

February 24, 1986

Docket No.: 50-414

Mr. H. B. Tucker, Vice President
Nuclear Production Department
Duke Power Company
422 South Church Street
Charlotte, North Carolina 28242

Dear Mr. Tucker:

Subject: Issuance of Facility Operating License No. NPF-48 -
Catawba Nuclear Station, Unit 2

see Tech specs

The NRC has issued the enclosed Facility Operating License NPF-48 together with Technical Specifications and Environmental Protection Plan for the Catawba Nuclear Station, Unit 2. The license authorizes low power testing and operation at up to but not to exceed 5 percent of power. Although the license contains various conditions discussing requirements which must be satisfied before exceeding 5 percent power, no operation in excess of 5 percent power is authorized by the license as issued. Authorization to operate beyond 5 percent power is still under consideration by the NRC. The issuance of this license authorizing operation at 5 percent of full power is without prejudice to future consideration by the Commission with respect to operation at power levels in excess of 5 percent.

Also enclosed is a copy of a related notice, the original of which has been forwarded to the Office of the Federal Register for publication.

Six signed copies of Amendment No.6 to Indemnity Agreement No. B-100 which covers the activities authorized under License No. NPF-48 are enclosed. Please sign all copies and return one copy to this office.

Sincerely,

/s/
Thomas M. Novak, Acting Director
Division of PWR Licensing-A
Office of Nuclear Reactor Regulation

Enclosures:

1. Facility Operating License NPF-48
2. Federal Register Notice
3. Amendment No. 6 to Indemnity Agreement B-100

cc w/enclosures: See next page

* SEE PREVIOUS CONCURRENCES

PWR#4/DPWR-A
*KJabbour/mac
01/23/86

PWR#4/DPWR-A
*MDuncan
01/23/86

PWR#4/DPWR-A
*BJYoungblood
01/23/86

AD/DPWR-A
TMNovak
2/24 /86

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P PDR

Mr. H. B. Tucker
Duke Power Company

Catawba Nuclear Station

cc:
William L. Porter, Esq.
Duke Power Company
P.O. Box 33189
Charlotte, North Carolina 28242

North Carolina Electric Membership
Corp.
3333 North Boulevard
P.O. Box 27306
Raleigh, North Carolina 27611

J. Michael McGarry, III, Esq.
Bishop, Liberman, Cook, Purcell
and Reynolds
1200 Seventeenth Street, N.W.
Washington, D. C. 20036

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

North Carolina MPA-1
Suite 600
3100 Smoketree Ct.
P.O. Box 29513
Raleigh, North Carolina 27626-0513

Senior Resident Inspector
Route 2, Box 179N
York, South Carolina 29745

Mr. C. D. Markham
Power Systems Division
Westinghouse Electric Corp.
P.O. Box 355
Pittsburgh, Pennsylvania 15230

Regional Administrator, Region II
U.S. Nuclear Regulatory Commission,
101 Marietta Street, NW, Suite 2900
Atlanta, Georgia 30323

NUS Corporation
2536 Countryside Boulevard
Clearwater, Florida 33515

Robert Guild, Esq.
2759 Rosewood Drive
Columbia, South Carolina 29205

Mr. Jesse L. Riley, President
Carolina Environmental Study Group
854 Henley Place
Charlotte, North Carolina 28208

Palmetto Alliance
2759 Rosewood Drive
Columbia, South Carolina 29205

Richard P. Wilson, Esq.
Assistant Attorney General
S.C. Attorney General's Office
P.O. Box 11549
Columbia, South Carolina 29211

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

Piedmont Municipal Power Agency
100 Memorial Drive
Greer, South Carolina 29651

Spence Perry, Esquire
Associate General Counsel
Federal Emergency Management Agency
Room 840
500 C Street
Washington, D. C. 20472

Mark S. Calvert, Esq.
Bishop, Liberman, Cook,
Purcell & Reynolds
1200 17th Street, N.W.
Washington, D. C. 20036

