

November 21, 2005

Mr. David A. Christian
Sr. Vice President and Chief Nuclear Officer
Virginia Electric and Power Company
Innsbrook Technical Center
5000 Dominion Blvd.
Glen Allen, Virginia 23060-6711

SUBJECT: SURRY POWER STATION, UNITS 1 AND 2 - REQUEST FOR ADDITIONAL
INFORMATION REGARDING PROPOSED LICENSE AMENDMENT TO
SUPPORT INCREASE IN THE LEAD ROD AVERAGE BURNUP LIMIT
(TAC NOS. MC6435 AND MC6436)

Dear Mr. Christian:

By letter dated March 17, 2005, as supplemented by letter dated August 1, 2005, Virginia Electric and Power Company (VEPCO) submitted proposed license amendments for Surry Power Station, Units 1 and 2, to increase the lead rod average burnup to 62,000 MWD/MTU. Based on its review of these submittals, the Nuclear Regulatory Commission (NRC) staff has determined that additional information is required to complete its review.

The NRC staff's questions are provided in the enclosure. In its March 17, 2005, submittal, VEPCO requested approval of these license amendments by September 2005 to support the spring 2006 refueling outage. As such, the NRC staff requests a response to this request for additional information within 30 days of the date of this letter.

Sincerely,

/RA/

Stephen R. Monarque, Project Manager
Plant Licensing Branch C
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-280 and 50-281

Enclosure: As stated

cc w/encl: See next page

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REQUEST FOR ADDITIONAL INFORMATION

PROPOSED INCREASE IN THE LEAD ROD AVERAGE BURNUP LIMIT

SURRY POWER STATION, UNITS 1 AND 2

VIRGINIA ELECTRIC AND POWER COMPANY

By letter (Reference 1) dated March 17, 2005, as supplemented by letter (Reference 2) dated August 1, 2005, Virginia Electric and Power Company (the licensee) requested approval of proposed amendments to the Operating Licenses and Technical Specifications for Surry Power Station, Units 1 and 2, to increase the lead rod average burnup from 60,000 MWD/MTU to 62,000 MWD/MTU. The licensee is currently restricted to a lead rod average burnup of 60,000 MWD/MTU, (References 3 and 4). In its license amendment request (LAR) the licensee stated this restriction has caused them an economic penalty to maintain the lead rod average burnup below 60,000 MWD/MTU. The NRC staff requests responses to the following questions in order to continue the review of the licensee's LAR:

Questions

1. In January of 1988, the NRC approved the use of Surry Improved Fuel (SIF) at Surry Power Station, Units 1 and 2 (Reference 5). At that time SIF was described as ". . . similar to the OFA [Optimized Fuel Assembly] fuel but includes some features of the Vantage 5 fuel." In July of 1995, the NRC approved the use of ZIRLO as a fuel cladding at Surry Power Station, Units 1 and 2 (Reference 6). However, those documents lack the specificity deemed necessary for the current review. Please provide a detailed description of SIF from its inception and subsequent iteration(s) until its current form. It is acceptable for the description to reference a standard fuel design such as OFA and provide a detailed description of any difference and its effect.
2. In Reference 1, the licensee requested the lead pin burnup be extended in accordance with WCAP-12488-P-A, "Westinghouse Fuel Criteria Evaluation Process," (Reference 8). WCAP-12488-P-A describes a Fuel Criteria Evaluation Process (FCEP) whereby Westinghouse may make a change to a currently approved fuel design provided the change meets the criteria in WCAP-12488-P-A and notification of the change is made to the NRC.
 - a. In Reference 7, Westinghouse did not explicitly list SIF as a product ". . . considered as licensed by the NRC under FCEP." Provide the justification for applying the FCEP to SIF.
 - b. Please provide the FCEP notification for the analysis for SIF to extend the lead pin burnup to 62,000 MWD/MTU.
3. As noted above, SIF has undergone at least one major change, the incorporation of ZIRLO cladding material. Identify the specific SIF iteration(s) covered by the FCEP notification. If the FCEP notification is to be extended to any other SIF iteration(s), provide justification for that extension.

