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DUKE POWER

April 15, 1997

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555

Subject: Catawba Nuclear Station
Dockets 50-413 and 50-414
Reply to Notice of Violation (NOV)
Inspection Report 50-413, 414/97-03

Attached is Duke Power Company's response to the two (2) Level IV violations cited in Inspection Report 50-413, 414/97-03, dated March 17, 1997. These violations were identified during inspections conducted between January 12, 1997, through February 15, 1997.

If there are any questions concerning this response, please contact K. E. Nicholson at (803) 831-3237.

Sincerely,

W. R. McCollum, Jr.

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xc: L. A. Reyes, Regional Administrator
P. S. Tam, ONRR
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CATAWBA NUCLEAR STATION
REPLY TO NOTICE OF VIOLATION
413, 414/97-03-01

Notice of Violation

10 CFR 50, Appendix B, Criterion V, Instructions, Procedures, and Drawings, as implemented by Duke Power Company Topical Quality Assurance (QA) Program (Duke-1-A) requires that certain activities affecting quality shall be accomplished in accordance with documented prescribed procedures.

Catawba procedures, QAG-1, Receipt, Inspection, and Control of QA Condition Material, Parts, and Components, revision 34, and NPP-311, Receipt Inspection, and Testing of QA Condition Commodities, revision 4, require that received QA condition materials and parts designated as QA hold status shall be stored in a QA controlled hold area until a final QA disposition has been made.

Contrary to the above, as of February 2, 1997, activities affecting quality were not accomplished in accordance with documented prescribed procedures in that received QA condition materials were not stored in a QA controlled hold area and were released for use without the required QA final dispositions. Specifically, the receipt inspection documentation for the Spare Parts Diesel Generator (SPDG), dated August 28, 1987, designated the SPDG and all parts as QA hold status, to be stored in a QA level C storage area. All parts were to receive an evaluation against Duke Power Diesel Generator Specification CNS 1301.00-00-0002, prior to use; however, the SPDG was not stored in a QA controlled hold area and numerous parts, including pistons, cylinders, turbocharger, and shaft driven pumps, had been released for use without the documented QA final disposition.

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

1. Reason for Violation

Duke Power Company acknowledges this violation. This violation occurred as a result of the diesel engine being turned over to the maintenance organization and not being maintained in direct QA control in a QA hold status. Because the engine was considered to be owned by maintenance, QA receipt inspectors regarded the engine and parts as non-QA issued items and therefore had no requirement to review the original receipt requirements.

Although parts have been used from the spare diesel using the upgrade processes in place at the time, there is no documentation which states the evaluations and justifications specified in the original receiving requirements were performed.

2. Corrective Actions Taken and Results Achieved

a) The storage building for the remaining diesel engine and parts has been upgraded to ANSI N45.2.2 Level B requirements, a QA hold area has been established in the building, and this building has been turned over to the warehouse organization.

b) A review of the basis for the original requirements has been performed. This review verified that the requirements which differed between the Duke specification and the other utility's specification were related to a list of parts which had been identified in an attachment to the Duke specification. This list provided specific tests or inspections desired to be performed on certain parts.

c) A review of the process which is used to upgrade parts has been performed. This process, which has changed over time, has always consisted of the same basic steps which involved a comparison of part number and function for the parts in the spare diesel engine manual and the plant diesel engine manual. It also involved a QA review of the items removed and, where possible, physical verification of likeness of the items. Any additional testing or inspections recommended by the diesel engineer would then also be performed. In addition, a QA acceptance tag or number would be assigned to the item. Final QC verification would be performed by the QC

inspector during maintenance on the diesel engine in the plant. No parts could be used unless they had the QA acceptance tag or number. A similar process is used for other parts upgraded. Where necessary, additional tests, inspections, or documentation reviews are made to verify the part can perform the function specified and is suitable for use.

d) A review was conducted to determine if the original receipt requirements had been met and the impact if the requirements had not been met, on the parts which had been used from the spare diesel. For the parts requiring additional tests per the original receipt inspection requirements, all the requirements except one had been met either through the original manufacturer's tests or through oversight by the diesel engineers. The one exception involves the requirement for a magnetic particle test on the turbocharger rotor shaft, which was not performed. The requirement for the magnetic particle test of these shafts is considered added conservatism and not a typical test for them. Further justification for the acceptability of the turbochargers (including the shafts) can be made by the six-thousand plus hours of operation of the plant diesels without a turbocharger shaft failure. Other parts used from the spare diesel, not requiring special tests or inspections, were evaluated per the process described in c) above.

