



Callaway Plant

April 7, 2014

ULNRC-06112

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
REVIEW OF THE DRAFT SUPPLEMENT 51 FOR NUREG-1437**

- References: 1) ULNRC-05830 dated December 15, 2011
2) Notice of Availability of the Draft Plant-Specific Supplement 51 to the Generic Environmental Impact Statement for License Renewal of Nuclear Plants Regarding Callaway Plant, Unit 1, dated February 12, 2014

By the Reference 1 letter, Union Electric Company (Ameren Missouri) submitted a license renewal application (LRA) for Callaway Plant Unit 1. Reference 2 dated February 12, 2014 transmitted the Notice of Availability of the Draft Plant-Specific Supplement 51 to the Generic Environmental Impact Statement (GEIS) for License Renewal of Nuclear Plants Regarding Callaway Plant, Unit 1. The Accession Number for draft Supplement 51 to the GEIS is ML14041A373.

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We have reviewed the Draft Supplemental Environmental Impact Statement (SEIS) for accuracy and are providing comments (refer to Enclosure 1- Comments on Draft Supplement 51 to NUREG-1437) for your consideration.

It should be noted that there are no changes to commitments contained within this response.

If you have any questions with regard to this submission, please contact me at (573) 489-9435 or Roger Wink at (314) 225-1561.

Sincerely,

A handwritten signature in black ink that reads "Sarah Kovaleski". The script is cursive and fluid.

Sarah Kovaleski
Director, Engineering Design

DS/adl

Enclosure: 1) Comments on Draft Supplement 51 to NUREG-1437

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CALLAWAY PLANT UNIT 1
LICENSE RENEWAL APPLICATION

COMMENTS ON DRAFT SUPPLEMENT 51 TO NUREG-1437

No.	DSEIS Location			Comment	Suggested Resolution
	Page	Line	Section		
1			General Comment	Ameren is in the process of constructing an ISFSI with completion expected in 2015. The water filled excavation that was made for Callaway Unit 2 is being filled in, in preparation of ISFSI construction.	<p>There are numerous locations in the report indicating that the existing spent fuel pool will reach capacity by 2020. Prior to the spent fuel pool reaching capacity the ISFSI facility will be available to store spent fuel assemblies.</p> <p>Also, there are several locations in the report indicating that the excavation previously completed for Callaway Unit 2 is water filled. This excavation has been drained of standing water and is in process of being filled to facilitate construction of the ISFSI project.</p>
2			General Comment	The Chamois Power Plant ceased operation in September 2013.	There are numerous references in the report describing the operation of the Chamois power plant. Since it has ceased operation consider whether the report needs to reflect this change.
3	2-1	30 - 32	2.1	The prior excavation referred to in this section was from initial site construction in the early 1980s.	Consider revising this sentence to clarify that the prior excavation was from initial construction.

4	2-8	28	2.1.2.1	Callaway does not use reverse osmosis as a treatment method for liquid radioactive waste.	Remove reference to reverse osmosis.
5	2-9	1 - 4	2.1.2.2	Line 1-4 states "Offgases from the main condenser are the major source of gaseous radioactive waste. Other radioactive gas sources collected by the system include leakage from steam piping and equipment in the reactor building, turbine generator building, and radioactive waste building." This is not correct. In fact, the major source of gaseous radioactive waste is purging of the volume control tank and discharge of tank vents and other equipment in the containment, radioactive waste, and auxiliary buildings.	Revise paragraph to state "The major source of gaseous radioactive waste is purging of the volume control tank and discharge of tank vents and other equipment in the containment, radioactive waste, and auxiliary buildings."
6	2-18	30	2.1.6.1	A statement is made that most of the water in the circulating system is lost to the atmosphere, this is misleading as only about 1% is lost through evaporation.	Consider deletion or revising as follows: "Although small in comparison to the total volume of water in the circulating water system, the largest loss is to the atmosphere."
7	2-18	42 - 46	2.1.6.1	Should state the water flowing down the discharge pipeline and discharged to the Missouri River has a <i>maximum</i> temperature near 90°F. Cooling tower blowdown temperatures (Outfall 002) vary with season and range from about 60-90°F. The current NPDES Permit does not contain an upper temperature limit or stipulate that the discharge must not cause the temperature of the mixing zone (or the area where the discharge water meets and mixes with the river) to increase by more than 5°F (2.8°C).	Revise the paragraph as follows: "The temperature of the water flowing down the blowdown pipeline and discharged to the Missouri River usually has a <u>maximum</u> temperature of approximately 90 °F (32 °C) (Ameren 2011d). The NPDES permit for Callaway establishes the upper limit of allowable temperature impacts by Callaway on the Missouri River. It

