ENERGY NORTHWEST

Alex L. Javorik
Columbia Generating Station
P.O. Box 968, PE23
Richland, WA 99352-0968
Ph. 509-377-8555 F. 509-377-2354
aljavorik@energy-northwest.com

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GO2-12-026

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555-0001

Subject: **COLUMBIA GENERATING STATION, DOCKET NO. 50-397**
LICENSE RENEWAL APPLICATION THIRD ANNUAL UPDATE

References:
1) Letter, GO2-10-011, dated January 19, 2010, WS Oxenford (Energy Northwest) to NRC, "License Renewal Application"
2) Letter, GO2-10-094, dated July 16, 2010, SK Gambhir (Energy Northwest), "License Renewal Application First Annual Update"
3) Letter, GO2-11-074, dated April 5, 2011, SK Gambhir (Energy Northwest), "License Renewal Application Second Annual Update"

Dear Sir or Madam:

By Reference 1, Energy Northwest requested the renewal of the Columbia Generating Station (Columbia) operating license. The first and second annual updates were provided to the Nuclear Regulatory Commission (NRC) in References 2 and 3. The License Renewal Rule, 10 CFR 54.21(b), requires that each year following submittal of a license renewal application (LRA), and at least 3 months before scheduled completion of the NRC review, an amendment to the renewal application must be submitted that identifies any change to the current licensing basis (CLB) of the facility that materially affects the content of the LRA.

In accordance with this requirement, Energy Northwest performed a review of CLB changes after the LRA Second Annual Update reference freeze date of November 1, 2010. The reference freeze date for the third annual update was November 1, 2011. This update also includes a review of applicable industry and plant specific operating experience for the same time frame. No changes in the CLB were found that materially affected the content of the LRA.

A143
NRR

One plant modification added a stainless steel platform and ladder in the primary containment at Columbia. This material-environment combination of stainless steel in air-indoor has been addressed in the LRA, but not for this specific component type. Therefore, two line items were added for the applicable component type with this material-environment combination in Amendment 52 which is provided as the enclosure to this letter. No change in the aging management review resulted from this change.

Another modification removed the automatic closure due to smoke or combustible vapors for the remote air intakes. No change in scoping / screening resulted due to this modification.

Additionally, during the reviews for this update, Energy Northwest also incorporated administrative or editorial changes in Amendment 52. The attachment provides a brief explanation of the changes made.

No new or revised commitments are included in this response.

If you have any questions or require additional information, please contact John Twomey at (509) 377-4678.

I declare under penalty of perjury that the foregoing is true and correct. Executed on the date of this letter.

Respectfully,

DA Javorik For

AL Javorik
Vice President, Engineering

Attachment: Summary of LRA Changes

Enclosure: License Renewal Application Amendment 52

cc: NRC Region IV Administrator
NRC NRR Project Manager
NRC Senior Resident Inspector/988C
EFSEC Manager
RN Sherman – BPA/1399
WA Horin - Winston & Strawn
AD Cunanan - NRC NRR (w/a)
MA Galloway - NRC NRR
RR Cowley - WDOH

AMENDMENT 52
Summary of LRA Changes

LRA Section	LRA Page	Summary	Type
2.4.6	2.4-25	Removed auto-close signal on smoke.	Plant modification
2.3.3.38	2.3-137	Editorial change in the FSAR. Analyzer rooms do not require a post-accident cooling capability.	Editorial change
Table 3.5.2-13	3.5-123	Installed new stainless steel platform and ladder in Primary Containment.	Plant modification
Table 3.5.2-13	3.5-124		
Table 3.5.2-13	3.5-124a		
Table B-2	B-22	Identified that the High-Voltage Porcelain Insulator Aging Management Program requires enhancement to be consistent with LRA A.1.2.31, Table A-1 Item Number 31, and B.2.31 as revised by Amendment 42.	Consistency
B.2.5	B-39b	Changed description from "Specification" to the more accurate "Standard" for AWWA Standard C203.	Consistency

