

Attachment 1

Proposed Amendment to Catawba Unit 1
Technical Specification 3/4.3.4
Concerning Turbine Overspeed Protection

B410020379 B40926
PDR ADDCK 05000413
P PDR

JUSTIFICATION AND ANALYSIS OF SIGNIFICANT HAZARDS CONSIDERATION

This proposed amendment would delete the requirement to cycle the specified turbine valves in Modes 2 and 3. Previous justification was given in Attachment 5 of my June 5, 1984 letter which transmitted proposed amendments to the Draft Technical Specifications for Catawba Unit 1. Subsequent to that letter a telephone conversation was placed on June 28, 1984 involving Mr. Giardina of your Staff, Duke Power personnel and employees of General Electric. During this conversation, the reason for not granting the requested Tech Spec change was discussed. The reason given was that the Catawba Tech Spec was based on the Standard Technical Specification used for General Electric Turbine Generators. It is our opinion, based on the attached July 24, 1984 letter from Mr. J. C. Packard of G. E. to Mr. G. P. Karasiewicz, of my Staff, that the G. E. Standard Tech Spec and the Current Catawba Tech Spec are in error.

10 CFR 50.92 states that a proposed amendment involves no significant hazards considerations if operation in accordance with the proposed amendment would not:

- 1) Involve a significant increase in the probability or consequences of an accident previously evaluated; or
- 2) Create the possibility of a new or different kind of accident from any accident previously evaluated; or
- 3) Involve a significant reduction in a margin of safety.

The proposed amendment does not increase the probability or consequences of an accident previously evaluated and it does not create the possibility of a new or different kind of accident.

The proposed amendment does not involve a significant reduction in a margin of safety. Actually, as discussed in my June 5, 1984 letter, testing of the valves during Modes 2 and 3 would involve bypassing the electronic circuits incorporated to protect the turbine from thermal transients and over-speed. Also, testing these valves is not recommended by the manufacturer. Thus, deleting the requirement to test the turbine valves during Modes 2 and 3 would add to the margin of safety which already exists.

For the reasons described above, it is concluded that the proposed amendment does not involve significant hazards considerations.

INSTRUMENTATION

3/4.3.4 TURBINE OVERSPEED PROTECTION

LIMITING CONDITION FOR OPERATION

3.3.4 At least one Turbine Overspeed Protection System shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTION:

- a. With one stop valve or one control valve per high pressure turbine steam line inoperable and/or with one intermediate stop valve or one intercept valve per low pressure turbine steam line inoperable, restore the inoperable valve(s) to OPERABLE status within 72 hours, or close at least one valve in the affected steam line(s) or isolate the turbine from the steam supply within the next 6 hours.
- b. With the above required Turbine Overspeed Protection System otherwise inoperable, within 6 hours isolate the turbine from the steam supply.

SURVEILLANCE REQUIREMENTS

4.3.4.1 The provisions of Specification 4.0.4 are not applicable.

4.3.4.2 The above required Turbine Overspeed Protection System shall be demonstrated OPERABLE:

- a. At least once per 7 days, ^{while in Mode 1} by cycling each of the following valves through at least one complete cycle from the running position:
 - 1) Four high pressure turbine stop valves,
 - 2) Four high pressure turbine control valves,
 - 3) Six low pressure turbine intermediate stop valves, and
 - 4) Six low pressure turbine intercept valves.
- b. At least once per 31 days, ^{while in Mode 1} by direct observation of the movement of each of the above valves through one complete cycle from the running position,
- c. At least once per 18 months by performance of a CHANNEL CALIBRATION on the Turbine Overspeed Protection Systems, and
- d. At least once per 40 months by disassembling at least one of each of the above valves and performing a visual and surface inspection of valve seats, disks and stems and verifying no unacceptable flaws or corrosion.

