

ENCLOSURE 1

NOTICE OF VIOLATION

Duke Power Company
Catawba Units 1 and 2

Docket Nos. 50-413, 50-414
License Nos. NPF-35, NPF-52

During the Nuclear Regulatory Commission (NRC) inspection conducted on January 11-15, 1988, a violation of NRC requirements was identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C (1986), the violation is listed below:

Technical Specification 3.7.4 requires at least two independent nuclear service water loops be operable in Modes 1, 2, 3 and 4. With only one nuclear service water loop operable, restore at least two loops to operable status within 72 hours or be in at least hot standby within the next six hours in cold shutdown within the following 30 hours.

Contrary to the above, on August 30, 1986, at 8:30 p.m. with Unit 1 shutdown for refueling and Unit 2 in Mode 1, Power Operation, Nuclear Service Water Train A was made inoperable with respect to Unit 2. On September 8, 1986 at 4:40 a.m., Unit 2 entered Mode 5, thus exceeding by approximately 92 hours the time required to shutdown to Mode 5.

This is a Severity Level IV violation (Supplement I).

Pursuant to the provisions of 10 CFR 2.201, Duke Power Company is hereby required to submit a written statement or explanation to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555, with a copy to the Regional Administrator, Region II, and a copy to the NRC Resident Inspector, Catawba, within 30 days of the date of the letter transmitting this Notice. This reply should be clearly marked as a "Reply to a Notice of Violation" and should include [for each violation]: (1) admission or denial of the violation, (2) the reason for the violation if admitted, (3) the corrective steps which have been taken and the results achieved, (4) the corrective steps which will be taken to avoid further violations, and (5) the date when full compliance will be achieved. Where good cause is shown, consideration will be given to extending the response time. If an adequate reply is not received within the time specified in this Notice, an order may be issued to show cause why the license should not be modified, suspended, or revoked or why such other action as may be proper should not be taken.

FOR THE NUCLEAR REGULATORY COMMISSION
ORIGINAL SIGNED BY

J. Nelson Grace

J. Nelson Grace
Regional Administrator

Dated at Atlanta, Georgia
this 14th day of March 1988

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PDR ADDOCK 05000413
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ENCLOSURE 2

ENFORCEMENT CONFERENCE SUMMARY

On February 23, 1988, representatives of the Duke Power Company (DPC) met with the NRC at the NRC's request in the Region II office in Atlanta, Georgia. The subjects of discussion were operability and reportability of several potential unanalyzed conditions in the Catawba Nuclear Service Water (RN) system. The list of conference attendees is contained in Attachment 1.

Following opening remarks given by M. L. Ernst, NRC Region II and H. Tucker, DPC, DPC gave a presentation which addressed the specific concerns of the NRC. The presentation consisted of a review of RN system design features, a review of the various RN configurations of concern, safety significance, operability/reportability decision points and corrective action.

The outline of the DPC presentation is contained in Attachment 2.

All NRC concerns on this issue were addressed in the meeting. It was evident that significant preparation time was expended. DPC also stated that as a result of this issue their sensitivity to reportability had been increased. The NRC enforcement action concerning this issue is discussed in Enclosure 1.

Attachments:

1. List of Attendees at the
Catawba Enforcement Conference
2. Catawba Nuclear Station
Nuclear Service Water System
Region II Presentation

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ATTACHMENT 1

ENFORCEMENT CONFERENCE
DPC - CATAWBA

ATTENDEES

NRC

M. L. Ernst, Deputy Regional Administrator
L. A. Reyes, Director, Division of Reactor Projects (DRP)
V. L. Brownlee, Branch Chief, DRP
T. A. Peebles, Section Chief, DRP
P. K. Van Doorn, Senior Resident Inspector, DRP
B. R. Bonser, Project Engineer, DRP
C. A. Julian, Branch Chief, Division of Reactor Safety (DRS)
R. H. Bernhard, Reactor Inspector, DRS
M. Thomas, Reactor Inspector, DRS
G. A. Belisle, Section Chief, DRS
A. F. Gibson, Director, DRS
B. Uryc, Enforcement Coordinator
G. R. Jenkins, Director, Enforcement and Investigation Coordination Staff
G. Lainas, Assistant Director, NRR
K. Jabbour, Project Manager, NRR
J. D. Smith, Operations Inspector, NRR
W. T. LeFave, Engineer Plant Systems, NRR
H. Wong, Senior Enforcement Specialist, OE
F. Hawkins, Section Chief, NRR

