# NRC Requires Proof from Energy Northwest that Hanford Nuclear Plant is Safe from Earthquakes

For more information: Chuck Johnson, Nuclear Power Program Director, 503-777-2794

Despite repeated assertions by Energy Northwest, that the Columbia Generating Station (CGS) nuclear plant is safe from earthquakes, the U.S. Nuclear Regulatory Commission (NRC) has ordered them to provide more proof. Nuclear watchdog groups believe that the order confirms concerns that faults surrounding the CGS nuclear plant are capable of more ground motion than the reactor was built to withstand and that the plant is in violation of its operating license and should be closed.

The announcement that the NRC is ordering further evidence from Energy Northwest that it is operating the region's only nuclear power reactor within earthquake safety bounds came Wednesday, May 13 – the same day that Oregon and Washington Physicians for Social Responsibility (PSR) and Heart of America Northwest filed a petition to the NRC demanding that a crack in a cooling component inside the reactor vessel be repaired.

The NRC letter requires the utility to conduct further studies to show whether the nuclear plant – located along the Columbia River on the Hanford Nuclear Reservation -- is operating within the bounds of its license. According to NRC criteria, nuclear plant operators must conduct further "seismic risk evaluation . . . if the design basis does not bound reevaluated hazard."

This NRC finding confirms a 2013 report by geologist Terry L. Tolan, sponsored by PSR, which reviewed US Geological Survey data showing the CGS nuclear plant to be vulnerable to potential earthquakes that are much stronger than it was designed to withstand. For the new safety review, Columbia Generating Station, along with Diablo Canyon on the California coast, are the only two nuclear plants the NRC classified as high priority. Energy Northwest must complete its review by June 2017, but the NRC may take until 2020 to evaluate whether to take regulatory action, which could include closing the plant and holding public hearings to determine if it is safe.

"The NRC is ordering further risk evaluations only for nuclear plants with newly discovered seismic hazards that exceed the basis for safety design," said Damon Moglen of Friends of the Earth, who issued a release on the Diablo Canyon reactor on Wednesday. "The NRC won't come out and say it, but, they're essentially saying that the reactors are operating outside of their license. Under the law, that means these outdated reactors should be shut down immediately."

"If you consider this combination of potential earthquake danger at the Columbia nuclear plant, coupled with a crack in a key cooling structure within the reactor vessel, the NRC should not delay this decision another five years," said Washington PSR President Bruce Amundson, MD. "The nuclear plant is closed now for refueling and should not be reopened until it can be shown that it is not a danger to Washingtonians."

State Representative Gerry Pollet (D-Seattle), who is also director of the nuclear safety citizens' group Heart of America Northwest, said "The public in the Northwest should not have to live for five years under the cloud of a possible nuclear accident from an earthquake we now know is possible, but which the reactor was not designed for. State and federal regulators and the city and county utilities that own the reactor should only allow restart of the reactor if the new studies show it is safe or can be upgraded to be safe. The reactor's operators have it backwards when they say they will run the reactor for the next five years before proving it to be safe."

The NRC letter is in response to a seismic study done by Energy Northwest, quietly submitted, with no press statement, in March 2015 as part of a disaster review ordered after the 2011 Fukushima reactor meltdown. Energy Northwest's report confirmed that the faults surrounding the CGS nuclear plant are far larger and more powerful than previously assumed, and that the shaking the faults could generate is much greater than that considered during design, construction and licensing more than 30 years ago. Though the calculations were there in tables and charts, the conclusions were left out of the final report and Energy Northwest continues to claim that the plant is safe. The NRC, while calling for continued study, publicly agreed.

In April, Energy Northwest informed the NRC that it was choosing to deviate from the standard plan for repairing a crack in a key structure holding two jet pumps in place inside the reactor vessel. Nuclear watchdog groups learned of this letter from the NRC website a week ago and have reviewed its contents with nuclear engineers from the Union of Concerned Scientists and Fairewinds Associates.

Jet pumps are designed to circulate water to cool the extremely hot fuel rods at the core of nuclear plants, but the attachment weld for two of these pumps, which provide vital cooling water to the reactor core at Columbia Generating Station (CGS), has a crack that its operator Energy Northwest has known about for fourteen years.

The NRC has acknowledged "intergranular stress corrosion cracks (IGSCC)" as a common and dangerous problem in this type of boiling water reactor, and has developed a protocol for dealing with them. Instead of repairing the one and a quarter inch crack in the weld between the jet pumps and the riser that holds them in place as is the standard practice for a crack of this size.

The analysis by reactor manufacturer General Electric and the Electric Power Research Institute that is used as the basis for Energy Northwest's claim that the jet pump riser crack growth rate will be less than anticipated is entirely redacted and unavailable to the public for independent evaluation for "proprietary" reasons.

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