



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

September 10, 2013

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

SUBJECT: ENVIRONMENTAL SITE AUDIT REGARDING BYRON STATION,  
UNITS 1 AND 2 (TAC NOS. MF1834 AND MF1835)

Dear Mr. Gallagher:

The U.S. Nuclear Regulatory Commission (NRC) staff is reviewing Exelon Generation Company, LLC's license renewal application for the Byron Station, Units 1 and 2 (Byron). The environmental site audit will be conducted at Byron during the week of September 16, 2013, by NRC and Argonne National Laboratory staff. The environmental audit activities will be conducted in accordance with the enclosed environmental audit plan.

To develop the Supplemental Environmental Impact Statement, the NRC staff requests the information described in the enclosed environmental audit needs list (enclosure 2) be made available, to the extent possible, during the environmental site audit. The NRC staff informally transmitted this information to your staff (Nancy Ranek) via e-mail on August 21, 2013.

If you have any questions, please contact me by telephone at 301-415-3306 or by e-mail at [Lois.James@nrc.gov](mailto:Lois.James@nrc.gov).

Sincerely,

A handwritten signature in cursive script that reads "Lois M. James".

Lois M. James, Sr. Project Manager  
Projects Branch 2  
Division of License Renewal  
Office of Nuclear Reactor Regulation

Docket Nos. 50-454 and 50-455

Enclosures:

1. Regulatory Environmental Audit Plan
2. Environmental Audit Needs List

cc: Listserv

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*/RA/*  
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DISTRIBUTION:

See next page

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OFFICE	PM:RPB2:DLR	LA:RPOB:DLR	BC:RPB2:DLR	PM:RPB2:DLR
NAME	LJames	IKing	DWrona ( <i>EKeegan for</i> )	LJames (signature)
DATE	8/19/2013	8/30/2013	9/9/2013	9/10/2013

**OFFICIAL AGENCY RECORD**

Letter to M. Gallagher from L. James dated September 10, 2013

SUBJECT: ENVIRONMENTAL SITE AUDIT REGARDING BYRON STATION,  
UNITS 1 AND 2 (TAC NOS. MF1834 AND MF1835)

**HARD COPY:**

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[Nancy.Ranek@exeloncorp.com](mailto:Nancy.Ranek@exeloncorp.com)

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LJames

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EDuncan, RIII

KStoedter, RIII

JRobbins, RIII

JWeibe, DORL

JMcGhee, SRI

JRobbins, RI

MYoung, OGC

AGhosh, OGC

CEngland, OGC

SBurnell, OPA

DMcIntyre, OPA

## **LICENSE RENEWAL ENVIRONMENTAL AUDIT PLAN BYRON STATION, UNITS 1 AND 2**

### **1. Background**

By letter dated May, 29, 2013, Exelon Generation Company, LLC (Exelon or applicant) submitted to the U.S. Nuclear Regulatory Commission (NRC) staff an application to renew the Byron Station, Units 1 and 2 (Byron) operating licenses NPF-37 and NPF-66. The NRC staff is reviewing the information contained in the environmental report (ER) of the license renewal application (LRA) per Title 10 of the *Code of Federal Regulations* Part 54 (10 CFR Part 54).

During the NRC staff's review, an environmental audit is conducted at the Byron site. This audit is conducted with the intent to gain understanding, to verify information, and to identify information that will require docketing to support the basis of the licensing or regulatory decision. Specifically, the NRC staff will identify pertinent environmental data, review the facility and area, and obtain clarifications regarding information provided in the ER.

Per NRC guidance, the NRC staff prepares a regulatory audit plan that provides a clear overview of audit activities and scope, team assignments, and schedule.

### **2. Environmental Audit Bases**

License renewal requirements are specified in 10 CFR Part 54, "Requirements for Renewal of Operating Licenses for Nuclear Power Plants." Licensees are required by 10 CFR 54.23 to submit an ER that complies with the requirements in 10 CFR Part 51, "Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions," as part of the LRA. Review guidance for the NRC staff is provided in NUREG-1555, "Standard Review Plans for Environmental Reviews for Nuclear Power Plants: Supplement 1 – Operating License Renewal."