Duke Power Company

H. B. Tucker, Vice President, Nuclear Production
N. Rutherford, Manager Licensing
J. W. Hampton, Manager Catawba Nuclear Station (CNS)
T. B. Owen, Assistant Manager CNS
L. Hartzell, Compliance Engineer, CNS
H. B. Barron, Operations Superintendent, CNS
P. G. LeRoy, Licensing Engineer, CNS
R. O. Sharpe, Nuclear Engineer, DPC
E. W. Fritz, Design Engineer, DPC Design
D. W. Eaves, Design Engineer, DPC Design

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ATTACHMENT 2

CATAWBA NUCLEAR STATION

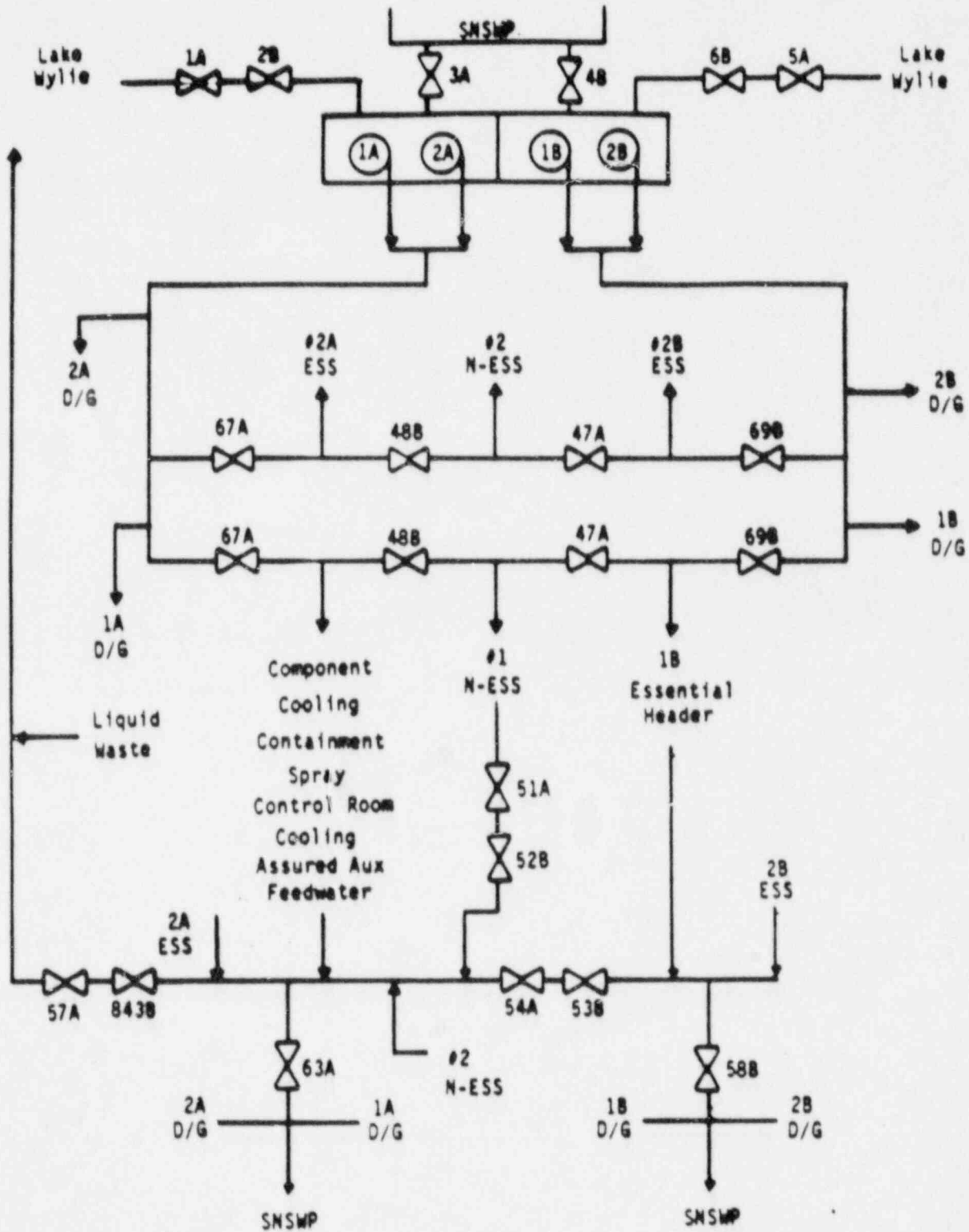
NUCLEAR SERVICE WATER SYSTEM

REGION II PRESENTATION

FEBRUARY 23, 1988

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CATAWBA NUCLEAR STATION
NUCLEAR SERVICE WATER SYSTEM



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**CATAWBA NUCLEAR STATION
NUCLEAR SERVICE WATER SYSTEM
DESIGN FEATURES**

- EACH OF 2 LOOPS IS SHARED BY BOTH UNITS.

- EACH PUMP HAS THE CAPACITY TO EITHER:
 1. REMOVE COMBINED BLACKOUT AND LOCA HEAT FROM ONE UNIT OR

 2. REMOVE COMBINED BLACKOUT AND COOLDOWN HEAT FOLLOWING TRIP FROM 100% FULL POWER.

- LOOP ISOLATION OCCURS ON COMBINED LOCA AND LOSS OF LAKE WYLIE.

- NON-ESSENTIAL EQUIPMENT IS ISOLATED ON LOCA SIGNAL - Sp.

- AUTOMATIC TRANSFER FROM LAKE WYLIE TO SNSWP ON EITHER Sp OR LOSS OF LAKE WYLIE.

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DECEMBER 1985 - SHARED ASPECTS OF RN RECOGNIZED

