

Craver, Patti

From: Krieg, Rebekah <rebekah.krieg@pnnl.gov>
Sent: Tuesday, December 13, 2011 10:38 AM
To: Logan, Dennis
Subject: FW: ACTION: Columbia aquatic ecology comments from WDFW
Attachments: 67 - posner - ML11334A066.pdf

From: Doyle, Daniel [<mailto:Daniel.Doyle@nrc.gov>]
Sent: Wednesday, November 30, 2011 1:59 PM
To: Krieg, Rebekah; Logan, Dennis
Cc: Balsam, Briana; Mcdowell, Bruce K; Imboden, Andy; Wrona, David
Subject: ACTION: Columbia aquatic ecology comments from WDFW

Dennis and Becky,

I just received the attached comment letter about Columbia this afternoon. It is from the WA State Dept of Fish and Wildlife via EFSEC.

Here are some excerpts:

- *Specifically, WDFW is concerned about the adequacy of cooling water intake screens to prevent the entrainment of juvenile aquatic organisms and the heat load of discharge water to the Columbia River. The protection of fish and wildlife and associated habitat are fundamental to compliance with state substantive standards under the Washington Administrative Code Section 463-62-040.*
- *WDFW suggests continued monitoring at the blowdown discharge to ensure there is not thermal barrier for aquatic species.*
- *WDFW suggests that the screen be modified to prevent entrainment of fry less than 60 mm fork length where possible.*
- *As wildlife continue to ingest the affected vegetation, WDFW acknowledges that continued monitoring of vegetation and wildlife samples will be necessary to identify cumulative effects of the radionuclide through time.*
- WDFW telephone number: 360-902-2200. WDFW letter signed by Peggy Miller, Energy Mitigation Biologist.

Aside from the NMFS letter, these are the only other comments on aquatic ecology so far. Please review the comments and let me know your plan for responding in the final SEIS and if you think any other changes to the document are necessary outside of Appendix A (comments and responses).

Thanks,

Dan Doyle

Project Manager
 Division of License Renewal
 U.S. Nuclear Regulatory Commission
daniel.doyle@nrc.gov
 (301) 415-3748



STATE OF WASHINGTON
ENERGY FACILITY SITE EVALUATION COUNCIL

PO Box 43172 • Olympia, Washington 98504-3172

9/1/2011

76 FR 54502

67

November 10, 2011

Ms. Cindy Bladey
Chief, Rules, Announcements, and Directives Branch (RADB)
Division of Administrative Services
Office of Administration
Mail Stop: TWB-05-B01M
U. S. Nuclear Regulatory Commission
Washington, DC 20555-0001

REMOVED

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RULES ANNOUNCEMENTS
DIRECTIVES
BRANCH

Dear Ms. Bladey:

Subject: Docket ID NRC-2010-0029: State Agency Comments – Columbia Generating Station
Draft Supplemental Generic Environmental Impact Statement – Supplement 47

Thank you for the opportunity to review the Draft Supplemental Generic Environmental Impact Statement (GEIS) for License Renewal of Nuclear Plants—Supplement 47, Regarding Columbia Generating Station, dated August 2011. The Energy Facility Site Evaluation Council (EFSEC) is pleased to provide the enclosed state agency comments.

EFSEC has completed its review of the GEIS and has also received comments from the Washington State Department of Fish and Wildlife (WDFW); please see enclosed letter. The WDFW comments are related to the potential impacts to aquatic life from the operation of the circulating cooling water system. Specifically, WDFW is concerned about the adequacy of cooling water intake screens to prevent the entrainment of juvenile aquatic organisms and the heat load of discharge water to the Columbia River. The protection of fish and wildlife and associated habitat are fundamental to compliance with state substantive standards under the Washington Administrative Code Section 463-62-040.

Thank you again for the opportunity to review the DEIS. Please contact me at (360) 664-1903 or Stephen.Posner@utc.wa.gov if you have any questions concerning this letter.