2.4.6 Fresh Air Intake Structure No. 1 and 2 – Seismic Category I

Structure Description

Two Seismic Category I remote Fresh Air Intake Structures are provided as part of the plant control room ventilation system design. In the event of a LOCA, operating personnel within the control room are protected from airborne radioactivity by means of pressurizing the control room with filtered air drawn from either of two separate remote fresh air intakes. Both intakes are physically remote from all plant structures. The fresh air intake structures are predominantly buried structures with above grade access grating to the air intake plenum. The structures are designed to withstand the effects of Seismic Category I disturbances, design basis wind velocity, and design basis tornado and tornado-generated missiles. The bottom of the Fresh Air Intake Structures are at elevation 431 ft. msl and the top of the structures are at elevation 441 ft. 9.5 in. msl. These elevations are sufficient to protect the structures from the effects of the design basis groundwater elevation 420 ft msl and the design basis flood elevation 433.3 ft msl. The intake structures are designed to handle, with adequate drainage, the instantaneous or local intense probable maximum precipitation (PMP).

Fire external to the plant and any resulting ingress of smoke or combustion vapors is detected by smoke detectors in the control room fresh air intake ducting, which will ~~automatically close the fire rated dampers downstream of the smoke detectors and place the control room in an unfiltered recirculation mode.~~

Reason for Scope Determination

The Fresh Air Intake Structure is within the scope of license renewal as a safety-related structure, which meets the criteria of 10 CFR 54.4(a)(1). The function of the Fresh Air Intake Structure, part of the main control room habitability system, is to ensure habitability inside the main control room during all normal and abnormal station operating conditions.

alarm in the control room.

The function of the Fresh Air Intake Structure is to provide protection from airborne radioactivity by means of pressurizing the control room with filtered air drawn from either of two separate remote fresh air intakes in the event of a LOCA.

Fire external to the plant and any resulting ingress of smoke or combustion vapors is detected by smoke detectors in the control room fresh air intake ducting, which will ~~automatically close the fire rated dampers downstream of the smoke detectors.~~ Therefore, the Fresh Air Intake Structure provides support and protection for equipment used for coping with and recovery from a Fire Protection (10 CFR 50.48) regulated event and meets the 10 CFR 54.4(a)(3) scoping criteria.

The critical motor control center~~,~~ ~~analyzer,~~ and fuel pool cooling (FPC) pump room emergency cooling fans auto start and the rooms are isolated from the Reactor Building HVAC system on an emergency signal. Although the FPC pump room is isolated from the Reactor Building HVAC system, the room temperature can be maintained below equipment operability limits with the Reactor Building HVAC dampers open. The ECCS and RCIC pump rooms emergency cooling fans auto start when their respective pump starts.

Each of the rooms housing critical equipment is provided with an individual air-handling unit (two units in the FPC pump room), which is fully enclosed within the room. Each air-handling unit is comprised of a fan and a water cooling coil in a sheet metal housing. Water is supplied to the cooling coils by the Standby Service Water System. During normal operation, these air-handling units are in standby. All units recirculate the air within the room they serve, removing the heat generated in the room via the cooling coil, to maintain temperatures below design limits.

Reason for Scope Determination

The Reactor Building HVAC systems provide:

- Secondary containment isolation and integrity [REA, ROA]
- Cooling to critical switchgear, ECCS pump rooms, and other vital rooms in the Reactor Building during emergency conditions [RRA]

These system-intended functions are safety-related. Therefore, the Reactor Building HVAC systems meet the scoping criteria of 10 CFR 54.4(a)(1).

The Reactor Building HVAC systems do not contain any NSR components that perform a 10 CFR 54.4(a)(1) function. The Reactor Building HVAC systems do, however, contain NSR components that are attached to or located near safety-related SSCs, whose failure creates a potential for spatial interaction that could prevent the satisfactory accomplishment of one or more of the functions identified in 10 CFR 54.4(a)(1). Therefore, the Reactor Building HVAC systems meet the scoping criteria of 10 CFR 54.4(a)(2). [REA, ROA, RRA]

The Reactor Building HVAC systems are relied upon to demonstrate compliance with, and meet the 10 CFR 54.4(a)(3) scoping criteria for, the following regulated events:

- Fire Protection (10 CFR 50.48) [REA, ROA, RRA]
- Environmental Qualification (10 CFR 50.49) [REA, ROA, RRA]
- Station Blackout (10 CFR 50.63) [RRA]