- SITE AND DESIGN ENGINEERING EVALUATION CONDUCTED.

Unrestricted operating requirements were clear; issue addressed was proper handling of out-of-service equipment.

- SHORT AND EXTENDED (> 72 HR) INOPERABILITY ADDRESSED.

After 72 hours, at least one unit is placed in cold shutdown with equipment isolated.

- LICENSE BASIS HEAT LOADS AND ACTUAL FLOW TEST DATA UTILIZED.

No special analysis involved.

- RESIDENT INSPECTORS BRIEFED.

- LER 414/86-31-1 ISSUED 8-29-86.

LER was a direct result of RN operating practices; otherwise event was not reportable.

**AUGUST 1986 - REQUIREMENTS FOR TWO TRAINS OF
RN WITH DIESEL GENERATOR INOPERABLE
CONFLICT WITH OPERATING UNIT
REQUIREMENTS.**

- **FSAR DID NOT ADDRESS REQUIREMENTS WITH
ONE UNIT IN COLD SHUTDOWN.**

FSAR defined two pumps as necessary if both units are operating;
second pump needed to place non-LOCA unit cold shutdown.

- **DESIGN ANALYSIS PERFORMED FOR CYCLE
SPECIFIC FLOW REQUIREMENT.**

FSAR values used for LOCA (operating) unit requirements; refueling
unit requirements took into account time since shutdown. Plant
test confirmed system flow performance.

- **DESIGN STUDY 888 INITIATED TO
DETERMINE GENERIC FLOW REQUIREMENT.**

Needed for future refueling outage work sequencing.

- **RESIDENT INSPECTORS BRIEFED.**

- **DESIGN ANALYSIS ADDRESSED EMERGENCY
POWER SOURCE RATHER THAN FLOW PATH.**

Closed valve 1RN47A rather than 1RN48B when 1A D/G was out-of-service.