GENERAL ELECTRIC

APPARATUS AND
ENGINEERING
SERVICES

GENERAL ELECTRIC COMPANY, 9801-G SOUTHERN PINE BOULEVARD, P.O. BOX 240606
CHARLOTTE, NORTH CAROLINA 28224, Phone (704) 379-7600

July 24, 1984

SUBJECT: CATAWBA #1 AND #2
TURBINES 170X617, X618
PERIODIC OPERATIONAL TEST SUMMARY
(GEK 46527)
DUKE FILE CN-200.30

RECEIVED

JUL 25 '84

NOV 1984
MANUFACTURING

Duke Power Company
Nuclear Production Department
Post Office Box 33189
Charlotte, NC 28242

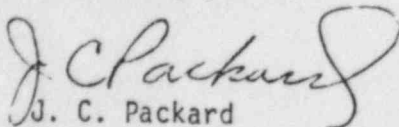
Attention: Mr. G. P. Karasiewicz
Maintenance Engineer

Gentlemen:

This will confirm our June 28, 1984 telephone discussion with you and Messrs. Lacivita and Carson in Schenectady and NRC personnel.

General Electric turbine valve testing recommendations are based entirely on turbine overspeed protection considerations, and are intended to apply only during periods of turbine operation. GEK 46527, "Periodic Operational Test Summary", summarizes the turbine testing recommendations, and the term "Operational" in the title is intended to refer to turbine operation.

Very truly yours,



J. C. Packard
Service Supervisor
Fossil Plant Services

ew

Attachment 2

Proposed Amendment to Catawba Unit 1
Technical Specification 3/4.10.5
Concerning Position Indication System - Shutdown

JUSTIFICATION AND SIGNIFICANT HAZARDS CONSIDERATION

The proposed amendment would fix an internal conflict currently contained in the Catawba Unit 1 Technical Specifications.

Specification 3.1.3.3 calls for an operable digital rod position indicator while in Modes 3, 4 and 5 with the reactor trip breakers in the closed position. Reference is made to Special Test Exception Specification 3.10.5 which allows suspension of the requirements of Specification 3.1.3.3 during rod drop time measurements and also during initial calibration of the Position Indication System.

The conflict appears when one attempts to verify the operability of an inoperable digital rod position indicator. The Action statement for Specification 3.1.3.3 calls for immediately opening the reactor trip breakers upon discovery of an inoperable indicator(s). In order to declare an inoperable indicator operable, Surveillance Requirement 4.1.3.3 must be performed. Specification 4.1.3.3 calls for moving control rods to verify that the digital rod position indicator agrees with the demand position indicator within 12 steps. However, control rods can not be moved with the reactor trip breakers open. Thus there is no way to verify the operability of an inoperable position indicator.

In order to resolve this conflict exception must be taken to the applicability of Specification 3.1.3.3 during performance of Surveillance Requirement 4.1.3.3.

10 CFR 50.92 states that a proposed amendment involves no significant hazards considerations if operation in accordance with the proposed amendment would not:

- 1) Involve a significant increase in the probability or consequences of an accident previously evaluated; or
- 2) Create the possibility of a new or different kind of accident from any accident previously evaluated; or
- 3) Involve a significant reduction in a margin of safety.

The proposed amendment does not increase the probability or consequences of an accident previously evaluated, it does not create the possibility of a new or different kind of accident, and it does not involve a significant reduction in a margin of safety. The amendment would allow verifying the operability of an inoperable digital rod position indicator and would remove an internal inconsistency in the Technical Specifications.

Thus, it is concluded that the proposed amendment does not involve significant hazards considerations.

SPECIAL TEST EXCEPTIONS

3/4.10.5 POSITION INDICATION SYSTEM - SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.10.5 The limitations of Specification 3.1.3.3 may be suspended during the performance of individual full-length shutdown and control rod drop time measurements provided;

- or during performance of Surveillance Requirement 4.1.3.3*
- Only one shutdown or control bank is withdrawn from the fully inserted position at a time, and
 - The rod position indicator is OPERABLE during the withdrawal of the rods.*.

APPLICABILITY: MODES 3, 4, and 5 during performance of rod drop time measurements.