NRC staff is required to prepare a site-specific supplement to NUREG-1437, "Generic Environmental Impact Statement for License Renewal of Nuclear Plants." During the scoping process required in 10 CFR Part 51, NRC staff is required to define the proposed action, identify significant issues which must be studied in depth, and to identify those issues that can be eliminated from further study.

### **3. Environmental Audit Scope**

The scope of this environmental audit for the Byron license renewal is to identify those issues which are significant and those issues which can be eliminated from further study and to identify the environmental resources that must be adequately described and evaluated in the site-specific supplemental Environmental Impact Statement (EIS). Audit team members will focus on reviewing the documents and requested information listed in the Byron Environmental Audit Needs List (Enclosure 2) and discussing the information with plant personnel subject matter experts.

**4. Information and Other Material Necessary for the Environmental Audit**

As described in the Site Audit Needs List (Enclosure 2).

**5. Tentative Team Assignments Area of Review Assigned Auditor**

The environmental audit team members and their specific discipline assignments are shown in Table 1. Those members of the team who are contractors from Argonne National Laboratory after their name.

**Table 1 Environmental Audit Team Members and Resource Assignments**

Discipline	Team Members
Environmental Project Manager	Lois M. James, NRC
Alternatives	Allison Travers, NRC Konnie Wescott, ANL
Aquatic Resources	Briana Grange, NRC* Dennis Logan, NRC
Environmental Justice	Emily Larson, NRC Jeff Rikhoff, NRC*
Geological Environment	Bill Ford, NRC
Historical and Cultural Resources	Emily Larson, NRC Jeff Rikhoff, NRC*
Human Health	Steve Klementowicz , NRC*
Land Use and Visual Resources	Allison Travers, NRC Dennis Logan, NRC
Meteorology, Air Quality, and Noise	Nancy Martinez, NRC Kevin Folk, NRC Young Soo Chang, ANL
Socioeconomics	Jeff Rikhoff, NRC* Emily Larson, NRC
Special Status Species and Habitats	Briana Grange, NRC* Dennis Logan, NRC
Terrestrial Resources	Allison Travers , NRC Dennis Logan, NRC
Waste Management and Pollution Prevention	Steve Klementowicz , NRC* Allison Travers, NRC
Water Resources – Groundwater	Bill Ford, NRC Nancy Martinez, NRC
Water Resources – Surface Water	Kevin Folk, NRC Terri Patton, ANL
* Will not attend environmental site audit but may participate via conference call. ANL personnel in support of the audit to be announced.	

## **6. Logistics**

The environmental audit will be conducted at Byron from September 16 - 20, 2013. An entrance meeting will be held with plant management at the beginning of the audit. An exit meeting will be held at the end of this audit.

## **7. Special Requests**

The NRC staff requests the applicant make available the information identified on the Environmental Audit Needs List. Plant staff who are subject matter experts in the disciplines listed on the Environmental Site Audit Needs List should be available for interviews and to provide tours which have been identified on the Environmental Audit Draft Schedule (Enclosure 3).

## **8. Deliverables**

A report should be issued by the NRC staff to the applicant within 90 days from the end of the environmental audit.

**BYRON NUCLEAR STATION, UNITS 1 AND 2,  
LICENSE RENEWAL ENVIRONMENTAL SITE AUDIT NEEDS LIST**

The U.S. Nuclear Regulatory Commission (NRC) staff has reviewed Appendix E, the Environmental Report (ER), of the Byron Nuclear Station, Units 1 and 2 (Byron), license renewal application (LRA).

Please be prepared to discuss the following issues and make the following available during the environmental site audit.

Alternatives (Alt)

- Alt-1 Please make available during the site audit all references that support the assumptions and conclusions in the alternatives analysis.
  
- Alt-2 Please provide the data sources that were consulted to support conclusions in the purchase power alternative, including any planning schedules or forecasts for PJM and Midwest ISO member companies. On page 7-16, the ER states, "For the purposes of this analysis, Exelon Generation assumes that the PJM and Midwest ISO member companies will install electricity generation capacity beyond that necessary to meet future demand, although delayed retirement of existing units is not considered available." Please provide a basis for these assumptions.
  
- Alt-3 Please provide the data sources that were consulted to support the conclusion to dismiss the delayed retirement alternative, including any retirement schedules for PJM and Midwest ISO member companies.
  
