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84 OCT 5 P3: 08

September 26, 1984

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

Re: Oconee Nuclear Station
Docket Nos. 50-269, -270, -287
IE Bulletin 84-03

Dear Sir:

In response to IE Bulletin 84-03 dated August 24, 1984 concerning recent failure of refueling cavity water seal and rapid draining of the refueling cavity at the Haddam Neck Plant, please find attached a report for Oconee Nuclear Station pursuant to Action Item 2 of the bulletin.

I declare under penalty of perjury that the information contained herein is correct to the best of my knowledge as executed on September 26, 1984.

Very truly yours,

Hal B. Tucker

Hal B. Tucker

MAH:slb

Attachment

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

Mr. J. C. Bryant
NRC Resident Inspector
Oconee Nuclear Station

Ms. Helen Nicolaras
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

IE11

DUKE POWER COMPANY
OCONEE NUCLEAR STATION

Response
to
IE Bulletin 84-03

Action Item 2

Evaluate the potential for and consequences of a refueling cavity water seal failure and provide a summary report of these actions.

Such evaluations should include consideration of: gross seal failure; maximum leak rate due to failure of active componenets such as inflated seals; makeup capacity; time to cladding damage without operator action; potential effect on stored fuel and fuel in transfer; and emergency operating procedures.

Response 2

Considering the difference in seal plate and gasket configuration between that at Oconee (Fig. 1) and that described in IEB 84-03, a gross seal failure of the magnitude experienced at Haddam Neck is not a credible event at Oconee. Correct alignment of the seal plate is assured by 4 alignment studs and 72 threaded studs. Water pressure above the seal plate, gasket sealant, the 1/8 inch recessed edges, and a final torque value of 150 ft.-lb. per nut ensure gasket stability.

A leak rate of less than 50 gpm would be expected from the Refueling Canal even in the unlikely event of a totally dislodged inner seal. Instrumentation and procedures currently in place to detect and respond to unexplained water loss in the Spent Fuel Pool and Refueling Canal would ensure that 50 gpm leak rate would be detected and mitigated.

Additional information is as follows:

1) A leak rate of 50 gpm translates into a time span of approximately 71 hours before a fuel assembly located in the Fuel Handling Bridge Mast would become uncovered assuming no operator action.

2) An additional minimum of 82,000 gallons (71,800 gallons from the Reactor Coolant Bleed Holdup Tank, 7600 gallons from the Concentrated Boric Acid Storage Tank, 2600 gallons from the Letdown Storage Tank) of makeup water is available which can be supplied at 50 gpm and would extend the time to initial fuel assembly uncovering by approximately 27 hours (98 hours total).

3) With normal operator action, a 50 gpm leak would be detected and any fuel in transfer return to either the Spent Fuel Pool or the Reactor Vessel within approximately one to two hours.

It is concluded from the above that more than adequate time is available for activation of Reactor Building sumps, isolation of the Spent Fuel Pool, positioning of any fuel assembly in transfer either in the Reactor Vessel or Spent Fuel Pool, and dewatering the Reactor Building Refueling Canal for locating and repairing any leak that may develop, however remote the potential for leakage may be.

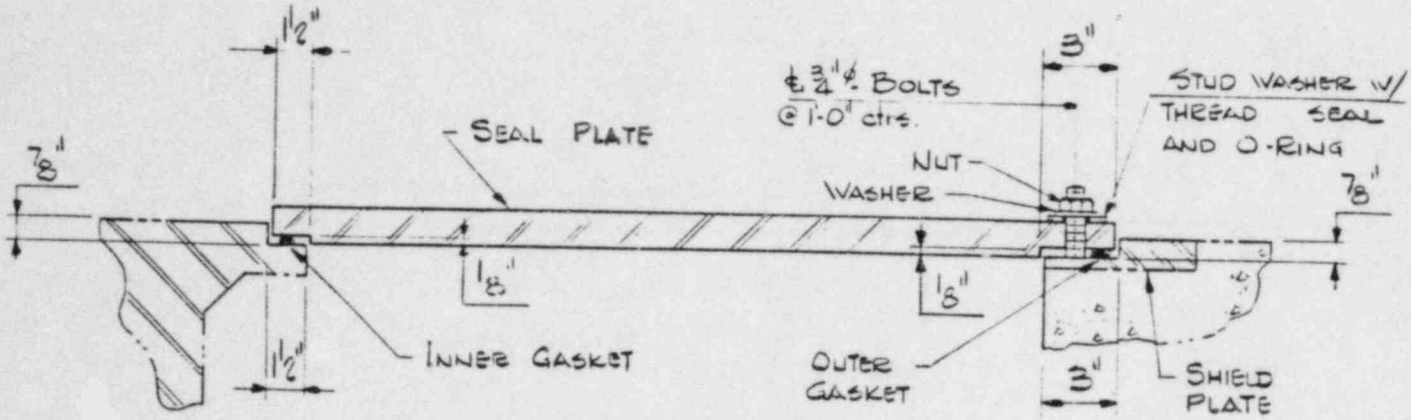

FIGURE #1

SCALE : 1½" = 1'-0"