

December 18, 2001

Mr. G. R. Peterson
Site Vice President
Catawba Nuclear Station
Duke Energy Corporation
4800 Concord Road
York, South Carolina 29745-9635

SUBJECT: CATAWBA NUCLEAR STATION, UNITS 1 AND 2 RE: CHANGES TO THE
REACTOR PRESSURE VESSEL SURVEILLANCE CAPSULE WITHDRAWAL
SCHEDULE (TAC NOS. MB1721 AND MB1722)

Dear Mr. Peterson:

By letter dated March 16, 2001, Duke Energy Corporation, submitted a request to defer removal of surveillance capsules, identified as capsule W for each unit, within the Catawba Units 1 and 2 reactor pressure vessel surveillance capsule withdrawal schedules. Your request was made in accordance with the provision of Title 10 of the *Code of Federal Regulations*, Part 50, Appendix H, paragraph III.B.3 which specifies that "[a] proposed withdrawal schedule must be submitted with a technical justification as specified in [10 CFR 50.4]. The proposed schedule must be approved prior to implementation."

We have evaluated your proposed schedule and concluded that the deferral of the removal of surveillance capsule W for each unit for one cycle (until the end of cycle 14) is acceptable for Catawba Units 1 and 2. Our Safety Evaluation is enclosed.

Sincerely,

/RA/

Chandu P. Patel, Project Manager, Section 1
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-413 and 50-414

Enclosure: As stated

cc w/encl: See next page

Mr. G. R. Peterson
Site Vice President
Catawba Nuclear Station
Duke Energy Corporation
4800 Concord Road
York, South Carolina 29745-9635

December 17, 2001

SUBJECT: CATAWBA NUCLEAR STATION, UNITS 1 AND 2 RE: CHANGES TO THE REACTOR PRESSURE VESSEL SURVEILLANCE CAPSULE WITHDRAWAL SCHEDULE (TAC NOS. MB1721 AND MB1722)

Dear Mr. Peterson:

By letter dated March 16, 2001, Duke Energy Corporation, submitted a request to defer removal of surveillance capsules, identified as capsule W for each unit, within the Catawba Units 1 and 2 reactor pressure vessel surveillance capsule withdrawal schedules. Your request was made in accordance with the provision of Title 10 of the *Code of Federal Regulations*, Part 50, Appendix H, paragraph III.B.3 which specifies that "[a] proposed withdrawal schedule must be submitted with a technical justification as specified in [10 CFR 50.4]. The proposed schedule must be approved prior to implementation."

We have evaluated your proposed schedule and concluded that the deferral of the removal of surveillance capsule W for each unit for one cycle (until the end of cycle 14) is acceptable for Catawba Units 1 and 2. Our Safety Evaluation is enclosed.

Sincerely,

/RA/

Chandu P. Patel, Project Manager, Section 1
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-413 and 50-414

Enclosure: As stated

cc w/encl: See next page

Distribution:

PUBLIC CPatel (hard copy)
PDII-1 Reading RidsOgcRp
RLaufer (hard copy) RidsAcrcAcnwMailCenter
CHawes (hard copy) RidsRgn2MailCenter
ADAMS ACCESSION NUMBER: ML013520508

OFFICE	PDII-1:PM	PDII-1:LA	PDII-1:(A)SC
NAME	CPatel:mw	CHawes	RLaufer
DATE	12/17/01	12/12/01	12/17/01

OFFICIAL RECORD COPY

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

REQUEST TO DEFER REACTOR PRESSURE VESSEL

SURVEILLANCE CAPSULE REMOVAL

CATAWBA UNITS 1 AND 2

DUKE ENERGY CORPORATION

DOCKET NOS. 50-413 AND 50-414

1.0 INTRODUCTION

By letter dated March 16, 2001, Duke Energy Corporation (the licensee), submitted a proposal to defer removal of surveillance capsules, identified as capsule W for each unit, within the Catawba Units 1 and 2 reactor pressure vessel (RPV) surveillance capsule withdrawal schedules. The submittal was made in accordance with the provision of Title 10 of the *Code of Federal Regulations*, Part 50, Appendix H, paragraph III.B.3 which specifies that “[a] proposed withdrawal schedule must be submitted with a technical justification as specified in [10 CFR 50.4]. The proposed schedule must be approved prior to implementation.”

