

DUKE POWER COMPANY

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VICE PRESIDENT
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April 8, 1983

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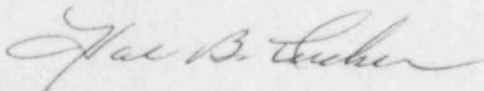
Mr. James P. O'Reilly, Regional Administrator
U. S. Nuclear Regulatory Commission
Region II
101 Marietta Street, NW, Suite 2900
Atlanta, Georgia 30303

Re: Catawba Nuclear Station
Units 1 and 2
Docket Nos. 50-413 and 50-414

Dear Mr. O'Reilly:

Pursuant to 10 CFR 50.55e, please find attached Significant Deficiency Report
SD 413-414/83-03.

Very truly yours,



Hal B. Tucker

RWO/php
Attachment

cc: Director
Office of Inspection and Enforcement
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Mr. P. K. Van Doorn
NRC Resident Inspector
Catawba Nuclear Station

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Duke Power Company
Catawba Nuclear Station

Report Number: SD 413-414/83-03

Report Date: April 8, 1983

Facility: Catawba Nuclear Station, Units 1 & 2

Identification of Deficiency:

Present control schemes for modulating active valves may not allow the valves to reach their fail-safe mode in a harsh environment and/or seismic event concurrent with a LOCA. This deficiency was identified February 15, 1983.

Initial Report:

On March 9, 1983, A Ignatonis, NRC Region II, Atlanta, Georgia was notified of the subject deficiency by W. O. Henry, D. L. Canup and M. L. Childers of Duke Power Company, Charlotte, North Carolina 28242.

Component and/or Supplier:

This deficiency is a result of Duke Power Company's control scheme for air actuated control valves in which solenoid valves and valve actuators are qualified but the valve positioners are not.

Description of Deficiency:

Present control schemes for modulating active valves may not allow the valves to reach their fail-safe mode in a harsh environment and/or seismic event concurrent with a LOCA. With the present configuration, non-qualified positioners must allow air to vent from valve actuators for the valves to reach their fail-safe position. This is due to the safety solenoid valves being located between the controllers and positioners (positioners are between Class 1E solenoid valves and valve actuators). See Attachment. Therefore, the potential exists for these control valves to not reach their fail-safe positions.

Analysis of Safety Implications:

Failure of these control valves to reach their fail-safe mode could result in inadequate emergency core cooling capabilities by means of:

- 1) Inadequate Nuclear Service Water flow to Component Cooling heat exchangers.
- 2) Inadequate Component Cooling flow and/or Residual Heat Removal flow through Residual Heat Removal heat exchangers.

Corrective Action:

Duke will relocate Class 1E solenoid valves between valve actuators and valve positioners. This will eliminate dependency on the positioner for venting the valve actuator to the fail-safe position and resolve this deficiency. This corrective action will be completed by September 15, 1983.

ATTACHMENT

SCHEMATIC OF MODULATING ACTIVE VALVE CONTROLS