ACTION:

or Surveillance Requirement 4.1.3.3

With the Position Indication System inoperable or with more than one bank of rods withdrawn, immediately open the Reactor trip breakers.

SURVEILLANCE REQUIREMENTS

4.10.5 The above required Position Indication Systems shall be determined to be OPERABLE within 24 hours prior to the start of and at least once per 24 hours thereafter during rod drop time measurements by verifying the Demand Position Indication System and the Digital Rod Position Indication System agree:

- Within 12 steps when the rods are stationary, and
- Within 24 steps during rod motion.

or during performance of Surveillance Requirement 4.1.3.3

*This requirement is not applicable during the ~~initial~~ calibration of the Position Indication System provided: (1) K_{eff} is maintained less than or equal to 0.95, and (2) only one shutdown or control rod bank is withdrawn from the fully inserted position at one time.

Attachment 3

Proposed Amendment to Catawba Unit 1
Technical Specification Table 3.3-4, Item 8.g
Concerning Auxiliary Feedwater Suction Pressure
Switch Trip Setpoints and Allowable
Values

JUSTIFICATION AND SIGNIFICANT HAZARDS CONSIDERATIONS

The proposed amendment would change the Allowable Values and Trip Setpoints for the Auxiliary Feedwater Suction Pressure-Low pressure switches. These changes are the result of a recently concluded flood study. The results of the study concluded in part that the Auxiliary Feedwater pressure switches needed to be relocated. Relocating the pressure switches causes a change in the Trip Setpoints. Thus, this amendment request reflects the need to revise those Trip Setpoints and Allowable Value in the Technical Specifications affected by the relocation of the pressure switches.

10 CFR 50.92 states that a proposed amendment involves no significant hazards considerations if operation in accordance with the proposed amendment would not:

- 1) Involve a significant increase in the probability or consequences of an accident previously evaluated; or
- 2) Create the possibility of a new or different kind of accident from any accident previously evaluated; or
- 3) Involve a significant reduction in a margin of safety.

The proposed amendment does not increase the probability or consequences of an accident previously evaluated and it does not create the possibility of a new or different kind of accident.

The proposed amendment does not involve a significant reduction in a margin of safety in that the proposed changes are values consistent with previous accident analyses. Thus, it is concluded that the proposed amendment does not involve significant hazards considerations.

TABLE 3.3-4 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION TRIP SETPOINTS

<u>FUNCTIONAL UNIT</u>	<u>TOTAL ALLOWANCE (TA)</u>	<u>Z</u>	<u>SENSOR ERROR (S)</u>	<u>TRIP SETPOINT</u>	<u>ALLOWABLE VALUE</u>
8. Auxiliary Feedwater (Continued)					
c. Steam Generator Water Level - Low-Low	15	12.18	1.5	> 17% of span from 0% to 30% RTP increasing linearly to > 54.9% of span from 30% to 100% RTP	> 10.25% of span from 0% to 30% RTP increasing linearly to > 53.2% of span from 30% to 100% RTP
d. Safety Injection	See Item 1. above for all Safety Injection Setpoints and Allowable Values.				
e. Loss-of-Offsite Power	N.A.	N.A.	N.A.	≥ 3500 V	≥ 3200 V
f. Trip of All Main Feedwater Pumps	N.A.	N.A.	N.A.	N.A.	N.A.
g. Auxiliary Feedwater Suction Pressure-Low					
1) 1 CAPS 5220, 5221, 5222	N.A.	N.A.	N.A.	≥ 10.5 psig	≥ 9.5 psig
2) 1 CAPS 5230, 5231, 5232	N.A.	N.A.	N.A.	≥ 10.9 psig 6.2	≥ 9.3 psig 5.2
9. Containment Sump Recirculation					
a. Automatic Actuation Logic and Actuation Relays	N.A.	N.A.	N.A.	N.A.	N.A.
b. Refueling Water Storage Tank Level-Low Coincident With Safety Injection	N.A.	N.A.	N.A.	≥ 177.15 inches	≥ 162.4 inches
	See Item 1. above for all Safety Injection Setpoints and Allowable Values.				