2.0 REGULATORY REQUIREMENTS

Nuclear power plant licensees are required by Appendix H to 10 CFR Part 50 to implement RPV surveillance programs to “monitor changes in the fracture toughness properties of ferritic materials in the reactor vessel beltline region...which result from exposure of these materials to neutron irradiation and the thermal environment.” Regarding RPV surveillance program design and specimen testing, Appendix H to 10 CFR Part 50 incorporates by reference the editions of the American Society for Testing and Materials (ASTM) Standard Practice E 185, “Conducting Surveillance Tests for Light-Water Cooled Nuclear Power Reactor Vessels,” through the 1982 edition.

The edition of ASTM E 185 to which the Catawba Units 1 and 2 RPV surveillance programs were designed was the 1974 edition (ASTM E 185-73). In accordance with paragraph 5.4, “Specimen Withdrawal,” of ASTM E 185-73, “it is recommended that capsules be withdrawn as described in Table 1.” As described for Case B in Table 1, which applies to both Catawba units, surveillance capsule W for each unit would fall under the “Fourth and Fifth” capsule category, which lists the “Withdrawal Time” as standby, whereby testing of the capsule is not required.

3.0 LICENSEE'S DETERMINATION

By letter dated March 16, 2001, the licensee requested to defer the removal of surveillance capsules W for both Catawba Units 1 and 2 to "assure surveillance capsule W is irradiated sufficiently to bound fluence values for the license renewal period." A table provided in the submittal showed exposure conditions for capsules previously removed and capsule W exposure estimates for both Catawba Units 1 and 2.

The proposed removal dates for capsule W of each unit correspond to a fluence equivalence of 55 EFY and an estimated fluence of 3.0×10^{19} n/cm².

4.0 STAFF EVALUATION

For both Catawba Units 1 and 2, the surveillance capsules that have been withdrawn, tested and reported have satisfied the provisions of ASTM E185-73, as required by Appendix H of 10 CFR Part 50. Therefore, capsule W for each unit is not required to meet any regulatory requirements, as these capsules are identified by ASTM E185-73 as "Standby."

5.0 CONCLUSION

The NRC staff has concluded that, in accordance with the provisions of Appendix H to 10 CFR Part 50, deferral of the removal of surveillance capsule W for each unit for one cycle (until the end of cycle 14) is acceptable for Catawba Units 1 and 2.

Principle Contributor: J. W. Collins

Date: December 17, 2001

Catawba Nuclear Station

cc:

Mr. Gary Gilbert
Regulatory Compliance Manager
Duke Energy Corporation
4800 Concord Road
York, South Carolina 29745

Ms. Lisa F. Vaughn
Legal Department (PB05E)
Duke Energy Corporation
422 South Church Street
Charlotte, North Carolina 28201-1006

Anne Cottingham, Esquire
Winston and Strawn
1400 L Street, NW
Washington, DC 20005

North Carolina Municipal Power
Agency Number 1
1427 Meadowwood Boulevard
P. O. Box 29513
Raleigh, North Carolina 27626

County Manager of York County
York County Courthouse
York, South Carolina 29745

Piedmont Municipal Power Agency
121 Village Drive
Greer, South Carolina 29651

Ms. Karen E. Long
Assistant Attorney General
North Carolina Department of Justice
P. O. Box 629
Raleigh, North Carolina 27602

Elaine Wathen, Lead REP Planner
Division of Emergency Management
116 West Jones Street
Raleigh, North Carolina 27603-1335

North Carolina Electric Membership
Corporation
P. O. Box 27306
Raleigh, North Carolina 27611

Senior Resident Inspector
U.S. Nuclear Regulatory Commission
4830 Concord Road
York, South Carolina 29745

Virgil R. Autry, Director
Division of Radioactive Waste Management
Bureau of Land and Waste Management
Department of Health and Environmental
Control
2600 Bull Street
Columbia, South Carolina 29201-1708

Mr. C. Jeffrey Thomas
Manager - Nuclear Regulatory
Licensing
Duke Energy Corporation
526 South Church Street
Charlotte, North Carolina 28201-1006

Saluda River Electric
P. O. Box 929
Laurens, South Carolina 29360

Mr. Peter R. Harden, IV
VP-Customer Relations and Sales
Westinghouse Electric Company
6000 Fairview Road
12th Floor
Charlotte, North Carolina 28210

Catawba Nuclear Station

cc:

Mr. T. Richard Puryear
Owners Group (NCEMC)
Duke Energy Corporation
4800 Concord Road
York, South Carolina 29745

Richard M. Fry, Director
Division of Radiation Protection
North Carolina Department of
Environment, Health, and
Natural Resources
3825 Barrett Drive
Raleigh, North Carolina 27609-7721