



ENERGY NORTHWEST

Sudesh K. Gambhir
Vice President, Technical Services
P.O. Box 968, PE04
Richland, WA 99352-0968
Ph. 509.377.8313 | F. 509.377.2354
sgambhir@energy-northwest.com

September 21, 2009
GO2-09-132

10 CFR 50.54(f)

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
11555 Rockville Pike
Rockville, MD 20852

Subject: **COLUMBIA GENERATING STATION, DOCKET NO. 50-397
SUPPLEMENTAL (POST-OUTAGE) RESPONSE TO NRC GENERIC
LETTER 2008-01**

- References:
1. NRC Generic Letter 2008-01, "Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems," dated January 11, 2008
 2. Energy Northwest Letter, "Nine-Month Response to NRC Generic Letter 2008-01, 'Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems,'" dated October 8, 2008
 3. NRC Letter from C.F. Lyon (NRC) to J.V. Parrish (Energy Northwest), "Columbia Generating Station – Re: Generic Letter 2008-01, 'Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems' Proposed Alternative Course of Action (TAC No. MD7812)" dated August 21, 2008

Dear Sir or Madam:

The Nuclear Regulatory Commission (NRC) issued Generic Letter (GL) 2008-01 (Reference 1) to request that each licensee evaluate the licensing basis, design, testing, and corrective actions for the emergency core cooling system (ECCS), decay heat removal (DHR), and containment spray systems to ensure that gas accumulation is maintained less than the amount that challenges operability of these systems, and that appropriate action is taken when conditions adverse to quality are identified.

Please find attached Energy Northwest's post-outage supplemental response to the nine-month response letter (Reference 2). This supplemental response is being submitted within 90 days of startup from the refueling outage, as requested by the NRC in Reference 3, for actions that were deferred until the next refueling outage.

A134
NRC

SUPPLEMENTAL (POST-OUTAGE) RESPONSE TO NRC GENERIC LETTER

2008-01

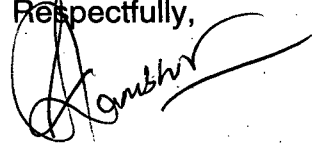
Page 2

In summary, Energy Northwest has concluded that the subject systems at Columbia Generating Station remain operable with respect to the concerns outlined in GL 2008-01 regarding managing gas accumulation in these systems.

There are no new commitments being made to the NRC by this letter beyond those previously referenced by Energy Northwest in Reference 2. If you have any questions, please contact MC Humphreys, Licensing Supervisor, at (509) 377-4025.

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

Respectfully,



SK Gambhir
Vice President, Technical Services

Attachment

cc: EE Collins, Jr. – NRC RIV
NJ DiFrancesco – NRC NRR
NRC Senior Resident Inspector/988C
WA Horin – Winston & Strawn
RN Sherman – BPA/1399

SUPPLEMENTAL (POST-OUTAGE) RESPONSE TO NRC GENERIC LETTER 2008-01

Attachment

Page 1 of 2

This attachment provides the Supplemental (Post-Outage) Response to Generic Letter (GL) 2008-01 for actions that were deferred until the next refueling outage as requested by the NRC in Reference 3 of the cover letter.

A. EVALUATION RESULTS

1. Design Basis Documents

A number of minor clarifications were added to technical analyses based on information from GE Reports that were previously discussed in Energy Northwest's (EN) nine-month response to the GL. In addition, allowable time frames for air to vent from the emergency core cooling system (ECCS) which have either local vent pipes or extended vent pipes directed to floor drains were documented.

2. Confirmatory Walkdowns

An evaluation was performed regarding the need to walkdown and/or ultrasonic test remaining inaccessible regions of residual heat removal (RHR) B discharge piping as well as all related ECCS, containment spray, and residual heat removal system piping located in the primary containment. Based on this evaluation, it was concluded that no further walkdowns of the remaining piping were necessary. This was based on the following:

- ECCS (i.e., high pressure core spray (HPCS), low pressure core spray (LPCS), and low pressure coolant injection (LPCI)) discharge piping from the containment penetration into the reactor vessel is located downstream of motor operated injection valves. As documented in EN's nine-month response, an analysis of ECCS piping downstream of the injection valves has concluded that the existence of air voids will have no adverse consequences related to accident conditions.
- Containment spray discharge paths downstream of the containment isolation valves are voided by design.
- ECCS suppression pool discharge (return) paths entering the containment discharge directly into the Suppression Pool through open ended connections that are below the water level. A section of the return piping is above the suppression pool water level. The configuration of these return lines coupled with the atmospheric pressure of the wetwell will keep these lines full of water.
- ECCS suppression pool suction between the containment penetration and the suppression pool involves entirely submerged piping.
- The remaining RHR B discharge piping outside of the containment is inaccessible due to physical restrictions. Drawing reviews of this 18 inch piping indicates that this section is horizontal and approximately 43 feet in

SUPPLEMENTAL (POST-OUTAGE) RESPONSE TO NRC GENERIC LETTER 2008-01

Attachment

Page 2 of 2

length with all branch lines dropping from the bottom of the main piping. The branch line for the test line to the suppression pool originates off this line near the downstream end and is flow tested quarterly.

The minimum required Froude number of 0.60 with 3000 gpm flow will ensure entrained or trapped air is removed from the system. The quarterly test involves flows of at least 7100 gpm into the wetwell. This test was last performed on September 15, 2009.

3. Vent Valves

Evaluations have been completed regarding two locations on HPCS discharge piping and one location on LPCS discharge piping. Although not required, the conclusion was made that the addition of valves at these locations could aid in venting affected portions of piping when other means were not available (e.g., dynamic flushing). Plans have been initiated to develop design change packages to support addition of the vent valves.

4. Procedures

No new procedure changes beyond those documented in Energy Northwest's nine-month response to the GL were required.

B. DESCRIPTION OF NECESSARY ADDITIONAL CORRECTIVE ACTIONS

1. Additional Corrective Actions

No new corrective actions were identified.

2. Corrective Action Updates

All corrective actions identified in Columbia's nine month response to the GL have been completed with the exception of the following:

- Correct HPCS drawing discrepancies. (Currently scheduled for completion on 9/30/09 per AR 00176497-27.)
- Evaluate the feasibility of adding tubing to RHR B system high point vent. (Currently scheduled for completion on 10/20/09 per AR 00176497-33.)

Conclusion

Energy Northwest has evaluated the previously unevaluated portions of the applicable systems at Columbia that perform the functions described in the GL and has concluded that these systems remain operable.