



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

August 30, 2011

Mr. David A. Swank  
Vice President, Engineering  
Columbia Generating Station  
Energy Northwest  
MD PE23  
P. O. Box 968  
Richland, WA 99352

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION FOR THE REVIEW OF THE  
COLUMBIA GENERATING STATION LICENSE RENEWAL APPLICATION –  
SEVERE ACCIDENT MITIGATION ALTERNATIVE REVIEW (TAC NO. ME3121)

Dear Mr. Swank:

By letter dated January 19, 2010, Energy Northwest submitted an application to the U.S. Nuclear Regulatory Commission (NRC or the staff) to renew Operating License NPF-21 for Columbia Generating Station pursuant to Title 10 of the *Code of Federal Regulations* Part 54. The NRC staff is reviewing the information contained in the license renewal application and the associated environmental report. The staff has identified, in the enclosure, areas where additional information is needed to complete the Severe Accident Mitigation Alternatives review. Further requests for additional information may be issued in the future.

Items in the enclosure were discussed with Mr. Abbas Mostala. A mutually agreeable date for the response is within 30 days from the date of this letter. If you have any questions, please contact me at 301-415-3748 or by e-mail at [daniel.doyle@nrc.gov](mailto:daniel.doyle@nrc.gov).

Sincerely,

A handwritten signature in black ink, appearing to read "Daniel Doyle", is positioned above the typed name.

Daniel Doyle, Project Manager  
Projects Branch 2  
Division of License Renewal  
Office of Nuclear Reactor Regulation

Docket No. 50-397

Enclosure:  
As stated

cc w/encl: Listserv

**Request for Additional Information  
Regarding the Analysis of Severe Accident Mitigation Alternatives  
for the Columbia Generating Station License Renewal Review**

**Background:**

In its letter dated January 28, 2011 (ADAMS Accession Number ML110330395), Energy Northwest identified Severe Accident Mitigation Alternative (SAMA) candidate FL-06R as potentially cost-beneficial.

In the January 28th letter, there were several different descriptions of SAMA FL-06R:

- “Add additional [nondestructive examination (NDE)] and inspections to increase probability of detecting degraded lines in raw water systems in the Control Building.” (page 6 of 173)
- “Improve control building flooding scenarios” (page 19 of 173)
- “Perform additional NDE and inspections to the three lines identified in SAMA candidate FL-04R to verify that degradation is not occurring in these lines. The specific locations of the NDE would be selected from potentially susceptible areas using similar methods as used in the risk-informed in-service inspection program to detect wall thinning.” (pages 119 and 120 of 173)
- “Perform additional NDE and inspections of the [service water (SW), turbine service water (TSW), and fire protection (FP)] lines in the Control Building area of the Radwaste Building.” (page 167 of 173)

**Issue:**

Based on the descriptions of SAMA FL-06R, it appears to relate to managing the effects of aging.

Potentially cost-beneficial SAMAs that relate to adequately managing the effects of aging may be mandated by the NRC as part of license renewal pursuant to 10 CFR Part 54.

**Requests:**

RAI 1:

Provide a determination as to whether the affected structures, systems, or components (SSCs) identified in the SAMA candidate are within the scope of the license renewal safety review under 10 CFR Part 54. If they are within the scope of license renewal, explain how the NDE and inspections proposed in SAMA FL-06R differ from the aging management programs proposed for the same SSCs in the safety portion of the license renewal application (e.g., SW and FP systems).

ENCLOSURE

RAI 2:

The SAMAs listed below were identified as potentially cost-beneficial in the January 28th letter. Energy Northwest stated that all these SAMA candidates will be considered for implementation through the normal processes for evaluating possible plant changes at Columbia Generating Station as described in response to RAI 6.j-1iv. For each of the 16 potentially cost-beneficial SAMAs, provide a determination and rationale (basis) as to whether the SAMA relates to managing the effects of aging.

| <b>SAMA ID</b> | <b>SAMA Description</b>                                                                                                                                |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| AC/DC-28       | Reduce common cause failures between EDG-3 and EDG-1/2                                                                                                 |
| CC-03b         | Raise reactor core isolation cooling system backpressure trip setpoints                                                                                |
| FR-07a         | Improve the fire resistance of critical cables for containment venting                                                                                 |
| FR-07b         | Improve the fire resistance of critical cables for transformer E-TR-6                                                                                  |
| FR-08          | Improve the fire resistance of cables to residual heat removal and standby SW                                                                          |
| HV-02          | Provide a redundant train or means of ventilation                                                                                                      |
| SR-05R         | Improve seismic ruggedness of MCC-7F and MCC-8F                                                                                                        |
| FL-05R         | Clamp on flow instruments to certain drain lines in the control building of the radwaste building and alarm in the control room                        |
| FL-04R         | Add one isolation valve in the SW, turbine SW, and fire protection lines in the control building area of the radwaste building                         |
| FL-06R         | Additional non-destructive evaluation and inspections to increase probability of detecting degraded lines in raw water systems in the Control Building |
| CC-24R         | Backfeed the HPCS system with emergency bus SM-8 to provide a third power source for HPCS                                                              |
| CC-25R         | Enhance alternate injection reliability by including residual heat removal service water and fire water crosstie in maintenance program                |
| OT-07R         | Increase operator training on systems and operator actions determined to be important from the PSA                                                     |
| FW-05R         | Examine the potential for operators to control reactor feedwater and avoid a reactor trip                                                              |
| OT-09R         | For the non-LOCA initiating events, credit the Z (power conversion system recovery) function                                                           |
| FR-11R         | Install early fire detection in the following analysis units: RC-02, RC-03, RC-04, RC-05, RC-07, RC-08, RC-11, RC-13, RC-14, and RC-1A                 |

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Sincerely,

/RA/

Daniel Doyle, Project Manager  
Projects Branch 2  
Division of License Renewal  
Office of Nuclear Reactor Regulation

Docket No. 50-397

Enclosure:  
As stated

cc w/encl: Listserv  
ADAMS Accession No. ML11214a237

|        |        |             |             |             |
|--------|--------|-------------|-------------|-------------|
| OFFICE | LA:DLR | PM:RPB2:DLR | BC:RPB2:DLR | PM:RPB2:DLR |
| NAME   | IKing  | DDoyle      | DWrona      | DDoyle      |
| DATE   | 8/4/11 | 8/ 29/11    | 8/30/11     | 8/30/11     |

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Letter to D. Swank from D. Doyle dated August 30, 2011

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