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Voss A. Moore, Assistant Director for Light Water Reactors Group 2, L

RAB POSITIONS - TECHNICAL SPECIFICATIONS - OCONEE UNITS 1, 2, & 3

Plant name: Oconee Units 1, 2 & 3
Licensing stage: OL
Docket number: 50-269, 270, 289
Responsible branch: LWR 2-3
Project Manager: I. Peltier
Date request received by RA-L: 4/30/74
Requested completion date: ASAP
Description of response: Comments on proposed technical specifications
Review status: Complete

The proposed technical specifications for Oconee Units 1, 2 & 3 have been reviewed by RAB. Final technical specification positions are enclosed. The bulk of these positions pertain to updating the radiological environmental monitoring program, which under the old format is covered in Appendix A to the license. The principal points of these positions have been discussed in meetings with the applicant on several occasions in the last six months.

These positions were prepared by J. Graf, RAB.

Original signed by
H. R. Denton

Harold R. Denton, Assistant Director
for Site Safety
Directorate of Licensing

Enclosure:
As stated

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memo

OFFICE	L:RA	L:RA	L:SS			
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DATE	5/3/74	5/3/74	5/7/74			

Form AEC-318 (Rev. 9-53) AECM 0240 GPO C43 16 81455-1 520-284

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RADIOLOGICAL ASSESSMENT BRANCH
TECHNICAL SPECIFICATION POSITIONS
OCONEE UNITS 1, 2, & 3

1) Replace specification 4.11.2 with the following:

A semiannual census of milch animals shall be conducted to determine their location and number with respect to the site. The census shall be conducted under the following circumstances:

1. Within a 1 mile radius from the plant site or the 15 mrem/yr isodose line--whichever is larger: A door to door or equivalent counting technique shall be utilized.*

2. Within 5 miles: Enumeration by using referenced information from such as county agricultural agents or other reliable sources.

3. These locations will be incorporated into the milk monitoring program as soon as practicable and in such a manner as to ensure that the locations selected for sampling are adequate to show that the provisions of Specification 3.10.1 are satisfied. For sample locations within the 15 mrem/yr isodose line, sampling shall be weekly during the season that animals are on pasture.

2) Add the following specifications:

4.11.3 During the seasons that animals producing milk** for human consumption are on pasture, samples of fresh milk will be obtained from these animals at locations and frequencies shown in Table 4.11-1, and analyzed for their radioiodine content, calculated as iodine-131. Analysis will be carried out within eight days (one I-131 half-life) of sampling. Suitable analytical procedures will be used to determine the radioiodine concentration to a sensitivity of 0.5 picocuries per liter of milk at the time of sampling. For activity levels at or above 0.5 picocuries per liter the overall error (one sigma confidence level) of the analysis will be within ± 25%. Results will be reported, with associated calculated error, as picocuries of I-131 per liter of milk at the time of sampling.

4.11.4 Reports shall be submitted in accordance with the requirements of section 6.6 Plant Reporting Requirements.

4.11.5 Deviations are permitted from the required sampling schedule if specimens are unavailable due to hazardous conditions or to malfunction of automatic sampling equipment. If the latter, corrective actions shall be completed prior to the end of the next sampling period. All deviations from the sampling schedule shall be described in the semiannual reports.

3) Add the following section between Specification and Bases in Section 4.11:

Reporting Requirements

Reporting requirements for environmental monitoring are given in Section 6.6 1.3.g(6). These require notification of the AEC within one week if individual milk samples show I-131 concentrations in excess of 10 picocuries per liter or greater or if any environmental medium, other than those associated with gaseous radioiodine releases, show a measured level of radioactivity in excess of ten times the control station value. Likewise, notification of the AEC is required within 30 days if measured values show levels of radioactivity in excess of 4.8 picocuries of I-131 per liter of milk or 4 times the control station value.

4) Add the following sentence in the Bases:

A concentration of 2.4 picocuries per liter of milk will result in a dose to the thyroid of an infant (2 gram thyroid) of 15 mrem per year, based upon the consumption of one liter per day of fresh milk for the year.

