



October 31, 2014

ULNRC-06150

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

10 CFR 2.101
10 CFR 2.109(b)
10 CFR 50.4
10 CFR 50.30
10 CFR 51.53(c)
10 CFR 54

Ladies and Gentlemen:

**DOCKET NUMBER 50-483
CALLAWAY PLANT UNIT 1
UNION ELECTRIC CO.
FACILITY OPERATING LICENSE NPF-30
COMMITMENT RELATED TO THE REVIEW OF THE FINAL SUPPLEMENTAL
ENVIRONMENTAL IMPACT STATEMENT (SEIS)**

Reference: 1) ULNRC-05830 dated December 15, 2011

By the referenced letter, Union Electric Company (Ameren Missouri) submitted a license renewal application (LRA) for Callaway Plant Unit 1. The application included an environmental report (Operating License Renewal Stage) prepared in accordance with 10 CFR 54.23 and 10 CFR Part 51, Subpart A.

As a result of questions raised by the US Fish and Wildlife Service (FWS) with regard to the biological assessment for the proposed Callaway Plant Unit 1 license renewal, Ameren Missouri has agreed to commit to conducting an entrainment and impingement study of the plant closed-cycle make-up water intake structure and its impact on the pallid sturgeon (*Scaphirhynchus albus*). The study, including Missouri River sampling, is described below and will be completed by December 31, 2016. A report describing the results of the study will be submitted to the NRC by March 31, 2017 with copies provided to the US Fish and Wildlife Service, the Missouri Department of Natural Resources, and the Missouri Department of Conservation.

Specifically, Ameren Missouri will perform a one-year pallid sturgeon entrainment and impingement study for the Callaway Plant Unit 1 closed-cycle make-up water intake structure.

- The impingement study will consist of a once-per-week sample over a 52 consecutive week period. The sample will be obtained from the traveling screen wash trough of the plant closed-cycle make-up water intake structure, with the exception that three (3) samples per week will be obtained and processed during May through July. Samples will be taken on non-consecutive days, when possible.
- The entrainment study will be conducted in either 2015 or 2016 and will require a weekly sample to be obtained and processed in the second half of March, April, August, and September. In addition, three (3) samples per week will be obtained and processed throughout May through July. Samples will be taken on non-consecutive days, when possible. Entrainment samples will be obtained and processed from the plant closed-cycle make-up water intake structure on the discharge side of the traveling screens.
- Missouri River sampling will be conducted at three (3) locations opposite the intake structure during four (4) consecutive weeks (during May or June based on monitored water temperatures favorable for sturgeon spawning) on a once per week basis.
- A final report documenting the study results will be provided.

This letter provides a copy of the Preliminary Entrainment and Impingement Monitoring Plan Description (Enclosure 1). This preliminary plan description provides a high level summary of the proposed elements of the monitoring plan. The detailed plan is expected to be developed and finalized in early 2015.

Enclosure 2 to this letter contains one (1) formal commitment. This commitment will be subject to the Callaway Commitment Management Program, which is consistent with Nuclear Energy Institute (NEI) 99-04, "Guideline For Managing NRC Commitments."

If you have any questions with regard to this commitment, please contact Sarah Kovaleski at (573) 489-9435 or Tom Elwood at (314) 225-1905.

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

Sincerely,

Sarah Kovaleski

Sarah Kovaleski
Director, Engineering Design

Executed on: October 31, 2014

DS/nls

Enclosures: 1) Preliminary Entrainment and Impingement Monitoring Plan Description
2) List of Commitments

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CALLAWAY PLANT UNIT 1
LICENSE RENEWAL APPLICATION

PRELIMINARY ENTRAINMENT AND IMPINGEMENT MONITORING PLAN
DESCRIPTION

CALLAWAY PLANT UNIT 1
PRELIMINARY ENTRAINMENT AND IMPINGEMENT MONITORING PLAN
DESCRIPTION

Purpose: To conduct an entrainment and impingement study at the Callaway Plant Unit 1 closed-cycle make-up water intake structure for pallid sturgeon (*Scaphirhynchus albus*) and to provide information on the occurrence of larval sturgeon from the Missouri River in the vicinity of the Callaway Plant Unit 1 intake.