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**JANUARY 1987 - IDENTIFIED UNNECESSARY FAILURE
SCENARIO WITH SNSWP TRANSFER.**

- CNPRO2350 INITIATED DESIGN STUDY 80
TO EVALUATE DELETION OF RM TRANSFER
ON Sp CONSIDERING:
 - 1- PROBLEM DEFINITION
 - 2- ADEQUACY OF RESOLUTION
 - 3- ALTERNATE RESOLUTIONS
 - 4- FSAR IMPACT FROM RESOLUTION

- DESIGN STUDY 80:
 - 1- AGREED WITH PROBLEM DEFINITION
 - 2- FOUND FAULT WITH RESOLUTION
 - 3- IDENTIFIED PRE-ALIGNMENT AS
ALTERNATE RESOLUTION
 - 4- IDENTIFIED INCONSISTANCY OF
RESOLUTION WITH FSAR

- PRA INDEPENDENTLY REACHED CONCLUSION
TO DELETE Sp INTERLOCK.

- NOT CURRENT OR FUTURE SAFETY CONCERN.

- RESIDENT INSPECTORS BRIEFED.

- REPORTABILITY EVALUATED BY DUKE
POWER COMPANY.

JULY 1987 - NRC AUDIT TEAM MEMBERS EXPRESSED CONCERN WITH RN SYSTEM DESIGN.**- REPORTABILITY ONLY SPECIFIC CONCERN AT EXIT.**

Material needed to be taken back to NRC for further analysis.

- 50.541 LETTER 8-7-87 REQUESTED INFORMATION.

Apparent concern centered on postulated failure of a single operable train while still under a 72 hour ACTION clock on the other train. Outside the Tech Spec bases.

- RESPONSE AND MEETING WITH NRC 8-27-87 DESCRIBED PROCEDURES.**- INFORMATION FROM LER 414/88-31-1.****- ANALYSIS OF SCENARIO OUTSIDE LICENSING BASIS.**

Analysis performed in response to apparent concern, not to justify previous or future operation.

- NRC CONCURRED WITH PROCEDURES, REQUESTED INCLUSION IN TECH SPEC.**- COURTESY REPORT PREPARED, PREVIOUS ALIGNMENT ERROR IDENTIFIED DURING FINAL REVIEW (10-12-87) - REPORT SUBMITTED AS TECH SPEC VIOLATION.**

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FEBRUARY 1988 - CURRENT STATUS OF ISSUES

- REVISED LOCA DECAY HEAT LOADS.

- DESIGN STUDY #66 RESOLVED:
 - LOCA AND SHUTDOWN COOLING REQUIREMENTS EQUAL (5200 GPM RM TO KC).

- DESIGN STUDY #80 RESOLVED:
 - POST-LOCA SEISMIC REQUIREMENTS FOR SNSWP CLARIFIED, Sp RM TRANSFER DELETED.

- FSAR AND TECH SPEC CHANGES SUBMITTED.

- PIT LEVEL INSTRUMENT MODIFICATION PLANNED.

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ANALYSIS OF TECH SPEC VIOLATION

- ACCIDENT SCENARIO REQUIRED LOCA, LOSS OF OFFSITE POWER AND SPECIFIC FAILURE OF ONE VALVE.

- EXISTING PLANT ABNORMAL PROCEDURE TO ADDRESS SPECIFIC POSTULATED FAILURE DIRECTED OPERATOR TO PERFORM CORRECT ACTION FOR RECOVERY.

- APPROXIMATELY 40 MINUTES WOULD BE AVAILABLE TO PERFORM THE CORRECTIVE ACTION.
Only minimum cooling is required until transfer to containment sump recirculation.

- NO PUMP DAMAGE WOULD HAVE OCCURRED PRIOR TO PERFORMING THE CORRECTIVE ACTION.
Non-essential flow demand is equivalent to containment spray cooling which is not established until transfer to sump.

