

# DUKE POWER COMPANY

POWER BUILDING

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WILLIAM O. PARKER, JR.  
VICE PRESIDENT  
ST. AM PRODUCTION

TELEPHONE AREA 704  
373-4083

October 18, 1977

Mr. J. P. O'Reilly, Director  
U. S. Nuclear Regulatory Commission  
Suite 1217  
230 Peachtree Street, Northwest  
Atlanta, Georgia 30303

Re: RII:WWP  
50-269/77-13  
50-270/77-13  
50-287/77-13

Dear Mr. O'Reilly:

My letter dated August 23, 1977 responded to an apparent item of non-compliance concerning analytical sensitivities realized in the environmental radiological monitoring program. The following information is provided to supplement that response and to further demonstrate the adequacy of this program at Oconee Nuclear Station.

A review has been conducted of all Oconee Nuclear Station environmental monitoring data for 1976 with particular emphasis on the water supply results reported in the 1976 Annual Operating Report. A total of nine (9) instances in which the sensitivities of Technical Specification 4.11 were not rigorously met for water supply samples were identified. These represent only 3 percent of the total water supply results given in the annual report and are tabulated below:

<u>Sample</u>	<u>Collection Dates</u>	<u>Reported Values</u>	<u>Object Sensitivity</u>
1. 006.1	6/1-22/76	Cs-137, <30.62	<15
2. 006.1	8/3-31/76	Co-60, <16.3	<15
3. 006.1	9/8-28/76	Zn-65, <33.6	<30
		Mn-54, <16.6	<15
4. 006.1	11/2-30/76	Co-60, <25.4	<15
		Zn-65, <33.6	<30
		Mn-54, <18.1	<15
5. 006.1	12/7-29/76	Cs-137, <15.7	<15
		Mn-54, <15.1	<15

NOTE: All water supply values given in the annual report are for FINISHED WATER except for I-131 values dated 7/76 or later (which are RAW water values).

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It is considered, therefore, that the data as reported represent compliance with the technical specification criteria for typical sensitivities. In the first sample above, however, the CS-137 result was incorrectly coded. The value on the original report sheet was <6 (rounded from <5.8), well within the required sensitivity limit. The remainder of the sample values were correctly coded from the original report sheets and were properly determined by computer analysis. However, the simultaneous equations which the computer program used for these samples included the proportional statistical variation of each component of the simultaneous equations. This method generally results in a higher "less than" value than would be calculated if a "less than" value were rigorously determined by summing the background and sample counts in the region of interest and performing a standard sensitivity calculation. Consequently, the raw spectra of the above samples were reexamined and new "less than" values were calculated by the more rigorous method with the following results.

<u>Sample</u>	<u>Collection Dates</u>	<u>New Values</u>	<u>Object Sensitivity</u>
1. 006.1	6/1-22/76	CS-137, < 6*	<15
2. 006.1	8/3-31/76	Co-60, < 7	<15
3. 006.1	9/8-28/76	Zn-65, <15	<30
		Mn-54, < 8	<15
4. 006.1	11/2-30/76	Co-60, <11	<15
		Zn-65, <11	<30
		Mn-54, < 9	<15
5. 006.1	12/7-29/76	Cs-137, < 4	<15
		Mn-54, < 5	<15

\*As stated on original report sheet.

In other words, due to the choice to include all possible computational statistical factors created by computer reduction of data, "less than" values were reported in a small percentage of instances which conservatively over estimated the actual "less than" values. Actual sensitivities were within the goals of the specification.

In the future, such reviews of analytical results will continue in order to determine, in those limited instances when the typical analytical sensitivities are not met, whether or not individual results and/or the general trend of sensitivity results are unacceptable.

My August 23, 1977 letter also stated that a commitment to provide definitive headings on water supply results in the annual environmental report did not appear in our documentation associated in OIE Inspection Report 50-269, -270, -287/76-2. This statement was in error as the com-

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mitment is identified in that inspection report. It should be noted that the data in question has been submitted voluntarily and is not required by the Oconee Technical Specifications. In the future, should such data be included, it will have appropriate headings.

Very truly yours,

*William O. Parker Jr.*  
William O. Parker, Jr. *by WAT*

MST:vr