- Alt-4 Please provide the data source for the following text on page 7-19: "Moreover, PJM Interconnection reports that as of 2011 about 34 GW of wind generation has been proposed for construction in the PJM region, and about 4 GW of solar generation has been proposed. Additionally, Midwest ISO reports that as of 2011 about 27 GW of wind generation has been proposed for construction in the Midwest ISO region."
  
- Alt-5 Please provide the available acreage and locations on the Byron site that would be suitable for alternative energy generation. Please identify possible locations during the site tour.

Aquatic (AQ)

- AQ-1 Provide electronic or paper copies the following ER references for NRC staff review during the site audit:
  - a. (ComEd 1981a) Commonwealth Edison Company. 1981. Byron Station Environmental Report Operating License Stage. Vol. 1. Amendment No. 4. January 1983.

- b. (ComEd 1981b) Commonwealth Edison Company. 1981. Byron Station Environmental Report Operating License Stage. Vol. 2. Amendment No. 4. January 1983.
- c. (EA Engineering 2012) EA Engineering, Science, and Technology. 2012. Byron Station 2011 Fish and Benthos Monitoring and Historical Fish and Benthos Comparisons. July 2012.
- d. (ESI 2011) Ecological Specialist, Inc. 2011. Unionid Communities near Byron Station, Rock River. ESI Project No. 11-003a. O'Fallon, Missouri. November 2011.
- e. (Exelon Nuclear 2003a) Exelon Nuclear. 2003. Storm Water Pollution Prevention Plan – Byron Nuclear Power Station. June 2003.
- f. (Exelon Nuclear 2011c) Exelon Nuclear. 2011. WHC Wildlife Management Plan – Byron Generating Station. Byron, IL.

AQ-2 The ER (Section 3.1.3.1, Page 3-6) states, “Byron has an agreement with the Illinois DNR [[Illinois] Department of Natural Resources] to limit consumption of water from the Rock River for makeup to the Byron cooling systems to no more than 9 percent of total river flow during times when the river flow rate drops below 19,200 L/sec (679 cfs).” Is this a condition of the National Pollutant Discharge Elimination System (NPDES) permit? If not, when was this agreement made and where is it documented? Provide such documentation.

AQ-3 The ER (Section 3.1.3.1, Page 3-7) states that the river screen house is equipped with bar grills, traveling screens, and trash racks and that debris is collected in a trash basket and disposed of offsite.

- a. Provide a written description of the flow path from when water enters the river screen house to the point at which it enters the pipelines that carry the water to the Byron site. Include details such as the spacing of the bar grills, size of traveling screen mesh, and periodicity of traveling screen and trash rack operation.
- b. Does the Byron intake include a fish return system? If not, are impinged fish disposed of offsite along with the debris collected in the trash basket?

#### Environmental Justice (EJ)

EJ-1 To help address the provisions of Section 4-4 “Subsistence Consumption of Fish and Wildlife” in Executive Order 12898, the following information is needed to assist the NRC in its environmental justice review:

- a. Information about any observed subsistence consumption behavior patterns—specifically fish and wildlife consumption—by minority and low-income populations in the vicinity of Byron. This subsistence consumption behavior could consist of hunting, fishing, and trapping of game animals and any other general food gathering activities (e.g., collecting nuts, berries, and other plant material) conducted by minority and low-income individuals in the vicinity of Byron.



- b. Information about current or past wildlife sampling and testing of game animals such as deer, squirrel, turkey, pheasant, duck, fish and other game birds and animals that may have been conducted in the vicinity of Byron. Wildlife sampling and testing may have been conducted before, during, and after plant construction and in the early days of plant operation, but was discontinued after determining that tissue samples consistently showed no significant or measurable radiological impact on the environment from plant operations.

