

DUKE POWER COMPANY

POWER BUILDING

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SENIOR VICE PRESIDENT
PRODUCTION AND TRANSMISSION

P. O. Box 2178

October 26, 1973

Mr. Angelo Giambusso
Deputy Director for Reactor Projects
Directorate of Licensing
Office of Regulation
U. S. Atomic Energy Commission
Washington, D. C. 20545



Re: Oconee Nuclear Station
Docket Nos. 50-269, -270, and -287

Dear Mr. Giambusso:

Pursuant to Technical Specifications 6.2 and 1.9(b) attached to Operating Licenses DPR-38 and DPR-47, we are reporting as an unusual event a situation which exists at Oconee Nuclear Station. The unusual event concerns the fact that liquid and gas waste management systems are processing larger volumes of fluids than were estimated in Chapter II of the Final Safety Analysis Report.

The basic waste management problems are briefly summarized as follows:

1. Due to mixing of volumes of water containing no radioactivity from miscellaneous sources with the small quantities of low level waste water, composite volumes of liquid to be treated as radioactive waste are greater than that identified in Table II-1a of the Final Safety Analysis Report.
2. Volumes of gaseous waste, due to the nitrogen overblanket on certain tanks, are substantially higher than those predicted in Table II-1a of the Final Safety Analysis Report.
3. Boron and other chemicals sometimes present in the liquid waste complicate the ability to discharge those wastes that are otherwise within Technical Specification limits.
4. The existing waste management systems are not operating at their full expected capacities.

In order to assess the extent of the waste handling problems and determine solutions, a waste management task force was appointed consisting of engineering, production, and station personnel. The task force has made recommendations concerning the liquid waste handling, and Duke is pro-

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October 26, 1973

ceeding concurrently with efforts in the four following areas:

1. Provide Interim Waste Management Facilities

We are proceeding to design, procure and install interim waste management facilities to give us reasonable assurance that Ocone 3 can be operated satisfactorily. The interim facilities may include a 15 gpm evaporator, a demineralizer tank and associated piping. The estimated date for completion of the interim facilities is May 1, 1974. Based on this schedule and the fact that these are interim facilities, the design of the system may not be in accordance with all design criteria and code requirements which would be provided in a permanent facility. However, piping, valves, and associated components will be procured and installed consistent with the power piping code ANSI B31.1-1973.

2. Provide Additional Permanent Waste Management Facilities

Preliminary plans indicate that two evaporators of 25 gpm capacity each, a gas stripper, two demineralizers, a drumming station, tankage, and associated piping and controls may be necessary to completely solve the waste management problems and give us adequate margins to cope with all conditions. A separate building will be required to house these facilities. This facility would be designed in accordance with criteria consistent with that for the existing waste management system. The estimated date for completion is January 1, 1976.

3. Improve Operation of the Existing System

Studies and tests will be continuing in order to improve the operation of the existing installed systems. We estimate that a majority of this work can be completed by January 1, 1974.

4. Separation of Non-Radioactive Waste Water from Contaminated Areas

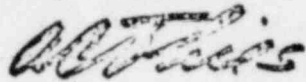
Studies will continue to attempt to isolate non-radioactive waste from contaminated waste.

While the waste management problems at the station caused by handling larger volumes of fluids have been significant at times, improvement in the operation of the waste management system has been accomplished. For instance, low level liquid waste volumes were being generated at rates as high as 14,000 gallons per day during August and September of 1973. Due to successful efforts to decrease secondary side leakage, liquid wastes are currently being generated at the rate of 7,000 gallons per day for Units 1 and 2 (7,000 gallons per day is equivalent to approximately 5 gallons per minute).

Mr. Angelo Giambusso
Page 3
October 26, 1973

It should be emphasized that although unexpected quantities of liquid and gaseous wastes have been collected and processed, the radioactive releases have been low and well within the limits of Technical Specifications 3.9 and 3.10. We will advise you of our progress in solving this problem.

Very truly yours,



A. C. Thies

ACT:vr

cc: Mr. Norman C. Moseley

PROPOSED REPLY TO CONGRESSIONAL
LETTER ON CENTRIFUGE ACCIDENT

The accident at Oakridge Tennessee which your constituent asked about, occurred, at an AEC facility rather than a privately owned, AEC licensed facility under the jurisdiction of the Regulatory side of the AEC. We have enclosed the Commission's public announcement on the incident which involved the classified development program on the gas centrifuge method of enriching uranium. No nuclear reactor was involved. The small amount of uranium hexafluoride released was essentially natural uranium and therefore, a very low level of radioactivity. Nobody was hurt. Full details of the incident could not be made public at the time because of the classified nature of the program. But a decision was eventually made to issue a public announcement in view of the industrial interest in the gas centrifuge development program.

The gas centrifuge process has been under development for a number of years and it is a potential competitor to the process currently being used for the separation of uranium isotopes. The gas centrifuge unit that failed was undergoing test operations in a facility at Oakridge. One of the purposes of this test facility is to screen the design for defects before the unit undergoes further investigations. Design modifications will be made to eliminate future occurrence of this type. The Commission appointed a special AEC team to investigate the incident for the purpose of recommending design changes as appropriate.

Taken by dictation from Germantown to RCPaulus

DAS 11-16-73

Public Announcement No.
R-461

~~Baranowski original~~

Above note prepared by PMM
(concurred in by Baranowski)
and transmitted by Phil Kauf, OIS
on 11-16-73

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preceding