Table 3.5.2-13 Aging Management Review Results – Bulk Commodities

Row No.	Component / Commodity	Intended Function[1]	Material	Environment	Aging Effect Requiring Management	Aging Management Program	NUREG-1801 Volume 2 Item	Table 1 Item	Notes
87	Pipe Supports	SNS, SRE, SSR	Carbon Steel	Treated water	Loss of material	Structures Monitoring Program BWR Water Chemistry Program	III.B1.1-11	3.5.1-49	E
88	Pipe Supports	SNS, SRE, SSR	Stainless Steel	Treated water	Loss of material	Structures Monitoring Program BWR Water Chemistry Program	III.B1.1-11	3.5.1-49	E
89	Stair, Ladder, Platform, and Grating Supports	SNS, SRE	Carbon Steel	Air-indoor	Loss of material	Structures Monitoring Program	III.B5-7	3.5.1-39	A
90	Stair, Ladder, Platform, and Grating Supports	SNS, SRE	Galvanized Steel	Air-indoor	None	None	III.B5-3	3.5.1-58	A
91	Stair, Ladder, Platform, and Grating Supports	SNS, SRE	Carbon Steel	Air-outdoor	Loss of material	Structures Monitoring Program	III.B5-7	3.5.1-39	A
92	Stair, Ladder, Platform, and Grating Supports	SNS, SRE	Galvanized Steel	Air-outdoor	Loss of material	Structures Monitoring Program	III.B2-7	3.5.1-50	A
93	Stairs, Ladders, Platforms, and Gratings	SNS, SRE	Aluminum	Air-indoor	None	None	III.B5-2	3.5.1-58	C

Insert A from page 3.5-124a

Table 3.5.2-13 Aging Management Review Results – Bulk Commodities

Row No.	Component / Commodity	Intended Function[1]	Material	Environment	Aging Effect Requiring Management	Aging Management Program	NUREG-1801 Volume 2 Item	Table 1 Item	Notes
94	Stairs, Ladders, Platforms, and Gratings	SNS, SRE	Carbon Steel	Air-indoor	Loss of material	Structures Monitoring Program	III.B5-7	3.5.1-39	C
95	Stairs, Ladders, Platforms, and Gratings	SNS, SRE	Galvanized Steel	Air-indoor	None	None	III.B5-3	3.5.1-58	C
96	Stairs, Ladders, Platforms, and Gratings	SNS, SRE	Aluminum	Air-outdoor	None	Structures Monitoring Program	III.B4-7	3.5.1-50	I 0525
97	Stairs, Ladders, Platforms, and Gratings	SNS, SRE	Carbon Steel	Air-outdoor	Loss of material	Structures Monitoring Program	III.B5-7	3.5.1-39	C
98	Stairs, Ladders, Platforms, and Gratings	SNS, SRE	Galvanized Steel	Air-outdoor	Loss of material	Structures Monitoring Program	III.B2-7	3.5.1-50	C
99	Tube Track Supports	SNS, SRE, SSR	Carbon Steel	Air-indoor	Loss of material	Structures Monitoring Program	III.B2-10	3.5.1-39	A
100	Tube Track Supports	SNS, SRE, SSR	Galvanized Steel	Air-indoor	None	None	III.B2-5	3.5.1-58	A
101	Tube Track Supports	SNS, SRE, SSR	Carbon Steel	Air-outdoor	Loss of material	Structures Monitoring Program	III.B2-10	3.5.1-39	A
102	Tube Track Supports	SNS, SRE, SSR	Galvanized Steel	Air-outdoor	Loss of material	Structures Monitoring Program	III.B2-7	3.5.1-50	A
103	Tube Tracks	SNS, SRE, SSR	Carbon Steel	Air-indoor	Loss of material	Structures Monitoring Program	III.B2-10	3.5.1-39	C

Insert B from page 3.5-124a

Insert A:

Table 3.5.2-13 Aging Management Review Results – Bulk Commodities									
Row No.	**Component / Commodity**	**Intended Function[1]**	**Material**	**Environment**	**Aging Effect Requiring Management**	**Aging Management Program**	**NUREG-1801 Volume 2 Item**	**Table 1 Item**	**Notes**
92a	Stairs, Ladders, Platforms, and Grating Supports	SNS, SRE	Stainless Steel	Air-Indoor	None	None	III.B5-5	3.5.1-59	A