- UNIT 2 WAS SUBCRITICAL 72 HOURS PRIOR TO EXCEEDING THE TIME ALLOWED TO ENTER COLD SHUTDOWN.

- DECAY HEAT EXTREMELY LOW DUE TO LOW BURNUP.

CONCLUSIONS

- DUKE POWER COMPANY PERSONNEL WERE PROACTIVE IN EVALUATING RN SYSTEM OPERATION.
- THE RN SYSTEM WAS AT ALL TIMES OPERATED IN A MANNER CONSISTANT WITH THE FSAR.
- THE RN SYSTEM WAS AT ALL TIMES ABLE TO PERFORM ITS INTENDED FUNCTION.

OPERABILITY/REPORTABILITY DECISION POINTS**TIME FRAME****TOPIC**

MAY 1986 RN EQUIPMENT/FLOW PATHS TO MEET T/S (2 OPERABLE LOOPS) FOR 2 UNIT MODE 1-4 OPERATION PUT IN T/S INTERPRETATION FORMAT. ADDRESSES SINGLE FAILURE CRITERIA.

AUG 1986 LER ISSUED ON RN OPERABILITY. DESCRIBES SHARED ASPECT OF SYSTEM AND REQUIRED ACTIONS FOR OPERABILITY.

"IF A D/G IS INOPERABLE, THE DEPENDENT RN TRAIN IS CONSERVATIVELY DECLARED INOPERABLE ON BOTH UNITS DUE TO THE SHARED NATURE OF THE RN SYSTEM"...

"...OPERATION WITH LESS THAN 4 RN PUMPS, REQUIRES RN SYSTEM REALIGNMENT TO ENSURE SUFFICIENT POST ACCIDENT FLOW IN THE EVENT OF ANY SINGLE FAILURE."

OCT 1986 INITIAL DETERMINATION OF RN FLOW REQUIREMENTS WITH DIESEL OUT OF SERVICE.

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- JAN 1987 POTENTIAL FOR PIT VALVE FAILURE IDENTIFIED. TO DETERMINE IF BOUNDED BY ACCIDENT ANALYSIS.
- MAR 1987 RN SNSWP SWAPOVER DESIGN STUDY, PART 1 DETERMINES PREVIOUSLY UNANALYZED CONDITION EXISTS.
- APR 1987 PIR ISSUED TO DOCUMENT DETERMINATION OF SIGNIFICANCE OF UNANALYZED CONDITION.
- MAY 1987 RN SNSWP SWAPOVER LOGIC DESIGN STUDY, PART 2 CONCLUDES THIS SPECIFIC EQUIPMENT FAILURE PREVIOUSLY UNANALYZED. DOES NOT CONCLUDE RN FLOW REQUIREMENTS WOULD NOT HAVE BEEN MET. ADDITIONAL ANALYSIS REQUIRED.
- AUG 1987 NRC REQUESTS ADDITIONAL INFORMATION ON RN QUESTION. DPC PROVIDES RESPONSE.
- LER SUBMITTED ON ERROR IN RN VALVE LINE-UP 30 AUG - 8 SEPT 1988.
- SEP 1987 NRC CONFIRMS PREVIOUS POSITION RN MEETS GDC 5 AND 44 AS OPERATED UNDER PROCEDURES.