e) A review of the use of the fuel rack springs mentioned in the inspector's report was conducted to determine if the appropriate actions had been taken using the basic steps identified in c) above. QA inspectors witnessed the removal of the springs from the spare diesel. Documentation that the specific steps were taken, however, was not included with the NPP-315 forms. A comparison of the part numbers in both manuals has shown that the same part is used on both the spare diesel and the plant diesels. The springs also successfully performed their function when installed in the operating diesels.

f) A review of the upgrade process (NPP-315) was conducted with the QA receiving inspectors and Procurement Engineering. They were instructed to verify that all necessary documentation has been provided, all testing completed, or post installation testing requirements identified before authorizing a part for upgrade per NPP-315. Verification of all steps taken are to be included

with the 315 form. This applies to all parts processed per NPP-315.

g) A summary document for the requirements for use of the parts from the spare diesel engine has been provided to the QA receiving inspectors and will be maintained in the QA vault. QA receipt inspectors have been instructed to insure these requirements are met, as a minimum, before any parts are issued from the spare diesel. A copy of the spare diesel engine manual has been placed in the vault with all other documentation for the engine.

h) A review of the current revision of NPP-315 (Revision 2) was conducted to insure it clearly specified actions required for upgrade of parts. The current revision places additional controls in the process and clearly specifies the steps necessary to verify and document the upgrade of parts. This revision also requires direct Procurement Engineering involvement in order to upgrade a part. The upgrades identified by the NRC inspector were made prior to revisions of NPP-315, therefore, no additional changes are necessary to this procedure.

3. Corrective Action to be Taken to Avoid Future Violations

The corrective actions as described in Section 2. above are sufficient to prevent further violations.

4. Date of Full Compliance

Duke Power Company is now in full compliance.

CATAWBA NUCLEAR STATION
REPLY TO NOTICE OF VIOLATION
413, 414/97-03-02

Notice of Violation

Part 70.24(a)(3), of Title 10 of the Code of Federal Regulations, requires, in part, each licensee authorized to possess special nuclear material (SNM) in a quantity exceeding those identified, to maintain applicable emergency procedures and conduct drills to ensure personnel are withdrawn to an area of safety when a criticality alarm sounds in areas where SNM is handled, used or stored.

Contrary to the above, as of January 17, 1985, for Unit 1 and May 15, 1986, for Unit 2, the licensee never developed and maintained criticality emergency procedures or conducted emergency drills for areas where sufficient quantities of special nuclear material are handled, used or stored (new fuel unloading and storage areas). Furthermore, the licensee's initial exemptions from the requirements of 10 CFR 70.24(a)(contained as part of its original NRC Material License for possessing SNM) expired when the Catawba Unit 1 and 2 construction permits were converted to operating licenses in 1985 and 1986, respectively. At that time, the licensee failed to implement appropriate emergency procedures, or renew its exemptions. Since then, new fuel storage areas have been used to handle and store new fuel assemblies on a regular basis prior to each unit refueling outage.

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

1. **Reason for Violation**

Duke Power Company denies this violation.

Basis for Denial

The violation states that Catawba Nuclear Station never developed and maintained criticality emergency procedures or conducted emergency drills for areas where sufficient quantities of special nuclear material are handled, used or stored (new fuel unloading and storage areas). As discussed in more detail below, Duke Power Company believes this violation is inappropriate because criticality emergency procedures have been developed and maintained and emergency drills have been conducted in compliance with 10 CFR 70.24(a)(3). The requirements are met if Duke Power Company maintains procedures, conducts drills and demonstrates its ability to ensure personnel are withdrawn to an area of safety.

Duke's view is that it is not required to drill in every location special nuclear material may exist so long as it demonstrates through procedures and drills that it can ensure proper withdrawal of personnel in each area. Duke has done so through effective procedures and drills in fuel receiving and storage areas. The procedures and drills were adequate to ensure personnel safety in the new fuel unloading and storage areas. The new fuel storage area was specifically drilled in March, 1997.