#### Geological Environment (Geo)

No specific audit needs

#### Historic and Cultural Resources (HCR)

- HCR-1 Please provide a map detailing the level of ground disturbance at the plant, including documentation on how this level of disturbance was determined. Has this understanding of the level of disturbance been coordinated with the IL State Historic Preservation Office (SHPO)? [In other words is the IL SHPO in agreement that these portions of the plant have been disturbed sufficiently as to preclude the possibility of any significant archaeological resources existing in these areas, including the potential for burials?]
- HCR-2 Please provide a series of aerial photographs of the entire plant site and associated transmission line(s) (during pre-construction, construction, and post-construction periods) looking at levels of disturbance that occurred during construction or since operation, whether any historic structures or possible sites are present on the property, and identifying any recent projects that will require a review of additional documentation.
- HCR-3 Please provide U.S. Geological Survey (USGS) 7.5 minute topographic quadrangle maps of the plant and associated transmission lines up to the first substation with plant boundaries and transmission lines highlighted. (I will need to take these hard copy maps with me for the file search at the IL SHPO, so I am not referring to geographic information system (GIS) maps with underlying topographic data – actual USGS-named quad sheets are needed.)
- HCR-4 Please provide vegetation/land-use maps of the plant and associated transmission line(s) up to the first substation.
- HCR-5 Provide a copy of the avoidance measures recommended by the IL SHPO for construction of Byron as referenced in Section 2.11.2 of the ER.
- HCR-6 Provide any maintenance or avoidance measures currently in place for site 11O6153, or any other site within Byron site boundaries.
- HCR-7 Please provide applicant's environmental review procedures for land-disturbing activities on the Byron site (e.g., trenching, clearing, digging).

- HCR-8 Please provide applicant's cultural resource management plan as described in Section 4.19 in the ER.
- HCR-9 Please provide applicant's transmission line management plan (ER references a ComEd transmission line planning process), including: timing of activities; danger tree removal and other clearing; inspections and repair activities conducted by ground vehicles; standard operating procedures or guidelines for the applicant and any contractors; erosion control procedures; technician training programs; and any regulations that restrict maintenance activities (e.g., looking for activities that could affect depth of disturbance, if any disturbance is necessary along the corridor).
- HCR-10 Please provide information on management around less-developed areas of the plant site, especially near known historic and cultural resources or near unsurveyed areas, if applicable.
- HCR-11 Please provide documentation of construction projects that have occurred on the property since the construction of Byron to determine how historic and cultural resources were considered. Any documentation demonstrating compliance with existing environmental procedures would be useful. What materials are used by the staff to determine whether the SHPO should be consulted?
- HCR-12 Please provide references presented in ER, especially survey reports and citations specified in the ER (Phase I and II archaeological surveys and literature search). Maps of site and survey locations at Byron will be needed during the site visit – these maps will not be docketed, as they are considered sensitive information; NRC will be independently collecting the location data at the IL SHPO, but that may be after the site visit is completed.
- HCR-13 Please verify if geomorphological work was conducted for the archaeological surveys to determine the depth of deposits and how deep archaeological remains may be present.
- HCR-14 Please provide consultation letters and other documentation indicating correspondence to and from the SHPO and any Federally-recognized Native American Tribes that have aboriginal ties to the project area and surrounding lands not already provided in the ER. Has any contact been made with local historical societies or other local organizations with an interest in historic preservation?
- HCR-15 Please provide detailed information about the National Register of Historic Places (NRHP) eligibility of sites location within the Byron site property and transmission line right of way up to the first substation.
- HCR-16 Please provide information on whether Byron is visible from any of the NRHP-Listed (and Eligible) historic properties presented in the ER.

- HCR-17 Meetings requested: Provide a knowledgeable applicant staff and member of the grounds maintenance team to discuss environmental compliance procedures to determine how they manage resources, avoid impacting historic and cultural resources, and deal with inadvertent discovery of historic and archaeological materials and human remains. Is any cultural resource training required for staff? Based on references in ER, this will likely include discussion of fleet procedures for transmission line maintenance, the cultural resource management plan, and any other manuals or procedures specific to environmental compliance at Byron.
- HCR-18 Meetings requested: Provide a knowledgeable applicant staff and transmission line maintenance contractor to discuss right-of-way maintenance and monitoring and any procedures in place regarding protection cultural resources along transmission line corridors.

Human Health (HH)

- HH-1 Provide NPDES monthly discharge monitoring reports for the past five years.
- HH-2 The ER (Page 4-30) states, "The highest daily blowdown temperature reported in recent years was 36°C (97°F), in August 2009 (Byron Station Monthly Discharge Monitoring Report for August 2009)." Does this statement remain true since the submission of the license renewal application?

Land Use and Visual Resources (LUV)

No specific audit needs.