Mr. Michael Hirsch
Federal Emergency Management Agency
Office of the General Counsel
Room 840
500 C Street, S.W.
Washington, D. C. 20472

Brian P. Cassidy, Regional Counsel
Federal Emergency Management Agency,
Region I
J. W. McCormach POCH
Boston, Massachusetts 02109

cc:

Mr. Heyward G. Shealy, Chief
Bureau of Radiological Health
South Carolina Department of Health
and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

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

Attorney General
P.O. Box 11549
Columbia, South Carolina 29211

Environmental Impact Coordinator
U.S. Environmental Protection Agency - Region IV
345 Courtland Street
Atlanta, Georgia 30365

Mr. Bruce Blanchard, Director
Office of Environmental Project Review
U.S. Department of the Interior
18th and C Streets, N.W.
Washington, D. C. 20240

Mr. Allan Hirsch, Director
Office of Federal Activities
U.S. Environmental Protection Agency
Washington, D. C. 20460

Chairman
South Carolina Public Service Commission
P.O. Box 11649
Columbia, South Carolina 29211

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LHarmon*

MVirgilio*

TBarnhart (4)*

IBailey*

LOW POWER LICENSE CATAWBA UNIT 2
(*w/Tech Specs)

DATED: February 24, 1986



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

DUKE POWER COMPANY

NORTH CAROLINA MUNICIPAL POWER AGENCY NO. 1

PIEDMONT MUNICIPAL POWER AGENCY

DOCKET NO. 50-414

CATAWBA NUCLEAR STATION, UNIT 2

FACILITY OPERATING LICENSE

License No. NPF-48

1. The Nuclear Regulatory Commission (the Commission or the NRC) has found that:
 - A. The application for license filed by the Duke Power Company acting for itself, North Carolina Municipal Power Agency No. 1 and Piedmont Municipal Power Agency (the licensees) complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations set forth in 10 CFR Chapter I; and all required notifications to other agencies or bodies have been duly made;
 - B. Construction of the Catawba Nuclear Station, Unit 2 (the facility) has been substantially completed in conformity with Construction Permit No. CPPR-117 and the application, as amended, the provisions of the Act and the regulations of the Commission;
 - C. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the regulations of the Commission (except as exempted from compliance in Section 2.D. below);
 - D. There is reasonable assurance: (i) that the activities authorized by this operating license can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations set forth in 10 CFR Chapter I (except as exempted from compliance in Section 2.D. below);
 - E. Duke Power Company* is technically qualified to engage in the activities authorized by this license in accordance with the Commission's regulations set forth in 10 CFR Chapter I;
 - F. The licensees have satisfied the applicable provisions of 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements," of the Commission's regulations;

*Duke Power Company is authorized to act as agent for the North Carolina Municipal Power Agency No. 1 and Piedmont Municipal Power Agency, and has exclusive responsibility and control over the physical construction, operation, and maintenance of the facility.