CONCLUSIONS

- THE RM SYSTEM HAS ALWAYS BEEN OPERATED IN A MANNER WHICH SATISFIES THE FSAR ACCIDENT ANALYSIS AND THE 10 CFR 50 APPENDIX A GENERAL DESIGN CRITERIA.
- THE TECHNICAL SPECIFICATION INTERPRETATION IMPLEMENTED IN MAY 1986 PROVIDED ONLY THE EQUIPMENT/ALIGNMENT DETAILS NECESSARY TO MEET THE EXISTING RM T/S REQUIRING 2 OPERABLE RM LOOPS. IT DID NOT MODIFY THE EXISTING T/S AND IT DID NOT ADD ADDITIONAL REQUIREMENTS.
- THE FSAR RM DESCRIPTION ONLY ADDRESSED RM REQUIREMENTS FOR 2 UNITS IN MODE 1-4 OPERATION AND HAS BEEN CLARIFIED TO REFLECT THE RM ALIGNMENT FOR OTHER UNIT/EQUIPMENT COMBINATIONS. (SUBMITTED WITH T/S CHANGE REQUEST).
- THE NRC WAS COGNIZANT OF THE SHARED NATURE OF THE RM SYSTEM AND DPC EFFORTS TO RESOLVE QUESTIONS OF REQUIRED EQUIPMENT AND SYSTEM ALIGNMENT.
- DPC IDENTIFIED ALL OF THE ISSUES DEALING WITH RM OPERATION WITHOUT NRC PROMPTING AND RESOLVED THEM IN A TIMELY MANNER. (INCLUDING THE VIOLATION CITED FOR THIS ENFORCEMENT CONFERENCE).

OCT 1986

DESIGN ANALYZES RN FLOW REQUIREMENTS TO SUPPORT PLANT OPERATION WITH DIESEL OUT OF SERVICE GREATER THAN 72 HOURS.

- . OPERABILITY - FLOW PARAMETERS FOR ONE UNIT OPERATING AND ONE UNIT SHUTDOWN (TWO LOOPS RHR) DETERMINED. ALIGNMENT ENSURES OPERABILITY UNDER TECHNICAL SPECIFICATION AND FSAR ACCIDENT ANALYSIS FOR TWO OPERABLE FLOW LOOPS.
- . REPORTABILITY - FSAR DOES NOT ADDRESS ABOVE FLOW CONFIGURATION OR PLANT OPERATION WITH ONE UNIT OPERATING AND ONE UNIT IN MODES 5/6. THIS IS CONSISTENT WITH OTHER FSAR SYSTEM DESCRIPTIONS WHICH DO NOT ADDRESS ALL POSSIBLE UNIT/EQUIPMENT COMBINATIONS OR MAINTENANCE CONDITIONS. TECHNICAL SPECIFICATIONS ARE STILL MET AND ACCIDENT ANALYSIS IS SATISFIED.

JAN 1987

STATION PROBLEM REPORT IDENTIFIES POTENTIAL FOR PIT VALVE FAILURE ON SWAPOVER AND RECOMMENDS MODIFICATION.

- . OPERABILITY - CONDITION DESCRIBED (DIESEL INOPERABLE >72 HOURS) NOT PRESENT. TECHNICAL SPECIFICATIONS WOULD CAUSE BOTH UNITS TO BE SHUTDOWN IF CONDITION OCCURRED WITH BOTH UNITS IN MODES 1-4.
- . REPORTABILITY - SINCE FSAR DOES NOT ADDRESS THIS PLANT CONDITION (ONE UNIT UP, ONE UNIT DOWN) IT IS NOT APPARENT WITHOUT ADDITIONAL REVIEW IF THIS FAILURE IS BOUNDED BY PRESENT FSAR ACCIDENT ANALYSIS.

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MAR 1987

RN STANDBY NUCLEAR SERVICE WATER POND
SWAPOVER LOGIC DESIGN STUDY, PART 1 ISSUED.

. REPORTABILITY - STUDY CONCLUDES PROPOSED MODIFICATION MAY INVOLVE UNREVIEWED SAFETY QUESTION BY DELETING ONE OF TWO REDUNDANT SWAPOVER SIGNALS. POTENTIAL PIT VALVE FAILURE IS ALSO ADDRESSED AS "AN UNREVIEWED SAFETY QUESTION THAT NEEDS TO BE ADDRESSED." THIS STATEMENT WAS NOT INTENDED TO CONSTITUTE "AN UNREVIEWED SAFETY QUESTION" AS DEFINED IN 10 CFR 50.59, BUT AS A PREVIOUSLY UNANALYZED CONDITION WHICH REQUIRES ADDITIONAL ANALYSIS. THE ADDITIONAL ANALYSIS WOULD DETERMINE IF THIS FAILURE MECHANISM WAS REPORTABLE AS "AN UNANALYZED CONDITION WHICH SIGNIFICANTLY COMPROMISES PLANT SAFETY" AS DEFINED IN 10 CFR 50.72 AND 50.73.

