

Reg. Files



UNITED STATES
ATOMIC ENERGY COMMISSION
DIVISION OF COMPLIANCE
REGION II - SUITE 818
230 PEACHTREE STREET, NORTHWEST
ATLANTA, GEORGIA 30303

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March 1, 1971

J. B. Henderson, Chief, Reactor Construction Branch
Division of Compliance, Headquarters

INQUIRY MEMORANDUM - DUKE POWER COMPANY (OCOONEE 1), LICENSE NO. CRRR-33,
DOCKET NO. 50-269

On February 25, 1971, during a site inspection, C. E. Murphy and C. M. Upright, the Region II inspectors, were advised by the subject licensee that a piece of polyethylene had been trapped between the mating flanges of the reactor core support shield and the core barrel. Preliminary information obtained from H. L. Hunnicutt, Principal Field Engineer, Duke Power Company, is as follows (preliminary information regarding this matter advanced to you by telecon on February 27, 1971):

The core support shield lower flange mates to the upper flange of the core barrel (Figure 3-46 of the FSAR). The two assemblies are bolted together with 120 bolts spaced on 3-11/16-inch centers. During the assembly of these components in the vessel, the licensee had draped 4 mil polyethylene over the walls to afford protection and to maintain the established clean conditions of the vessel and internals.

After all bolts had been installed and their retaining clips had been tack welded to them, it was found that one section of polyethylene six feet long had been trapped between the mating surfaces.

The licensee attempted to pull the trapped material out and succeeded in removing a strip approximately three feet long. The width of this strip was approximately 1/8 inch. Attempts to remove the remaining piece were unsuccessful. The licensee estimates that the remaining strip is also approximately 1/8 to 3/16-inch wide and 3-feet long. Since the distance from the bolt holes to the edge of the flange is 5/8 inch, the licensee is of the opinion that this would represent the maximum possible width of the strip. Two plies of the material exist for a distance of about six inches at one end of the strip. The licensee has made tests of the polyethylene sheet and found that when compressed to the degree calculated to be approximately represented by the torqued bolts, that the thickness is reduced from 4 mils to 1 mil. The licensee has postulated that the polyethylene will melt during operation and does not consider that the relaxation of the bolts will be a problem. The study was not

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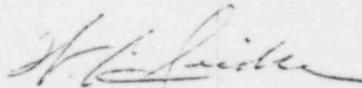
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complete as yet, however, and Hunnicutt was not able to state what would be the effects of the material in the coolant system. Hunnicutt advised the inspector by telephone on February 27, 1971, that chemical analyses would be made of the polyethylene to determine whether halogens were present. The licensee plans to issue an in-house report on the incident.

When the inspector attempted to examine the installation, he found that the portable steel ladders used during the installation had been removed and a rope ladder with wood rungs had been installed. In climbing on this ladder, the inspector observed wood splinters falling from the rungs. Examination of the rungs indicated that numerous splinters could have been dislodged from the rungs and fallen into the internals. When the inspector pointed out that the use of this type ladder compromised the vessel cleanliness, the ladder was removed immediately. Because of the installation of the vessel internals, however, Hunnicutt could not advise the inspector of a method that could be used to assure that the splinters could be located and removed.

Hunnicutt advised the inspector that the licensee would advise Region II of the results of any studies or analyses that were made regarding these events.

We will also followup on these items during the next scheduled inspection.



W. C. Seidle
Senior Reactor Inspector

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