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GRACE, J. N. Region 2, Office of Director

SUBJECT: Provides summary of 860528 analytical results of broadleaf vegetation samples taken on 860520 & 860604 of tests taken on 860527. I-131 not routinely found on broadleaf vegetation samples.

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July 2, 1986

Dr. J. Nelson Grace, Regional Administrator
U.S. Nuclear Regulatory Commission - Region II
101 Marietta Street, NW, Suite 2900
Atlanta, Ga. 30323

Subject: Oconee Nuclear Station
Docket Nos. 50-269, -270, -287
Anomalous Radiological Environmental Sample Report

Dear Sir:

By letter dated June 24, 1986 Duke provided a report describing conditions in which measured levels of radioactivity exceeded the reporting levels in Table 4.11-3 of the Radiological Effluent Technical Specifications. Due to typographical error, please find attached a revision to the subject report.

On May 28, 1986, analytical results of broadleaf vegetation samples taken on May 20, 1986, were reviewed. Two special samples, in addition to the required sampling schedule, were collected in order to monitor any radioactivity increases due to the Chernobyl accident. Both samples showed I-131 activity in excess of the reporting level of 100 pCi/kg-wet.

On June 4, 1986, analytical results of the monthly broadleaf vegetation samples taken on May 27, 1986, were reviewed. These samples also indicated I-131 above the reporting level. The results from both sets of samples are summarized below:

Sample Location	Sample Date	I-131 Activity (pCi/kg-Wet)
028 (Site Boundary)	5/20/86	121.0
	5/27/86	162.8
060 (Greenville Water Intake)	5/27/86	146.0
073 (Tamassee School-Control Location)	5/20/86	103.0
	5/27/86	148.2

This activity is considered to be due to the Chernobyl accident based on the following:

- o I-131 is routinely not found in broadleaf vegetation samples. When I-131 has been identified in broadleaf samples, it has not exceeded one-half of the levels present in these samples.

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- o Reviews of gaseous effluent data does not indicate an increase in I-131.
- o The activity is distributed fairly evenly among the sample locations, including the control location.

The dose model of Regulatory Guide 1.109 was used to calculate the dose which would result from consumption of leafy vegetables. The dose to a child's thyroid was the most restrictive. A dose of 24.21 mrem/yr. was calculated assuming the maximum observed concentration (162.8 pCi/kg-wet) was present and leafy vegetables were available the entire year.

On June 6, 1986, analytical results of milk samples taken on May 20, 1986, were reviewed. The sample from location 069 (Powell residence, 4.5 miles WNW) showed I-131 activity in excess of the reporting level of 3 pCi/ . The other two bi-weekly milk samples also indicated the presence of I-131; however, the activities were below the reporting level. The results of the samples are summarized below:

Sample Location	Sample Date	I-131 Activity (pCi/kg-Wet)
069 (Powell Residence)	5/20/86	3.23
066 (Anderson)	5/20/86	4.3E-1
071 (Clemson Dairy)	5/20/86	6.49E-1

This activity is considered to be due to the Chernobyl accident based on the following:

- o Broadleaf vegetation samples pulled 5/20/86 and 5/27/86 showed above reporting levels of I-131 including the control location. This activity was attributed to Chernobyl.
- o Review of gaseous effluent data does not indicate an increase in I-131.

The dose model of Regulatory Guide 1.109 was used to calculate the dose which would result from consumption of milk. The dose to a child's thyroid was the most restrictive. A dose of 6.10 mrem/yr was calculated for the maximum exposed individual.

Very truly yours,

Hal B. Tucker

PJN/41/jgm