Emergency Procedures

The Catawba Nuclear Station radiation monitor annuciator procedures provide the actions required by control room personnel should either the Unit 1 or Unit 2 New Fuel Storage Area Radiation Monitors alarm. The Unit 1 procedure (OP/1/B/6100/10Z) was approved on September 9, 1982 and the Unit 2 procedure was approved on March 26, 1986. These procedures provide control room personnel with guidance for the following actions should the new fuel receiving and storage area monitors alarm in the control room: (1) Evacuation of the new fuel receiving and storage area, if necessary, (2) Notification of Radiation Protection personnel to determine the source of the alarm.

These procedures have been maintained since the approval dates provided above to ensure that personnel in the new fuel receiving and storage area would be withdrawn to an area of safety and the group responsible for determining the

source of the alarm is identified as required by 10CFR70.24(a)(3).

Drills

Catawba Nuclear Station Emergency Preparedness has developed drills associated with both new and spent fuel accident scenarios to verify proper control room, fuel building occupant, Radiation Protection and Emergency Response Organization response. These drills satisfy the requirements of 10CFR70.24(a)(3) and are summarized as follows:

February 19, 1988

This drill included a Spent Fuel Accident in the Unit 2 Fuel Building which simulated spent fuel handling operations were in progress in the Unit 2 Fuel Building. The control room received an alarm on the Unit 2 Fuel Building Refueling Bridge radiation monitor. The control room used the annuciator response procedures described above to evacuate the Unit 2 Fuel Building and to contact Radiation Protection for determination of the source of the alarm. This drill demonstrated the ability to withdraw personnel to an area of safety and the designation of personnel to determine the cause of the alarm as required by 10CFR70.24(a)(3).

May 3, 1993

This drill included a New Fuel Accident in the Unit 1 Fuel Building which simulated new fuel handling operations were in progress in the Unit 1 Fuel Building. The fuel handling crew was accompanied by one Radiation Protection technician who provided continuous job coverage. The control room received a report of a dropped new fuel assembly with one broken tube and fuel pellets spilled on the floor. The control room was also told that a fuel handling operator had been struck by the dropped assembly and had been injured. The control room evacuated the Unit 2 Fuel Building, except for the injured person and the Radiation Protection technician. The Medical Emergency Response Team was dispatched to the Unit 2 Fuel Building to care for the injured operator. This drill demonstrated the ability to withdraw personnel to an area of safety and the designation of personnel to determine the cause of the alarm as required by 10CFR70.24(a)(3).

October 2, 1996

This drill included a Spent Fuel Accident in the Unit 1 Fuel Building which simulated spent fuel handling operations were in progress in the Unit 1 Fuel Building. The control room

received alarms on the radiation monitors located in the New and Spent Fuel Storage locations in the Unit 1 Fuel Building. The control room used the annuciator response procedures previously described to evacuate the Unit 1 Fuel Building and contact Radiation Protection personnel to determine the cause for the alarms. The Radiation Protection personnel determined the cause of the alarm to be a damaged spent fuel assembly. This drill demonstrated the ability to withdraw personnel to an area of safety and the designation of personnel to determine the cause of the alarm as required by 10CFR70.24(a)(3).

March 18, 1997
This drill included the receipt of a Unit 2 New Fuel Storage Area radiation alarm in the control room which simulated new fuel handling operations were in progress. The control room received an alarm on one of the Unit 2 New Fuel Storage Area radiation monitors. The control room used the annuciator response procedures described above to evacuate the Unit 2 Fuel Building and contact Radiation Protection personnel to determine the cause for the alarm. The Radiation Protection personnel determined that the readings in the Unit 2 New Fuel Storage Area was at background level. The Unit 2 New Fuel radiation monitor was determined to be inoperable. This drill demonstrated the ability to withdraw personnel to an area of safety and the designation of personnel to determine the cause of the alarm as required by 10CFR70.24(a)(3).

The emergency procedures and drills described above demonstrate compliance with the requirements of 10CFR70.24(a)(3).

2. Corrective Actions Taken and Results Achieved

The review of this violation did not identify the need for any corrective actions.

3. Corrective Action to be Taken to Avoid Future Violations

The review of this violation did not identify the need for any corrective actions.

4. Date of Full Compliance

Duke Power Company is now in full compliance.