Insert B:

Table 3.5.2-13 Aging Management Review Results – Bulk Commodities									
Row No.	**Component / Commodity**	**Intended Function[1]**	**Material**	**Environment**	**Aging Effect Requiring Management**	**Aging Management Program**	**NUREG-1801 Volume 2 Item**	**Table 1 Item**	**Notes**
98a	Stairs, Ladders, Platforms, and Grating	SNS, SRE	Stainless Steel	Air-Indoor	None	None	III.B5-5	3.5.1-59	C

Table B-2
Consistency of Columbia Aging Management Programs with NUREG-1801
(continued)

Program Name	New / Existing	Consistent with NUREG-1801	Consistent with NUREG-1801 with Exceptions	Plant-Specific	Enhancement Required
Fire Water Program Section B.2.26	Existing	Yes	--	--	Yes
Flexible Connection Inspection Program Section B.2.27	New	--	~~Yes~~	Yes	--
Flow-Accelerated Corrosion (FAC) Program Section B.2.28	Existing	Yes	--	--	Yes
Fuel Oil Chemistry Program Section B.2.29	Existing	--	Yes	--	--
Heat Exchangers Inspection Section B.2.30	New	Yes	--	--	--
High-Voltage Porcelain Insulators Aging Management Program Section B.2.31	Existing	--	--	Yes	Yes
Inaccessible ~~Medium-Voltage~~ Power Cables Not Subject to 10 CFR 50.49 EQ Requirements Program Section B.2.32	New	Yes	--	--	Yes
Inservice Inspection (ISI) Program Section B.2.33	Existing	Yes	--	--	--
Inservice Inspection (ISI) Program – IWE Section B.2.34	Existing	Yes	--	--	--

Insert E to LRA Section B.2.5 on page B-39

The Buried Piping and Tanks Inspection Program will manage the effects of loss of material due to corrosion on the external surfaces of metallic piping and tanks that are buried or underground. The program also manages cracking, loss of material and loss of pre-load for buried bolting. Additionally, the program will verify that aging degradation is not occurring for buried concrete and polymer piping.

Buried piping and tanks are those whose external surface is in direct contact with soil, or concrete of a wall penetration below grade. Underground piping and piping components are also located below grade, but are exposed to air and are contained within outdoor vaults, valve pits, or guard pipes where access for inspection is restricted. The Buried Piping and Tanks Inspection Program supplements the External Surfaces Monitoring Program in such instances.

The Buried Piping and Tanks Inspection Program is a combination of a mitigation program (consisting of protective coatings, cathodic protection, and backfill quality) and a condition monitoring program (consisting of electrochemical verification of cathodic protection, confirmation of backfill quality, visual inspections of pipe or tank external surfaces, and non-destructive evaluation of pipe or tank wall thicknesses as needed).

Integrity of coatings will be inspected when components are excavated for maintenance or other reasons. If opportunistic inspections have not occurred between year 30 and year 38, directed excavation of the requisite sections of buried piping and tanks for the purpose of inspection will be performed before the end of year 40. Additional inspections of buried and underground piping and buried tanks will be performed within 10 years of entering the period of extended operation, and in each 10 year period thereafter.

Insert F to LRA Section B.2.5, page B-39

Program Elements Affected:

- **Preventive Actions**

Cathodic protection (in accordance with NACE SP0169-2007 or NACE RP0285-2002) is not, and will not be, provided for Diesel Fuel Oil System piping and tanks in the scope of license renewal. As described in FSAR Section 9.5.4.3, regarding Diesel Generator fuel oil piping and tanks, "The overflow lines from the day tank to the storage tank run underground south of the diesel generator building. Diesel fuel oil pipe lines extending under the diesel generator building do not receive full protection from the exterior rectifier-anode system because of the electrical shielding effect of the ground grid and foundation reinforcing and structural steel. Since the earth area under the diesel generator building is sheltered and hence relatively much drier than the earth exterior to this building, no additional cathodic protection system is provided or required." FSAR Section 9.5.4.3 further indicates that the "exterior surfaces of the buried piping and components in the diesel oil supply system are coated with coal tar enamel. Application of coatings is in strict accordance with AWWA ~~Specification~~ C203."

Standard