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PDR ADOCK 05000414
P PDR

- G. The issuance of this license will not be inimical to the common defense and security or to the health and safety of the public;
 - H. After weighing the environmental, economic, technical, and other benefits of the facility against environmental and other costs and considering available alternatives, the issuance of this Facility Operating License No. NPF-48, subject to the conditions for protection of the environment set forth in the Environmental Protection Plan attached as Appendix B, is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied;
 - I. The receipt, possession, and use of source, byproduct and special nuclear material as authorized by this license will be in accordance with the Commission's regulations in 10 CFR Parts 30, 40, and 70.
2. Based on the foregoing findings and the July 26, 1985, and the November 21, 1985, affirmations by the Atomic Safety and Licensing Appeal Board of the Partial Initial Decisions issued by the Atomic Safety and Licensing Boards dated June 22, September 18, and November 27, 1984, regarding this facility and satisfaction of conditions therein imposed, Facility Operating License No. NPF-48 is hereby issued to the Duke Power Company, the North Carolina Municipal Power Agency No. 1 and Piedmont Municipal Power Agency (the licensees) to read as follows:
- A. This license applies to the Catawba Nuclear Station, Unit 2, a pressurized water reactor and associated equipment (the facility) owned by the North Carolina Municipal Power Agency No. 1 and Piedmont Municipal Power Agency and operated by Duke Power Company. The facility is located on the licensees' site in York County, South Carolina, on the shore of Lake Wylie approximately 6 miles north of Rock Hill, South Carolina, and is described in Duke Power Company's Final Safety Analysis Report, as supplemented and amended, and in its Environmental Report, as supplemented and amended;
 - B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses:
 - (1) Duke Power Company, pursuant to Section 103 of the Act and 10 CFR Part 50, to possess, use, and operate the facility at the designated location in York County, South Carolina, in accordance with the procedures and limitations set forth in this license;
 - (2) North Carolina Municipal Power Agency No. 1 and Piedmont Municipal Power Agency, pursuant to the Act and 10 CFR Part 50, to possess the facility at the designated location in York County, South Carolina, in accordance with the procedures and limitations set forth in this license;
 - (3) Duke Power Company, pursuant to the Act and 10 CFR Part 70, to receive, possess, and use at any time special nuclear material as reactor fuel, in accordance with the limitations for storage and amounts required for reactor operation, as described in the Final Safety Analysis Report, as supplemented and amended;

- (4) Duke Power Company, pursuant to the Act and 10 CFR Parts 30, 40, and 70 to receive, possess, and use at any time any byproduct, source and special nuclear material as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;
 - (5) Duke Power Company, pursuant to the Act and 10 CFR Parts 30, 40, and 70, to receive, possess, and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components;
 - (6) Duke Power Company, pursuant to the Act and 10 CFR Parts 30, 40 and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility authorized herein; and
 - (7) Duke Power Company, pursuant to the Act and 10 CFR Parts 30, 40, and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of McGuire Nuclear Station, Units 1 and 2, and Oconee Nuclear Station, Units 1, 2, and 3.
- C. This license shall be deemed to contain and is subject to the conditions specified in the Commission's regulations set forth in 10 CFR Chapter I and is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:
- (1) Maximum Power Level

Duke Power Company is authorized to operate the facility at reactor core power levels not in excess of 3411 megawatts thermal (100 percent power) in accordance with the conditions specified herein. Pending Commission approval, this license is restricted to power levels not to exceed 5 percent of full power (170 megawatts thermal).
 - (2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, both of which are attached hereto, are hereby incorporated into this license. Duke Power Company shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

(3) Initial Startup Test Program (Section 14, SER, SSER #3)*

Any changes to the Initial Test Program described in Section 14 of the FSAR made in accordance with the provisions of 10 CFR 50.59 shall be reported in accordance with 50.59(b) within one month of such change.

(4) Antitrust Conditions

Duke Power Company shall comply with the antitrust conditions delineated in Appendix C to this license.

(5) Inservice Inspection Program (Sections 5.2.4 and 6.6, SSER #2; Section 6.6, SSER #5)

Within six months of the date of this license, Duke Power Company shall submit the balance of the inservice inspection program as described in its letter dated January 8, 1985, for staff review and approval.

(6) Fire Protection Program (Section 9.5.1, SER, SSER #1, SSER #2, SSER #3, SSER #4, SSER #5)

- (a) Duke Power Company shall maintain in effect all provisions of the approved fire protection program as described in the Final Safety Analysis Report, as amended, for the facility and as approved in the SER through Supplement 5, subject to provisions b & c below.
- (b) Duke Power Company may make no change to features of the approved fire protection program which would decrease the level of fire protection in the plant without prior approval of the Commission. To make such a change Duke Power Company must submit an application for license amendment pursuant to 10 CFR 50.90.
- (c) Duke Power Company may make changes to features of the approved fire protection program which do not decrease the level of fire protection without prior Commission approval, provided:
 - (i) such changes do not otherwise involve a change in a license condition or technical specification or involve an unreviewed safety question (see 10 CFR 50.59).