Goals: To resolve questions raised by the US Fish & Wildlife Service with regard to the biological assessment to support the Callaway Plant Unit 1 Nuclear Regulatory Commission license renewal application.

Monitoring plan design:

Entrainment

- Sampling duration—mid-March through September
- Sampling interval—week
- Sampling frequency
 - Mid-March, April, August and September: once per week
 - May through July: three (3) times per week (Samples will be taken on non-consecutive days, when possible.)
- Sampling intensity—one collection every six (6) hours over 24 hours (composited prior to sample processing)
- Sampling magnitude—minimum 100 m³ sample volume per collection
- Sampling location—tap off cooling water make-up line post traveling screens or other post-screen location TBD
- Ancillary data collection
 - pump operation data
 - water temperature
 - dissolved oxygen
 - river discharge and stage
- Sample processing
 - Identification (to lowest practicable level) and counting of all collected species by lowest practicable taxonomic level
 - Length measurement of up to 25 larvae per taxon per sampling day
 - Identification, counting, and measurement of pallid sturgeon (larval identification by DNA sequencing and morphological characteristics)

Impingement

- Sampling duration—52 consecutive weeks
- Sampling interval—week
- Sampling frequency
 - Once per week during August through April
 - Three (3) times per week during May through July (samples will be taken on non-consecutive days, when possible)
- Sampling intensity—one 24-hour collection composited from screen washings
- Sampling location—traveling screen wash trough
- Sample processing
 - Identification to species, counting, and measurement (weight and length) of up to 25 randomly selected individuals (i.e., all species impinged) per collection day
 - Identification, counting, measurement, and photodocumentation of all Acipensiformes, with identification by DNA sequencing of suspected pallids, and morphological characteristics prior to release of live fish, or preservation of dead fish
 - Strict quality control procedures for species identification to include qualified fisheries biologists, use of taxonomic keys and voucher specimens, and verification of identification by outside taxonomy expert for uncommon species or uncertain identification of individuals
 - Condition of each specimen (initially live, stunned or dead) upon collection from screen wash trough
 - Impinged Acipensiformes assumed to die
 - Impinged fish that are diseased or show signs of dying previous to impingement (e.g., fungus, injury) will be excluded
 - Any non-fish organisms such as reptiles, amphibians, mammals, and birds that are collected will be noted

River sampling for larval sturgeon

- Sampling gear
 - Tapered rectangular-frame nets with dimensions (Refer to Reference 1)
 - Deployed by boat
- Sampling location
 - Three (3) locations opposite the intake (e.g., channel margin near intake, channel thalweg, and channel margin on/near channel margin on inside bend opposite intake)
 - At bottom and near surface
- Sampling duration—four (4) consecutive weeks during May or June based on monitored water temperatures favorable for sturgeon spawning

- Sampling frequency—once per week during daylight and darkness
- Sample processing
 - Identification, counting, and measurement of all sturgeon larvae and eggs
 - Identification by DNA sequencing and/or morphological characteristics

Additional Reporting Requirements – Unusual or Important Environmental Events

(Refer to Reference 2)

"Any occurrence of an unusual or important event that indicates or could result in significant environmental impact casually related to plant operation shall be recorded and reported to the NRC within 24 hours followed by a written report per Subsection 5.4.2. The following are examples: excessive bird impaction events, on-site 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.

No routine monitoring programs are required to implement this condition."

References Cited

1. Braaten, P.J., D.B. Fuller, R.D. Lott, M.P. Ruggles and R.J. Holm. 2010. Spatial distribution of drifting pallid sturgeon larvae in the Missouri River inferred from two net designs and multiple sampling locations. *N. Amer. J. Fish. Mgmt.* 30:1062-1074.
2. Source: Callaway Plant Unit 1 Operating License (OL) Appendix B – Environmental Protection Plan (Non-Radiological); Implemented by site procedure APA-ZZ-00520, "Reporting Requirements and Responsibilities", Revision 43 - Attachment 2, Item 12.

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LIST OF COMMITMENTS