REFERENCES

1. Letter serial no. 05-108, Leslie N. Hartz, Vice President Nuclear Engineering to USNRC, Virginia Electric and Power Company Surry Power Station Units 1 and 2 License Amendment Request Proposed Increase in the Lead Rod Average Burnup Limit, dated March 17, 2005.
2. Letter serial no. 05-453, Leslie N. Hartz, Vice President Nuclear Engineering to USNRC, Virginia Electric and Power Company Surry Power Station Units 1 and 2 License Amendment Request Proposed Increase in the Lead Rod Average Burnup Limit, dated August, 1, 2005.
3. Letter from the NRC (Mr. B. C. Buckley, Sr. and Mr. L. B. Engle) to Virginia Electric and Power Company (Mr. W. L. Stewart), "Surry, Units 1 and 2 and North Anna, Units 1 and 2 - Removal of 45,000 MWD/MTU Batch Average Burnup Restriction (TAC NOS. M87767, M87768, M87812, and M87813)," December 14, 1993.
4. Letter from the NRC (Mr. B. C. Buckley, Sr. and Mr. L. B. Engle) to Virginia Electric and Power Company (Mr. W. L. Stewart), "Surry, Units 1 and 2 and North Anna, Units 1 and 2 - Removal of 45,000 MWD/MTU Batch Average Burnup Restriction (TAC NOS. M87767, M87768, M87812, and M87813)," April 20, 1994.
5. Letter from the NRC (Mr. Chandu P. Patel) to Virginia Electric and Power Company (Mr. W. L. Stewart), "Surry Units 1 and 2 - Issuance of Amendments re: Control Rod Assemblies and Surry Improved Fuel (TAC NOS. 63166, 63167, 65432, 65433, 65561, and 65562)," January 6, 1998.
6. Letter from the NRC (Mr. B. C. Buckley) to Virginia Electric and Power Company (Mr. J. P. O'Hanlon), "Surry Units 1 and 2 - Issuance of Amendments re: Use of ZIRLO (TAC NOS. M91003 and M91004)," July 27, 1995.
7. Letter from B. F. Maurer, Westinghouse, Acting Manager Regulatory Compliance and Plant Licensing, to the USNRC, "Clarification on 62,000 MWD/MTU Lead Rod Average Burnup (Proprietary/Non-Proprietary), October 20, 2005.
8. WCAP-12488-P-A, "Westinghouse Fuel Criteria Evaluation Process," October 1994

Surry Power Station, Units 1 & 2

cc:

Ms. Lillian M. Cuoco, Esq.
Senior Counsel
Dominion Resources Services, Inc.
Building 475, 5th Floor
Rope Ferry Road
Waterford, Connecticut 06385

Mr. Donald E. Jernigan
Site Vice President
Surry Power Station
Virginia Electric and Power Company
5570 Hog Island Road
Surry, Virginia 23883-0315

Senior Resident Inspector
Surry Power Station
U. S. Nuclear Regulatory Commission
5850 Hog Island Road
Surry, Virginia 23883

Chairman
Board of Supervisors of Surry County
Surry County Courthouse
Surry, Virginia 23683

Dr. W. T. Lough
Virginia State Corporation Commission
Division of Energy Regulation
Post Office Box 1197
Richmond, Virginia 23218

Dr. Robert B. Stroube, MD, MPH
State Health Commissioner
Office of the Commissioner
Virginia Department of Health
Post Office Box 2448
Richmond, Virginia 23218

Office of the Attorney General
Commonwealth of Virginia
900 East Main Street
Richmond, Virginia 23219

Mr. Chris L. Funderburk, Director
Nuclear Licensing & Operations Support
Dominion Resources Services, Inc.
Innsbrook Technical Center
5000 Dominion Blvd.
Glen Allen, Virginia 23060-6711