*The parenthetical notation following the title of many license conditions denotes the section of the Safety Evaluation Report and/or its supplements wherein the license condition is discussed.

- (ii) such changes do not result in failure to complete the fire protection program approved by the Commission prior to license issuance.

Duke Power Company shall maintain, in an auditable form, a current record of all such changes including an analysis of the effects of the change on the fire protection program and shall make such records available to NRC inspectors upon request. All changes to the approved program made without prior Commission approval shall be reported to the Director of the Office of Nuclear Reactor Regulation together with the FSAR revisions required by 10 CFR 50.71(e).

(7) Turbine Missiles (Section 3.5.1.3, SER)

Duke Power Company shall submit for NRC staff approval by December 6, 1987, a turbine system maintenance program based on the manufacturer's calculations of missile generation probabilities acceptable to the NRC staff or volumetrically inspect all low pressure turbine rotors within three years or by the second refueling outage, whichever is later, and thereafter every three years or every other refueling outage until a maintenance program is approved by the staff.

(8) Detailed Control Room Design Review, I.D.1 (Section 18.1, SER, SSER #2, SSER #5)

Duke Power Company shall correct all human engineering deficiencies according to the schedule contained in its letter dated March 28, 1984.

(9) Emergency Response Capabilities (Generic Letter 82-33, Supplement 1 to NUREG-0737).

(a) Regulatory Guide 1.97, Revision 2, Compliance (Section 7.5.2, SSER #4, SSER #5)

Prior to startup following the first refueling outage, Duke Power Company shall provide qualified accumulator discharge instrumentation.

(b) Safety Parameter Display System (SPDS) (Section 18.2, SSER #5)

Prior to startup following the first refueling outage, Duke Power Company shall add to the existing SPDS and have operational the following SPDS parameters: (a) residual heat removal flow, (b) containment isolation status, (c) stack radiation measurements, (d) primary coolant system hot leg temperature, and (e) steam generator or steamline radiation. The actual value of these and all other SPDS variables should be displayed for operator viewing in easily and rapidly accessible display formats.

(10) Anticipatory Reactor Trip, II.K.3.10 (Section 5.2.2, SER)

Prior to exceeding 70% power, Duke Power Company shall complete the described turbine trip tests to verify that PORVs will not be challenged when the anticipatory trip bypass is in effect.

(11) Steam Generator Tube Rupture (Section 15.4.4, SER, SSER #2)

Prior to startup following the first refueling outage of Catawba Unit 2, Duke Power Company shall submit for NRC staff review and approval an analysis which demonstrates that the steam generator single-tube rupture analysis presented in the FSAR is the most severe case with respect to the release of fission products and calculated doses. Consistent with the analytical assumptions, Duke Power Company shall propose any necessary changes to Appendix A to this license.

(12) Main Steam Line Break (MSLB) Outside Containment (Section 3.11, SSER #4, SSER #5)

Prior to startup following the first refueling outage, Duke Power Company: (a) shall provide the additional information identified in its November 15, 1985, letter, (b) shall provide any necessary information and clarification requested by the staff regarding the approval of the LOFTRAN Code used in the MSLB analysis and its resulting consequences, and (c) shall receive staff approval regarding the LOFTRAN Code used in the MSLB analysis and its resulting consequences.

(13) Transamerica Delaval, Inc. (TDI) Diesel Generators (Section 8.3.1, SSER #4, SSER #5)

Duke Power Company shall implement the TDI diesel requirements as specified in Attachment 1, and shall incorporate these requirements, within six months of the date of this license, into its maintenance and surveillance program. Attachment 1 is hereby incorporated into this license.

(14) Generic Letter 83-28 (Section 15.6, SSER #4, SSER #5)

Duke Power Company shall submit responses to and implement the guidance of Generic Letter 83-28 on a schedule which is consistent with that given in its November 2 and December 31, 1984, letters.

