

**From:** [Gibson, Lauren](#)  
**To:** [Dunham, Zachary K.](#)  
**Subject:** DRAFT RAIs for Columbia Generating Station Re: PRNM/ARTS/MELLLA LAR (TAC NO. ME7905)  
**Date:** Monday, September 17, 2012 10:57:00 AM  
**Attachments:** [Draft ME7905 RAIs HF2.docx](#)

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Zach,

By letter dated January 31, 2012, as supplemented by letter dated July 31, 2012, Energy Northwest submitted a license amendment request for Columbia Generating Station. The amendment would allow the licensee to expand the operating domain by the implementation of Average Power Range Monitor/Rod Block Monitor/Technical Specifications/Power Range Neutron Monitoring/Maximum Extended Load Line Limit Analysis (ARTS/PRNM/MELLLA). The Neutron Monitoring System would be modified by replacing the analog Average Power Range Monitor subsystem with the Nuclear Measurement Analysis and Control (NUMAC) Power Range Neutron Monitoring System. The licensee would expand the operating domain to Maximum Extended Load Line Limit Analysis (MELLLA) and make changes to certain allowable values and limits and to technical specifications. The changes to the technical specifications include the adoption of TSTF-493 Option A surveillance notes. Furthermore, the amendment would allow a change in the licensing basis to support Anticipated Transient without Scram (ATWS) accident mitigation with one Standby Liquid Control (SLC) pump instead of two.

The NRC staff has reviewed the submitted information and determined that the information specified in the attached request for additional information (RAIs) is needed for the staff to complete its evaluation.

Please contact me to confirm whether or not you would like to have a clarifying conference call.

Thank you,

Lauren

Lauren K. Gibson  
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DRAFT REQUEST FOR ADDITIONAL INFORMATION

LICENSE AMENDMENT REQUEST

TO IMPLEMENT PRNM/ARTS/MELLLA

ENERGY NORTHWEST

COLUMBIA GENERATING STATION

DOCKET NUMBER 50-397

By a letter dated January 9, 2012, as supplemented by letter dated July 31, 2012 (ADAMS Accession No. ML12219A255), Energy Northwest (Energy, the licensee) submitted a license amendment (LAR) for Columbia Generating Station. The proposed amendment would allow the licensee to expand the operating domain by the implementation of Average Power Range Monitor/Rod Block Monitor/Technical Specifications/Power Range Neutron Monitoring/Maximum Extended Load Line Limit Analysis (ARTS/PRNM/MELLLA). The Neutron Monitoring System would be modified by replacing the analog Average Power Range Monitor subsystem with the Nuclear Measurement Analysis and Control (NUMAC) Power Range Neutron Monitoring System. The licensee would expand the operating domain to Maximum Extended Load Line Limit Analysis (MELLLA) and make changes to certain allowable values and limits and to technical specifications. The changes to the technical specifications include the adoption of TSTF-493 Option A surveillance notes. Furthermore, the amendment would allow a change in the licensing basis to support Anticipated Transient without Scram (ATWS) accident mitigation with one Standby Liquid Control (SLC) pump instead of two.

The NRC staff has reviewed the submitted information and determined that the information below is needed for the staff to complete its evaluation.

1. In the submittal, there is information related to verification and validation (V&V) of the software for this upgrade, but not information related to V&V of the operator actions. Please describe the on-site validation of the system, with the revised procedures, and trained operators.
2. Please describe the long term human performance monitoring program, if any, which will protect the modification from inadvertent change.