Sincerely,

Stephen Posner
EFSEC Compliance Manager

Enclosure

cc: Travis Nelson-Washington Department of Fish and Wildlife, Habitat Program Manager
Jeff Ayres-Washington Department of Ecology

SOPSI Review Complete
Template = ADM-013

FRDS = ADM-03
Call - D. Doyle (did)
S. Freeman (5782)



State of Washington

Department of Fish and Wildlife

Mailing Address: 600 Capitol Way N, Olympia WA 98501-1091, (360) 902-2200, TDD (360) 902-2207
Main Office Location: Natural Resources Building, 1111 Washington Street SE, Olympia WA

November 4, 2011

Stephen Posner
Energy Facility Site Evaluation Council
Utilities and Transportation Commission
P.O. Box 43172
Olympia, WA 98504-3172
(360) 664-1903

**Subject: Generic Environmental Impact Statement for License Renewal of Nuclear Plants;
Supplement 47; Regarding Columbia Generating Station; Draft Report for Comment**

Dear Mr. Posner:

The Department of Fish and Wildlife (WDFW) has reviewed the Draft Supplemental Environmental Impact Statement (DSEIS) and offers the following comments for the above referenced project at this time.

The mission statement for the Department of Fish and Wildlife (WDFW) mandates that WDFW strives to protect, restore and enhance fish and wildlife and their habitats, while providing sustainable fish and wildlife-related recreational and commercial opportunities. With that in mind, WDFW has reviewed the Draft Supplemental Environmental Impact Statement (DSEIS) for potential impacts to fish, wildlife, their habitats and recreational opportunities and offers the following comments for the above referenced project at this time.

The intake and discharge of the cooling system poses a potential thermal barrier to fish and other aquatic wildlife at the point of blowdown discharge. Studies indicated water temperature was not elevated at distances beyond 10 ft (3 m) from the discharge structure and was imperceptible at the surface of the river in the summer. However, in the winter months, the maximum plume length detected had a temperature rise of 0.7 degrees Fahrenheit (F) at 500 ft (152 m), and a temperature rise of 0.2 degrees F isotherm was approximately 40 ft wide. Since width of the river is about 1,200 ft (370 m) wide near the blowdown discharge; the size of the plume does not likely block fish passage through the area at this time. WDFW suggests continued monitoring at the blowdown discharge to ensure there is not thermal barrier for aquatic species.

The intake system for the makeup water pumps consists of two buried pipes that extend into the Columbia River. The intake structure, located at the end of each of the pipe, is composed of two

Mr. Stephen Posner
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intake screens made up of an outer and inner perforated pipe sleeves. The outer sleeve consists of 3/8-in. diameter holes (composing 40 percent of the surface area) and the inner with 3/4-in. diameter holes (composing 41 percent of the surface area). The intake screens are designed to distribute the water flow evenly along its surface. During normal operating periods, the average makeup water withdrawal is about 17,000 gpm (1.1 m³/sec). Impingement of aquatic organisms is unlikely because the velocity of the water across the face of the intake system is several times faster than the intake velocity. Fish Protection Screen Guidelines for Washington State (work in progress, WDFW 2000) suggests minimum openings of 3/32 in. for fry less than 60 mm fork length (27 percent open) and 1/4 in. for fish greater than fork length (40 percent open). The outer screen meets the suggested percent open area for the juveniles greater than 60 mm fork length but does not block fry less than 60 mm from entering the intake structure.

The DSEIS indicates that phytoplankton, zooplankton, and the eggs, larvae, and juvenile forms of many of the fish and invertebrates entrained by intake systems will likely face 100-percent mortality in the cooling systems when they encounter the physical and chemical stressors. The overall conclusions of the entrainment studies indicate entrainment is minimal at facilities with closed-cycle cooling systems and will neither destabilize nor noticeably alter the population of anadromous fish including their early life stages. WDFW suggests that the screen be modified to prevent entrainment of fry less than 60 mm fork length where possible.

In addition, monitoring of radionuclide levels in wildlife samples indicated the samples contain radionuclide below levels that are estimated to cause adverse health effects to animals or to the people who may consume them. But radionuclide concentrations in vegetation samples collected from, or adjacent to, waste disposal facilities were higher than concentrations in samples collected farther away, including concentrations measured offsite. As wildlife continue to ingest the affected vegetation, WDFW acknowledges that continued monitoring of vegetation and wildlife samples will be necessary to identify cumulative effects of the radionuclide through time.

WDFW welcomes the opportunity to work with EFSEC on this relicensing application. Please keep WDFW apprised of the status of the Final SEIS and the relicensing process. If you have any questions or need more information from the WDFW, please call (360) 902-2200.

Sincerely,



Peggy Miller

Energy Mitigation Biologist
Washington State Department of Fish and Wildlife