESOP if the permit holder submits a complete application for renewal to the IEPA prior to the permit expiration date. Because Exelon Generation met this requirement, the permit is administratively extended (415 ILCS 5/39(x)).

² Future land application of river sediment is being evaluated. A permit renewal application will be filed after the evaluation is complete.

Byron Station Environmental Report
Section 9.1 Proposed Action

Table 9.1-1 Environmental Authorizations for Current Byron Operations (Continued)

Agency	Authority	Requirement	Number	Issue or Expiration Date	Activity Covered
Federal and State Requirements					
Illinois Emergency Management Agency, Division of Nuclear Safety	32 IAC 609	Waste tracking permit	IL-0105	Not Applicable	Shipments of low-level radioactive waste
Tennessee Department of Environment and Conservation	Tennessee Code Annotated 68-202-206	License to deliver radioactive material	T-IL007-L12 (TDEC 2011)	Renewed annually	License to deliver radioactive material to processing facility in Tennessee
Utah Department of Environmental Quality	Utah Rule 313-26	Permit to deliver radioactive material	0110000032 (Utah 2012)	Renewed annually	Permit to deliver radioactive material to disposal facility in Utah
<hr/> NPDES – National Pollutant Discharge Elimination System FESOP – Federally Enforceable State Operating Permit					

Byron Station Environmental Report
Section 9.1 Proposed Action

Table 9.1-2 Environmental Authorizations for Byron License Renewal^a

Agency	Authority	Requirement	Remarks	Status
U.S. Nuclear Regulatory Commission	Atomic Energy Act (42 USC 2011 et seq.)	License renewal	Applicant for federal license must submit an Environmental Report in support of license renewal application	ER filed with LRA 5/29/2013
U.S. Fish and Wildlife Service	Endangered Species Act Section 7 (16 USC 1536)	Consultation	Federal agency issuing a license must consult with the USFWS	
Illinois Environmental Protection Agency	Clean Water Act Section 401 (33 USC 1341)	Certification	Applicant seeking federal license for a project with discharge to state waters must obtain either State certification that proposed action would comply with applicable State water quality standards or a waiver	See Sec. 9.1.4
Illinois Historic Preservation Agency	National Historic Preservation Act Section 106 (16 USC 470f)	Consultation	Federal agency issuing a license must consider cultural impacts and consult with State Historic Preservation Officer	

^a No requirements related to NRC license renewal were identified for local or other agencies

9.2 Alternatives

NRC

“The discussion of alternatives in the report shall include a discussion of whether the alternatives will comply with such applicable environmental quality standards and requirements.” 10 CFR 51.45(d), as required by 10 CFR 51.53(c)(2)

The coal, gas, purchased power, new nuclear, and renewables alternatives discussed in [Section 7.2](#) could be constructed and operated to comply with applicable environmental quality standards and requirements. Exelon Generation notes that increasingly stringent air quality protection requirements could make the construction of a large fossil-fueled power plant infeasible in many locations. Exelon Generation also notes that the EPA is revising its requirements for design and operation of cooling water intake structures at new and existing facilities (40 CFR Part 125, Subparts I and J). These requirements could necessitate construction of cooling towers and other technologies for the coal- and gas-fired and new nuclear alternatives.