APR 1987

PROBLEM INVESTIGATION REPORT (PIR) ISSUED (BASED ON FINDINGS IN THE ABOVE DESIGN STUDY) TO DETERMINE IF THE PROBLEM DEFINED IN THE SPR IS "AN UNANALYZED CONDITION" THAT "SIGNIFICANTLY COMPROMISES PLANT SAFETY."

. OPERABILITY - POTENTIAL FAILURE MECHANISM DOES NOT CONSTITUTE NEAR TERM OPERABILITY PROBLEM. FOR DIESEL OUT OF SERVICE GREATER THAN 72 HOURS SYSTEM IS PARTIALLY ALIGNED TO POND REMOVING VALVE FAILURE AS PROBLEM. LONGER TERM OPERABILITY QUESTION WILL BE RESOLVED WHEN ADDITIONAL ANALYSIS IS COMPLETE.

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. REPORTABILITY - PRELIMINARY CORRESPONDENCE FOR PART 2 OF THE SNSWP SWAPOVER LOGIC DESIGN STUDY DEMONSTRATES LOW LIKELIHOOD OF EVENT IN QUESTION (I.E. SINGLE FAILURE, LOSS OF LAKE, BLACKOUT, DIESEL INOP), PRA ARGUMENT SEEN AS SUFFICIENT TO SHOW THIS IS NOT "AN UNANALYZED CONDITION THAT SIGNIFICANTLY COMPROMISES PLANT SAFETY" AT THIS TIME.

MAY 1987

RN STANDBY NUCLEAR SERVICE WATER POND SWAPOVER LOGIC DESIGN STUDY, PART 2 ISSUED.

. OPERABILITY - NO ADDITIONAL INFORMATION CHALLENGES THE EXISTING DETERMINATION OF CURRENT OPERABILITY.

. REPORTABILITY - THE STUDY CONCLUDES THAT THE PROBLEM IDENTIFIED IS A "PREVIOUSLY UNANALYZED SITUATION THAT NEEDS TO BE ADDRESSED." THE SINGLE ACTIVE FAILURE CAUSING LOSS OF TWO RN PUMPS IS RECOGNIZED AS WELL AS THE PROPOSED MODIFICATION, ALTERNATIVES, AND THE STATISTICAL PROBABILITY OF THE SEQUENCE OF EVENTS AFTER MODIFICATIONS. THE REPORT DOES NOT CONCLUDE THAT THE PLANT WAS OPERATED OUTSIDE ITS DESIGN BASIS, OR THAT TECHNICAL SPECIFICATIONS WERE VIOLATED, OR THAT LOSS OF THE TWO PUMPS WOULD RESULT IN INSUFFICIENT RN FLOW FOR THE SCENARIO DESCRIBED. FOR REPORTABILITY UNDER 10 CFR 50.72 AND 50.73 THE "UNANALYZED CONDITION THAT SIGNIFICANTLY COMPROMISED PLANT SAFETY" IS CONSIDERED TO COVER THE REQUIREMENT FOR OPERABLE FLOW LOOPS NOT

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INDIVIDUAL EQUIPMENTS, NOTE THAT THE RULE ADDRESSES PAST TENSE CONDITIONS THAT EXISTED. THE PROCEDURES BY WHICH THE RN SYSTEM HAS BEEN OPERATED SINCE UNIT TWO CRITICALITY WERE DESIGNED TO ENSURE SUFFICIENT RN FLOW UNDER ALL ACCIDENT CONDITIONS. ABSENT A DISCOVERY OF THE POSSIBILITY OF PAST INSUFFICIENT RN FLOW AS A RESULT OF THIS SCENERIO, IT WAS NOT DEEMED TO BE A REPORTABLE EVENT.

THE SRI ELEVATES THE ISSUE TO URI STATUS IN REPORT NUMBER 413/87-10. DPC ACTIONS TO JUSTIFY CONTINUED OPERATION AND THE ONGOING PRA/DESIGN STUDY ARE SUMMARIZED.