- D. The facility requires exemptions from certain requirements of Appendices A and J to 10 CFR Part 50, as delineated below, and pursuant to evaluations contained in the referenced SER and SSERs. These include (a) partial exemption from General Design Criteria 16, 38, and 50 of Appendix A, with respect to the completion and testing of the ice condenser prior to the reactor coolant system temperature's exceeding 200°F (mode 4), in accordance with the Facility Technical Specifications the ice condenser is not required to be operable in Modes 5 and

6. (Section 6.2.1 of SSER #5), (b) partial exemption from the requirement of paragraph III.D.2(b)(ii) of Appendix J, the testing of containment airlocks at times when the containment integrity is not required (Section 6.2.6 of SSER #5), (c) exemption from the requirement of paragraph III.A.1(d) of Appendix J, insofar as it requires the venting and draining of lines for type A tests (Section 6.2.6 of SSER #5), and (d) partial exemption from the requirements of paragraph III.B of Appendix J, as it relates to bellows testing (Section 6.2.6 of the SER, and Section 6.2.6 of SSER #5). These exemptions are authorized by law, will not present an undue risk to the public health and safety, and are consistent with the common defense and security; and certain special circumstances are present. These exemptions are, therefore, hereby granted pursuant to 10 CFR 50.12. With the granting of these exemptions, the facility will operate, to the extent authorized herein, in conformity with the application, as amended, the provisions of the Act, and the rules and regulations of the Commission. In addition, two exemptions were previously granted pursuant to 10 CFR 50.12. A partial exemption from those portions of General Design Criterion 4 of Appendix A to 10 CFR 50 which require protection of structures, systems and components against dynamic effects associated with postulated reactor coolant system pipe breaks was granted on April 23, 1985, for a period ending with the completion of the second refueling outage for Catawba Unit 2 or the adoption of the proposed rulemaking for modification of GDC-4 whichever occurs first. Furthermore, an exemption from the requirements of Appendix E, IV.F, insofar as they may require the active participation of all Crisis Management Center personnel for the Catawba Station emergency preparedness exercises (Section 13.3 of SSER #4), was granted on January 17, 1985, by the issuance of Facility Operating License No. NPF-35 for Catawba Nuclear Station, Unit 1.

- E. Duke Power Company shall fully implement and maintain in effect all provisions of the Commission approved physical security, guard training and qualification, and safeguards contingency plans including amendments made pursuant to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The plans, which contain Safeguards Information protected under 10 CFR 73.21, are entitled: "Catawba Nuclear Station Security Plan," with revisions submitted through December 16, 1985; "Catawba Nuclear Station Guard Training and Qualification Plan," with revisions submitted through September 30, 1985; and "Catawba Nuclear Station Safeguards Contingency Plan," with revisions submitted through October 23, 1985.

F. Reporting to the Commission

Except as otherwise provided in the Technical Specifications or Environmental Protection Plan, Duke Power Company shall report any violations of the requirements contained in Section 2.C of this license in the following manner: initial notification shall be made within twenty-four (24) hours to the NRC Operations Center via the Emergency Notification System with written follow-up within 30 days in accordance with the procedures described in 10 CFR 50.73 (b), (c), and (e).

- G. The licensees shall have and maintain financial protection of such type and in such amounts as the Commission shall require in accordance with Section 170 of the Atomic Energy Act of 1954, as amended, to cover public liability claims.
- H. This license is effective as of the date of issuance and shall expire at midnight on February 24, 2026.

