

May 13, 2015

Executive Director for Operations  
U.S. Nuclear Regulatory Commission,  
Washington, DC 20555-0001

Attn: Balwant K. Singal, Senior Policy Manager,  
Office of Nuclear Reactor Regulation

**10 CFR 2.206 emergency enforcement petition to immediately repair known crack in riser RS-9 weld for jet pumps 17 and 18 in the reactor vessel of the Columbia Generating Station, and to apply knowledge from the Fukushima Seismic Hazard Re-analysis in examining cracks and other signs of deterioration within the reactor vessel.**

In the matter of Energy Northwest's letter dated April 14, 2015, GO2-15-056 [ADAMS ML15113A301], regarding "Columbia Generating Station, Docket No. 50-397, Deviation From BWRVIP Flaw Evaluation Requirements For Jet Pump Riser Indication," Oregon and Washington Physicians for Social Responsibility and Heart of America Northwest (the Petitioners) submit the following request for emergency enforcement action as provided by Section 2.206 of Title 10 of the Code of Federal Regulation (10 CFR 2.206).

The Petitioners seek an enforcement action to ensure that the public health and safety is not unduly jeopardized by the unsafe operation of the Columbia Generating Station (CGS), located ten miles north of Richland, Washington on the Hanford Nuclear Reservation.

*The Petitioners call on the Nuclear Regulatory Commission to modify the operating license and/or suspend the restart of the CGS until the crack observed on the RS-9 riser weld for jet pumps 17 and 18 has been repaired.*

The Petitioners challenge the decision by Energy Northwest to use water chemistry and continued visual observation to deal with a known crack of one and one quarter inches, observed since 2011, in the RS-9 riser weld for jet pumps 17 and 18 in the Columbia Generating Station's reactor vessel.

This issue does not merit allowing a variance to the ordinary prescription in the BWRVIP program that would require a nuclear plant operator to repair a crack when it has reached this length, particularly on a critical component that must continue to function in full capacity to adequately cool the reactor core.

Further, in addressing the known crack on the RS-9 riser and concerns about additional deterioration within the reactor vessel, it is important that the NRC take into account the additional seismic hazards identified in Energy Northwest's Fukushima Seismic Hazard Reanalysis report, entitled "Columbia Generating Station, Docket No. 50-397, Seismic Hazard and Screening Report, Response to NRC Request for Information Pursuant to 10 CFR 50.54(F) Regarding Recommendation 2.1 of the Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident," [GO2-15-045] submitted to the NRC in March, 2015.

In particular, table 2.4-1 on page 112 of this document, showing 5% damped uniform hazard response spectra and the ground motion response spectra at a range of frequencies at the CGS site, indicates that ground motion exceeding the .25 g ground motion that is the design basis for the CGS, in many cases greatly exceeding it, is possible under a majority of the frequencies listed in the table.

On May 13, 2015, the NRC announced (see NRC News Release No. 15-032) that it was requiring the owner to conduct an in-depth analysis of the updated earthquake hazard for Columbia Generating Station. With uncertainty about the plant's response to earthquake motions, the NRC must not allow the reactor to operate with compromised safety margins. The limits on allowable crack size in the BWRVIP are based on forces (i.e. stresses) from heat up and cool down of the reactor and routine vibrations during operation and may not bound the forces imposed by the as-yet unanalyzed updated earthquake hazard.

All decisions related to cracking and deterioration within the reactor vessel and within its sensitive parts and equipment should take the most conservative approach possible so as not to further degrade the safety margins in a loss of coolant accident or other events that may occur due to a seismic event.

Specifically, this known crack on the RS-9 riser and other cracks that may be forming or may occur in a seismic event, may cause water to drain more rapidly from the reactor vessel in a loss of coolant accident and reduce the ability to cool the reactor adequately to prevent melting.

*For these above reasons, the reactor should either be kept closed during this current shut down for refueling and the riser weld should be repaired, or, if the NRC has not acted until after the nuclear plant has been re-started, the reactor be closed for that purpose.*

Sincerely,

Charles K. Johnson  
Oregon and Washington Physicians for Social Responsibility  
812 SW Washington St., Suite 1050  
Portland, OR 97205  
[chuck@oregonpsr.org](mailto:chuck@oregonpsr.org)  
(503) 777-2794

Peggy Maze Johnson  
Heart of America Northwest  
444 NE Ravenna Blvd., Suite 406  
Seattle, WA 98115  
[peg@hoanw.org](mailto:peg@hoanw.org)  
(206) 382-1014