JUL 1987

NRC QUALITY VERIFICATION INSPECTION (413/87-23) TEAM RAISES CONCERN THAT RN SYSTEM DESIGN IS NOT ANALYZED FOR THIS EVENT, THAT PRA IS NOT ACCEPTABLE TO DETERMINE SIGNIFICANCE, AND THAT DPC FAILED TO REPORT UNDER REQUIREMENTS OF 10 CFR 50.72 OR 10 CFR 50.73 (THE NRC REPORT IS ISSUED IN NOVEMBER 1987).

AUG 1987

REVIEW OF PAST INSTANCES OF PLANT IN THE CONDITION UNDER QUESTION CONCLUDE NO UNANALYZED CONDITION HAS EVER EXISTED. AN ACTUAL HEAT LOAD ANALYSIS WILL BE CONDUCTED TO RE-VERIFY THIS FOR 22 AUG - 1 SEPT 1986 TIME FRAME.

NRC ISSUES REQUEST FOR ADDITIONAL INFORMATION ON RN.

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DPC PROVIDES RESPONSE TO 50.54(F) LETTER. CONCLUDES THE PLANT MEETS GDC 5 AND 44. PROVIDES ADDITIONAL ANALYSIS THAT A SINGLE RN PUMP CAN REMOVE HEAT LOADS EXPECTED DURING POSTULATED CONDITIONS UNDER QUESTION (INCLUDING LOCA), AND PROVIDES JUSTIFICATION FOR CONTINUED OPERATION.

A REVIEW OF VALVE LINE-UP DATA USED TO CONFIGURE RN FOR THE 30 AUG - 8 SEPT 1986 TIME FRAME IDENTIFIES ERROR. THIS ERROR IS DETERMINED REPORTABLE UNDER 10 CFR 50.73 AND LER 413/87-36 IS SUBMITTED.

SEP 1987

NRC ISSUES LETTER CONFIRMING RN SYSTEM MEETS GDC 5 AND 44 AS OPERATED UNDER PROCEDURES IN PLACE. REQUESTS TECHNICAL SPECIFICATIONS BE MODIFIED TO REFLECT SHARED ASPECTS OF RN SYSTEM.

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CATAWBA NUCLEAR STATION
TECHNICAL SPECIFICATION INTERPRETATION

TECHNICAL SPECIFICATION(S) AFFECTED: 3.7.4, Nuclear Service
Water System

REVISION: 0

DETAILS:

The Nuclear Service Water System (RN) contains pumps which are unit designated, i.e., 1A, 2A, 1B, 2B, yet supply both units through common discharge piping. All RN pumps receive auto-start signals from a safety signal on either unit. Accordingly, the following interpretations are made with respect to RN System OPERABILITY:

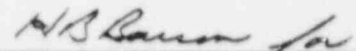
An RN pump designated to one unit may be assumed to supply post accident RN requirements to equipment on the opposite unit provided its associated emergency diesel generator is OPERABLE AND RN system valve alignments are such that the required RN equipment will receive the required flows.

Since three RN pumps can supply sufficient flow for four RN trains but cannot do so if a single failure occurs, this configuration does not represent two independent RN trains for each unit. Therefore, with only three RN pumps OPERABLE, the action statement for one RN train out of service must be entered for both units or sufficient RN supplied equipment isolated. This assures that the required post-accident flows will be supplied to the remaining OPERABLE RN supplied equipment in the event of any single failure. Only isolated RN supplied equipment must be declared inoperable.

If less than three RN pumps are OPERABLE, both units must enter Tech Spec action statement 3.0.3 until sufficient RN supplied equipment is isolated to assure that at least one RN train per unit or two trains on the same unit, will receive the required post-accident RN flows.

BASIS: Review of Technical Specification. Discussion with Design Engineering.

APPROVAL:



J. W. Hampton, Manager
Catawba Nuclear Station

DATED:

5-15-86