FOR THE NUCLEAR REGULATORY COMMISSION

[Signature]

Harold R. Denton, Director
Office of Nuclear Reactor Regulation

Enclosures:

- 1. Attachment 1
- 2. Appendix A - Technical Specifications
- 3. Appendix B - Environmental Protection Plan
- 4. Appendix C - Antitrust Conditions

Date of Issuance: February 24, 1986

*SEE PREVIOUS PAGE FOR CONCURRENCES

PWR#4:DPWR-A
KJabbour:kab
01/23/86 + 2/14/86

PWR#4:DPWR-A
*MDuncan
01/23/86

PWR#4:DPWR-A
*BJYoungblood
01/23/86

9/9 - with noted changes to SER 2.5 on exemption of 2/24/86
no concurrence by J. GRAY USE on compliance published 2-24-86
 OELD
 J. GRAY
 02/19/86

D:DPWR-A
 Wovak
 02/24/86

DD:NRR
DEisenhut
02/ /86

D:NRR
HDenton
02/24/86

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PAS *WL*
WLambe (subject to typos checked)
02/18/86

ATTACHMENT 1 TO LICENSE NPF-48

TDI DIESEL ENGINES REQUIREMENTS

Duke Power Company shall comply with the following requirements related to the TDI diesel engines for Catawba Unit 2.

1. Changes to the maintenance and surveillance program for the TDI diesel engines, as identified in Section 8.3.1.1.2(D) of SSER #5, shall be subject to the provisions of 10 CFR 50.59.
2. Connecting rod assemblies shall be subjected to the following inspections at each major engine disassembly (approximately every 5 years):
 - The clearance between the link pin and the link rod should be examined. This dimension must be zero when the specified bolt torque is applied.
 - The surfaces of the rack teeth should be inspected for signs of fretting. If fretting has occurred, it should be subject to an engineering evaluation for appropriate corrective action. The mating surfaces should also be examined to ensure that the percentage of contact meets manufacturer's recommendations.
 - All connecting-rod bolts should be lubricated in accordance with the engine manufacturer's instructions and torqued to the specifications of the manufacturer. The lengths of the two pairs of bolts above the crankpin should be measured ultrasonically pre- and post-tensioning.
 - If connecting-rod bolt stretch was measured ultrasonically during reassembly following the preservice inspection, the lengths of the two pairs of bolts above the connecting rod should be remeasured ultrasonically before the link rod box is disassembled. Alternatively, the breakway torque should be measured. If bolt tension determined by either method is less than 93% of the value at installation, the cause should be determined, appropriate corrective action should be taken, and the interval between checks of bolt torque should be reevaluated.
 - All connecting-rod bolts should be visually inspected for thread damage (e.g., galling), and the two pairs of connecting rod bolts above the crankpin should be inspected by magnetic particle testing (MT) to verify the continued absence of cracking. All washers used with the bolts should be examined visually for signs of galling or cracking, and replaced if damaged.
 - A visual inspection should be performed of all external surfaces of the link rod box to verify the absence of any signs of service induced distress.

- ° All of the bolt holes in the link rod box should be inspected for thread damage (e.g., galling) or other signs of abnormalities. In addition, the bolt holes subject to the highest stresses (i.e., the pair immediately above the crankpin) should be examined with an appropriate nondestructive method to verify the continued absence of cracking. Any indications should be recorded for engineering evaluation and appropriate corrective action.
3. (a) Cylinder blocks shall be inspected at intervals calculated using the cumulative damage index (CDI) model and using inspection methodologies described by Failure Analysis Associates, Inc., (FaAA) in a report entitled "Design Review of TDI R-4 and RV-4 Series Emergency Diesel Generator Cylinder Blocks" (FaAA-84-9-11) dated December, 1984. In addition to these inspections, liquid penetrant inspection of the cylinder liner landing area should be performed anytime liners are removed. If inspection reveals cracks in the cylinder block between stud holes of adjacent cylinders, this condition shall be reported promptly to the NRC staff and the affected engine shall be considered inoperable. The engine shall not be restored to "operable" status until the proposed disposition and/or corrective actions have been approved by the NRC staff.
 - (b) Prior to restart from the first refueling outage, Duke Power Company shall submit its cumulative damage analysis performed in accordance with FaAA report No. FaAA-84-9-11 dated December 1984, which verifies the acceptability of the "as-built" dimensions of the Catawba Unit 2 cylinder blocks. Alternatively, the block dimensions should be modified as necessary to meet the latest TDI specifications.
4. The engines shall be rolled over with the airstart system and the cylinder stopcocks open prior to any planned starts, unless that start occurs within 4 hours of a shutdown. The engines shall also be rolled over with the airstart system and the cylinder stopcocks open after 4 hours, but no more than 8 hours after engine shutdown and then rolled over once again approximately 24 hours after each shutdown. In the event an engine is removed from service for any reason other than the rolling over procedure prior to expiration of the 8 hour or 24 hour periods noted above, that engine need not be rolled over while it is out of service. Duke Power Company shall air roll the engine over with the stopcocks open at the time it is returned to service. The origin of any water detected in the cylinders must be determined and any cylinder head which leaks due to a crack shall be replaced. No cylinder heads that contain a through-wall weld repair where the repair was performed from one side only shall be used on the engines except for cylinder heads containing full penetration weld repairs as described in TDI drawing 102718, Revision 0.

