

USNRC REGION II
ATLANTA, GEORGIA
DUKE POWER COMPANY

POWER BUILDING
422 SOUTH CHURCH STREET, CHARLOTTE, N. C. 28242

51 SEP 8 P12:34

WILLIAM O. PARKER, JR.
VICE PRESIDENT
STEAM PRODUCTION

TELEPHONE: AREA 704
373-4083

September 2, 1981

Mr. James P. O'Reilly, Director
U. S. Nuclear Regulatory Commission
Region II
101 Marietta Street, Suite 3100
Atlanta, Georgia 30303

IE HQ FILE COPY



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

Dear Mr. O'Reilly:

In accordance with the requirements of Oconee Nuclear Station Technical Specification 6.6.2.2.d, this report is submitted describing a condition in which measured levels of radioactivity exceeded the control level by more than 50 times at Location 000.4 and 10 times at Location 005.2.

On August 27, 1981, analytical results of bottom sediment samples collected on August 3, 1981 were reviewed. A summary of pertinent analytical results is given below:

<u>Sample Location</u>	<u>Activity (pCi/kg-dry)</u>		
	<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>
000.5 Lake Keowee (Control)	<2.95 E1	<2.45 E1	4.70 E1
000.4 Near Liquid Effluent Release Point-Lake Hartwell	-	1.97 E3	6.97 E3
005.2 Hwy. 27 Bridge-Lake Hartwell	4.50 E2	5.88 E2	3.17 E3

The expected buildup of activity in the bottom sediment near the liquid effluent release point (Location 000.4) was estimated from NRC Regulatory Guide 1.109, page 1.109-14. The following table summarizes the observed and expected concentrations using the liquid radioactive effluent data for the first six months of 1981:

<u>Radionuclide</u>	<u>Measured Concentration Location 000.4 (pCi/kg)</u>	<u>Expected Concentration Location 000.4 (pCi/kg)</u>
Co-60	2.70 E2	2.37 E3
Cs-134	1.97 E3	9.98 E3
Cs-137	6.97 E3	5.19 E4

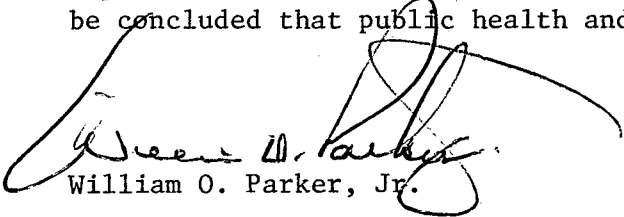
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We would expect the radionuclides to be highest at Location 000.4 with each location sampled downstream showing lower concentrations. The measured concentrations of Cesium at Location 005.2 were in fact significantly lower than the concentrations at Location 000.4. The activities measured were also significantly lower than the expected activities. The observed concentration of Cobalt 60 at Location 005.2 was slightly higher than the observed concentration at Location 000.4 but well within the expected concentrations.

Since the observed concentrations for all three nuclides were well below the expected concentrations of the activities calculated by the model, it may be concluded that public health and safety were not affected.



William O. Parker, Jr.

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