Meteorology, Air and Noise (Met)

- Met-1 Provide a copy of Byron's Federally Enforceable State Operating Permit for stationary emission sources (standby emergency diesel generators, auxiliary boilers, auxiliary feedwater pumps, essential service water makeup water pumps, a fire pump, and cooling towers).
- Met-2 Provide copies of Byron's annual air emission reports for the most recent five years.
- Met-3 Identify combustion sources of hazardous air pollutants (HAPs) at Byron and amount released for the most recent five years.
- Met-4 Provide details of Byron's stationary emission sources including, as applicable, operating hours per year (last five years), fuel consumption and rate, horsepower ratings, capacity.
- Met-5 Are there expected upgrade/replacement activities for equipment/operation that could increase or decrease air emissions over the license renewal period?

- Met-6 The ER provides carbon dioxide (CO<sub>2</sub>) emissions from stationary combustion sources at Byron. Provide a site-wide emission inventory data (annual) for greenhouse gases (GHG). Emissions should include stationary combustion sources, mobile sources (commuters, visitors, delivery vehicle, etc.), and other sources (refrigerant leakage, emissions from switchyard, etc.).
- Met-7 Provide copies of any Notice of Violations received and describe the compliance history associated with Byron's Federally Enforceable State Operating Permit.
- Met-8 Provide the following meteorological information from the data recorded at Byron's meteorological facility. The meteorological data should include the most recent five years for which data is available. Please provide the following information:
- a. mean monthly and annual temperatures
  - b. mean monthly precipitation and annual precipitation
  - c. seasonal and annual summary wind statistics in the form of wind direction and speed frequency distribution tables and wind roses. Discuss predominant wind direction and speed by season and annual average, local terrain features affecting wind direction and speed, and provide a value for annual average wind speed.
- Met-9 Provide general aspects of meteorological data acquisition and management:
- Type of instruments and instrument heights along with schematic diagrams of primary and backup monitoring system from towers to computer display.
  - Procedures for calibration and maintenance of meteorological instruments
  - Procedures for collection, evaluation, validation, and management of meteorological data, including QA/QC.
- Met-10 Provide noise emissions studies conducted at Byron, if any.
- Met-11 Provide ambient noise survey in and around the site, if any.
- Met-12 Provide information about any noise complaints for the most recent five years resulting from plant operation.
- Met-13 Identify primary noise sources at Byron and in the vicinity of Byron.
- Met-14 Identify nearby noise-sensitive receptors (e.g., residences, school, nursing home, childcare facility).
- Met-15 Meetings requested: Provide a knowledgeable individual to discuss the following aspects of facility operations:
- a. Stationary and mobile sources of air pollutants operating at Byron.
  - b. Air permits and emission inventories
  - c. Meteorological towers and data
  - d. Noise issues

Met-16 Tours requested:

- a. General site tour
- b. Major air emission and noise sources
- c. Onsite meteorological towers

Socioeconomic (S)

- S-1 Provide updated permanent workforce data, preferably a residential distribution of permanent workforce by county in Table format.
- S-2 Provide updated property tax information, similar to the data provided in Tables 2.7-2 and 2.7-3 of the ER. Include data for the years 2011 and 2012, if available.
- S-3 Byron's last settlement agreement was signed on November 8, 2008 and covered tax years 2005 through 2011. What is the status of the latest settlement agreement for current and future tax years? Please provide any relevant information.
- S-4 In accordance with the 2008 settlement agreement, Exelon agreed to make payments in addition to taxes (PIATs) to specific tax recipients. Under the agreement, Exelon made two PIAT payments of \$2,302,000 each; one in 2008 and the other, in 2010. Will there be additional PIATs in the future? If so, will there be any changes to the list of recipients in ER Table 2.7-1? Please provide any relevant information.
- S-5 Exelon pays annual property taxes to a number of taxing entities within, and including, Ogle County. The Ogle County Treasurer collects Byron's property tax payment and disperses it to the various taxing entities to partially fund their respective operating budgets. Provide additional information about tax payments to Ogle County (after tax triggers and not including PIAT payments) and the portion of the county tax monies allocated to "the Byron Forest Preserve, the Oregon Park District, the Rock Valley Community College 511, the Byron Unit 226 School District, the Byron Fire District, the Byron Library District, Ogle County, and Rockvale Township." A brief explanation of how these payments are allocated would be helpful. A table showing the amount of distribution (or percentage) of the Byron property tax payment and each entity's total revenue (or percent of total revenue) would also be helpful. It's important to know how dependent some of these entities may be on the revenue received from the Byron property tax payment via Ogle County.
- S-6 In addition to property tax payments and PIAT information presented in Section 2.7 of the ER, describe any other major annual support payments, one-time payments, and other forms of non-tax compensation (if any) provided to local organizations, communities, and jurisdictions (e.g., county, municipality, townships, villages, incorporated places, and school districts) on behalf of Byron.