5. Periodic inspections of the turbochargers shall include the following:
 - The turbocharger thrust bearings should be visually inspected for excessive wear after 40 non-prelubed starts since the previous visual inspection.
 - Turbocharger rotor axial clearance should be measured at each refueling outage to verify compliance with TDI/Elliott specifications. In addition, thrust bearing measurements should be compared with measurements taken previously to determine whether a trend exists. Any such trends shall be evaluated by Duke Power Company to determine need for further inspection or corrective action.
 - Spectrographic and ferrographic engine oil analysis shall be performed quarterly to provide early evidence of bearing degradation. Particular attention should be paid to copper level and particulate size which could signify thrust bearing degradation.
 - The nozzle ring components and inlet guide vanes should be visually inspected at each refueling outage for missing parts or parts showing distress. If such are noted, the entire ring assembly should be replaced.
 - Pre-turbine exhaust temperature shall be monitored during engine operation to ensure that the manufacturer's temperature limit is not exceeded.
6. Main bearing No. 7 of emergency diesel generator 2B shall be disassembled and inspected at each refueling outage, both visually and with liquid penetrant, to verify that the bearings are free of distress. Subsequent to reassembly, run-in testing shall be performed in accordance with manufacturer's recommendations.
7. Operation beyond the first refueling outage shall require staff approval based on the staff's final review of the Owners Group generic findings and of the overall implementation status of Owners Group recommendations at Catawba Unit 2. This will include staff review of implementation status relative to open items identified in Sections 8.3.1.1.2(A) and 8.3.1.1.2(C) of SSER #5.
8. The following confirmatory information shall be submitted to the NRC staff prior to initial plant criticality.
 - a. Verify that each engine base has been fabricated from normal class 40 gray iron which is free of Widmanstaetten graphite microstructure.
 - b. Submit details concerning nature and cause of indication found on one rocker arm capscrew from Engine 2B. This information should address whether indication is service induced or whether it occurred as a result of fabrication or installation.

- c. Submit evaluation of causal factors leading to wear of turbocharger thrust bearings in Engine 2B. Confirm that these causal factors have been found to be unique to the Engine 2B turbocharger and justify how this conclusion was reached.
 - d. Confirm that rotor float measurements have been conducted for both engine 2A turbochargers and that these measurements are acceptable per the TDI/Elliott specifications.
 - e. Verify implementation of TDI Service Information Memorandum (SIM) 300.
9. The number 7 main bearing from engine 2B shall be disassembled and inspected, both visually and with liquid penetrant, following a 100 hour endurance test of this bearing to verify that the bearing continues to be in adequate condition and free of any significant distress. The staff should be immediately notified of any adverse findings as a result of this inspection. A report shall be submitted to the NRC staff prior to initial plant criticality which documents in detail (1) the circumstances of the earlier failures of the No. 7 bearing, (2) the investigations, analyses, and inspections conducted to establish the cause of these failures, (3) the findings from these efforts, (4) the corrective actions taken, and (5) a description and the results of the 100 hour confirmatory test/inspection of the No. 7 bearing.