					stipulates that the discharge must not cause the temperature of the mixing zone (or the area where the discharged water meets and mixes with the river) to increase by more than 5 °F (2.8 °C) (MDNR 2010a)."
8	2-19	32, 33	2.1.7.1	Incorrectly estimates the volume of water returned to the river. Over the past three years the volume of water returned to the river has averaged near 4400 gpm with the losses to evaporation near 11,000 gpm. Therefore, approximately 25% of the water withdrawn is returned to the river.	Suggest revising paragraph to state that approximately 25% of the water withdrawn is returned to the river.
9	2-21	10, 11	2.1.7.2	The unit 2 prior excavation hole is in the process of being filled in and will be completely filled in by 2015. The GWS pump is used to dewater the structural fill area underlying the power block.	Consider revising this text to match page 2-37 lines 17 & 18.
10	2-33	14		Concerning the 401 Water Quality Certification, Ameren did receive a response letter from the Missouri DNR (dated October 8, 2013) stating that the department considers the permit to provide appropriate environmental protection under the Missouri Clean Water Law and compliance with the Clean Water Act.	Consider revising.
11	2-68	Table 2-16		Number of Callaway employees does not match what is listed on page 2-57	Consider reconciling the two numbers.
12	4-44	18 - 29	4.12.3.1	The Chamois Power Plant ceased operation in September 2013 and is no longer a cumulative effect on the aquatic resources.	Recommend removing reference to the Chamois Power plant or revising to state that it no longer impacts the aquatic resources.

13	4-45	29	4.12.3.5	The sentence appears to be misleading. Sentence inappropriately implies that the "license renewal" contributes to the "LARGE" cumulative impact when in fact other major factors outside of existing or future operation of Callaway result in this impact.	Consider revising the text as follows: "Because of the noticeable destabilization of aquatic resources within the Lower Missouri River as a result of USACE intervention with reservoir construction and channel stabilization, independent of Callaway's existing or future operation, the NRC staff concludes that the cumulative effects have the potential to be LARGE."
14	5-4	17	5.3.2	The fire PRA CDF number has been reduced from 2.0E-5 to 1.68E-5 since the original LAR was submitted.	The current fire CDF is 1.68×10^{-5} . Given that the fire CDF has been reduced since the original LAR, no SAMAs have become more cost-beneficial and therefore changes to the SAMA analysis performed for this application are not needed.
15	8-26	33	8.2.9	The Missouri-Kansas-Texas Railroad in central Missouri is now a state hiking trail (Katy Trail State Park), with no rails remaining. The Callaway rail spur could not be reconstructed to provide rail access.	Consider removing the discussion of the rail spur to the Callaway site.
16	F-10	8		The stated CDF of 7.6x10E-6 has an incorrect exponent	Correct to state a CDF of 7.6x10E-5.
17	F-18	11		Safety related water system is incorrectly listed as emergency service water	Change to essential service water.

18	H-6	4	Appendix H	Two additional sedimentation ponds are currently being designed with installation planned during 2015 as the existing treatment lagoons are approaching capacity.	
19	H-6	13, 14	Appendix H	The current NPDES Permit does not contain a temperature limitation for discharge such that the discharge must not cause the temperature of the mixing zone (or the area where the discharged water meets and mixes with the river) to increase by more than 5°F (3°C). Temperature is required to be monitored.	Consider removing this sentence.
20	H-6	15	Appendix H	The statement in the Draft SEIS that "All plant outfalls except one connect into a single pipeline..." is not completely accurate.	Consider revising the section to state: "NPDES outfalls 001, 002, 003, 007, 009, and 016 all connect to a single discharge pipeline that discharges to the Missouri River. Storm water outfalls 010, 011, 012, 014, and 015 each flow to separate area creeks. Note that outfall 009 has never been used."
21	H-9		H.4.3.2	This section fails to acknowledge the buoyancy and strong photopositive response of pallid larval as mentioned in Section H.4.1 in contrast to the water intake opening of the Callaway intake that may preclude larval impingement and/or entrainment. Emphasis should also be added to note relative small component of river water extracted due to minimal amount of water required by a cooling tower verses a once through cooling water system, i.e., mitigating factor/impacts.	Consider revising.