- S-7 Provide information about any anticipated changes in state and local tax laws, rates, and assessed property value or any other recent or anticipated tax payment adjustments that could result in notable future increases or decreases in property taxes or other payments.

Special Status Species and Habitats (SSSH)

- SSSH-1 The June 20, 2013, final rule that amended 10 CFR Part 51 revised the scope of the transmission line review for license renewal to be those “transmission lines that connect the nuclear power plant to the substation where electricity is fed into the regional power distribution system and transmission lines that supply power to the nuclear plant from the grid” (see 10 CFR 51, Appendix B to Subpart A, Table B–1, Footnote 4). Accordingly, the NRC staff will address only those transmission lines that meet this definition in its environmental review.
- a. Identify the name and location of the substation that connects Byron to the regional grid.
  - b. Clarify which portions of the four 345-kV lines described in Section 3.1.6 of the ER are in scope for the license renewal review according to the 2013 definition.
  - c. Confirm that the following statement regarding transmission lines that supply power to Byron remains true under the 2013 transmission line scope (Section 3.1.6, Page 3-13, Paragraph 2, of the ER): “No separate transmission lines exist for the purpose of supplying power to Byron from the grid (off-site power).”
- SSSH-2 Please provide all reports of “unusual or important environmental events” reportable under Appendix B, Section 4.1 to the Byron Operating Licenses (NPF-37 and NPF-66) that have occurred within the past 10 years (2003-2013). As stated in Section 4.1 of the ER, this would include events such as excessive bird impaction events, onsite plant or animal disease outbreaks, mortality or unusual occurrence of any species protected by the Endangered Species Act of 1973, fish kills, increase in nuisance organisms or conditions, and unanticipated or emergency discharge of waste water or chemical substances.

Terrestrial Ecology (TE)

- TE-1 Provide electronic or paper copies of the following ER references for NRC review during the site visit:
- a. (Exelon Nuclear 2011c) Exelon Nuclear. 2011. WHC Wildlife Management Plan –Byron Generating Station. Byron, IL.
  - b. (ComEd 1981a) Commonwealth Edison Company. 1981. Byron Station Environmental Operating License Stage. Vol. 1. Amendment No. 4. January 1983.

c. (ComEd 1981b) Commonwealth Edison Company. 1981. Byron Station Environmental Report Operating License State. Vol. 2. Amendment No. 4. January 1983.

- TE-2 Briefly describe the specific records or information reviewed to determine that no new and significant information exists for each of the terrestrial resources Category 1 issues applicable to Byron.
- TE-3 Byron appears to be located in the vicinity of the Castle Rock State Park and Lowden-Miller State Forest Important Bird Area (IBA) described here: <http://netapp.audubon.org/IBA/Site/1698>. Based on the NRC staff's initial review, the Byron site boundaries and the in-scope transmission line corridors do not appear to cross any designated IBAs. Please confirm whether these statements are true.
- TE-4 Please provide a copy of ComEd's transmission line vegetative maintenance procedure(s) described on Page 2-25 in Section 2.4 of the ER.
- TE-5 In Section 2.4 (Page 2-25), the ER states that "bat houses have been erected and are monitored" on the Byron site as part of wildlife habitat enhancement and conservation education activities. Please provide any monitoring information available on these bat houses, including their locations and any information on what species of bat inhabit them, if any.
- TE-6 If available, please provide a reference for the Wildlife Habitat Council's recognition of Byron Station's Wildlife at Work program (November 2011) discussed in Section 2.4 (Page 2-25).
- TE-7 Section 4.9, Page 4-22, of the ER states that, "All refurbishment activities would occur on previously-disturbed or developed areas that are devoid of natural habitat..." Please describe the specific records or information reviewed to determine that the potentially affected areas are devoid of natural habitat, including whether any surveys were conducted.
- TE-8 Section 4.9, Page 4-22, of the ER states that, "Some songbirds could be temporarily displaced by noise, machinery, and personnel associated with refurbishment activities, but such disturbances would be temporary and minor." Please provide a reference, or describe how this conclusion was reached.
- TE-9 Section 3.1.6, Page 3-14, of the ER states, "The intention is for these transmission lines to remain a permanent part of the transmission system even after Byron is decommissioned." Please provide a source from ComEd to support this statement.
- TE-10 Please provide ComEd's "surveillance and maintenance procedures that provide assurance that design ground clearances will not change" referenced in Section 4.13.2, Page 4-32, of the ER.

Waste Management and Pollution Prevention (WWPP)

No specific audit needs.

Water Resources – Groundwater (WR-GW)

- WR-GW-1 Provide electronic or paper copies of the following ER references for NRC review during the site visit:
- a. (Exelon Nuclear 2011b) Exelon Nuclear, 2011, "Hydrogeologic Investigation Report, May 2011."
  - b. The last five years of annual reports submitted to the Illinois State Water Survey reporting the pumping rates of high-capacity wells at the plant.
- WR-GW-2 Meeting: A breakout meeting with the applicant's subject matter expert(s) and/or the contractor(s) to discuss what is being learned about groundwater flow direction, rates, and water chemistry from the "Site Groundwater Protection Initiative" that is part of the Nuclear Energy Institute (NEI) "Industry Ground Water Protection Initiative."
- WR-GW-3 Meeting: A breakout meeting with the applicant's subject matter expert(s) and/or the contractor(s) to discuss the current location and concentration of any radiological or non-radiological contaminants detected in groundwater underlying the site.
- WR-GW-4 Tour: The hydrology-groundwater team would like a general tour of the site and specifically:
- a. The surface water intake and discharge to the Rock River
  - b. Areas of groundwater contamination along the discharge line
  - c. Former Byron Salvage Yard Superfund Site and Dirk's Farm
  - d. The onsite well locations that supply potable water



Water Resources – Surface Water (WR-SW)

- WR-SW-1 Provide electronic or paper copies of the following ER references for NRC review during the site visit:
- a. Agreement with Illinois Environmental Protection Agency (IEPA) limiting Byron's consumptive use of surface water
  - b. Byron Storm Water Pollution Prevention Plan
  - c. A large scale map or maps depicting NPDES outfall locations
  - d. Application for Clean Water Act Section 401 Certification referenced in Exelon's July 2, 2012 letter to the IEPA
  - e. Copy of Illinois DNR/Office of Water Resources (OWR) permit 15001 issued April 1977 to Commonwealth Edison (as referenced in IDNR letter to Exelon dated July 10, 2012)
  - f. Copies of any Notices of Violation (NOVs), nonconformance notifications, or related infractions received from regulatory agencies associated with NPDES permitted discharges, sanitary sewage systems, groundwater or soil contamination, including spills, leaks, and other inadvertent releases of fuel solvents, chemicals, or radionuclides (covering past five years). Include correspondence of self-reported violations to responsible agencies.
  - g. Copy of IEPA Water Pollution Control Permit No. 2011-EP-1250 (Hauling of Sanitary Wastewater Tributary to the City of Oregon WWTP) and IEPA Permit No. 2009-SC-2169-1 (Land Application of Sludge)
- WR-SW-2 Please provide a description of the methodology/procedure used to ensure compliance with instream flow requirements (i.e., adjusting cooling water system (CWS) makeup and blowdown).
- WR-SW-3 Please provide all non-radiological monitoring reports from the last five years, including NPDES Discharge Monitoring Reports and surface water withdrawal records/reports
- WR-SW-4 Meeting: A breakout meeting with the applicant's subject matter expert(s) and/or the contractor(s) responsible for writing the surface water hydrology and quality portions of the ER and who can discuss the plant's CWS and intake, effluent discharges, and affected water resources.
- WR-SW-5 Tour: The hydrology-surface water team would like a general tour of the site and vicinity including associated intake structures and conveyances (i.e., Rock river intake and screen house), significant streams and other surface water features, and NPDES outfall locations (e.g., blowdown Outfall 001). Include the site package treatment plant.