5) The following deficiencies are noted in Tables 4.11-1 and 4.11-2:

The applicant should incorporate these samples into the program or provide the basis for a conclusion that such sampling is impossible or inappropriate.

a) Soil sampling has been omitted. Soil sampling should be included as follows:

i - Type Samples - soil
ii - Schedule - once per 3 years
iii - Analysis - Gamma Analysis, Sr-90 on collection.

b) Meat and poultry sampling has been omitted. Meat and poultry sampling should be included as follows:

i - Type Samples - 1 sample or more of meat, poultry and eggs from animals fed on crops grown within 10 miles of the facility at the prevailing downwind direction or where drinking water is supplied from a downstream source.

1 sample from major game species in areas where these provide an important source of dietary protein.

ii - Schedule - Semiannually
iii - Analysis - Gamma Analysis on edible portions.

c) The control sample location has not been specified for milk. One sample from milking animals at a control location (10-20 miles distant and in the least prevalent wind direction) should be included.

d) Ground water samples should be analyzed quarterly by gamma analysis and analyzed for tritium.

6) The attached table (Attachment #1) entitled, "Environmental Monitoring Program Report" should be incorporated into section 6.6.1 Routine Reports.

7) The four reporting requirements listed below should be incorporated into section 6.6.2 Non-Routine Reports.

Reporting Requirements

1. If individual milk samples show I-131 concentrations of 10 picocuries per liter or greater, a plan shall be submitted within one week advising the AEC of the proposed action to ensure the plant related annual doses will be within the design objective of 15 mrem/yr to the thyroid of any individual.

2. If milk samples collected over a calendar quarter show average concentrations of 4.8 picocuries per liter or greater, a plan shall be submitted within 30 days advising the AEC of the proposed action to ensure the plant related annual doses will be within the design objective of 15 mrem/yr to the thyroid of any individual.

3. If, during any six-month report period, a measured level of radioactivity in any environmental medium other than those associated with gaseous radioiodine releases exceeds ten times the control station value, a written notification will be submitted within one week advising the AEC of this condition. This notification should include an evaluation of any release conditions, environmental factors, or other aspects necessary to explain the anomalous result.

4. If, during any six-month report period, a measured level of radioactivity in any environmental medium other than those associated with gaseous radioiodine releases exceeds four times the control station value, a written notification will be submitted within 30 days advising the AEC of this condition. This notification should include an evaluation of any release conditions, environmental factors, or other aspects necessary to explain the anomalous result.

8) In section 6.6.1.3, "Semiannual Operating Report", add a subsection for reporting occupational personnel radiation exposure according to the format given in attachment #2.

ATTACHMENT #1

ENVIRONMENTAL MONITORING PROGRAM REPORT

Facility _____ Docket No. _____

A. Sample Results

Medium/Sample	Location[1]	Average Quarterly Results[2] (specify radionuclide or entity) Quarter _____	Quarter _____
AIRBORNE			
Particulate			
1)			
2)			
Iodine			
1)			
2)			
Soil			
1)			
2)			
BIOTA			
1)			
2)			
WATERBORNE			
Surface			
1)			
2)			
Ground			

[redacted] (Continued)

Drinking

1)
2)

AQUATIC

Sediment

1)
2)

Benthic Organisms

1)
2)

Plants

1)
2)

INGESTION

Milk

1)
2)

Feedstuffs and Forage

1)
2)

Fish and Shellfish

1)
2)

Fruits and Vegetables

Meat and Poultry

1)
2)

OTHER

1/ Specify location and its distance and direction from the facility, and indicate which is used for background.

2/ Use the following units; direct radiation, mrem/quarter; particulate pCi/m^3, iodine, water and milk pCi/l; precipitation, nCi/m^2; sediment, and vegetation, pCi/gm dry.

B. Evaluation

(Include a summary evaluation of the results from the monitoring program)

ATTACHMENT #2

Occupational Personnel Radiation Exposure

a) The information required by 10 CFR 20.407 shall be provided in the semi annual operating report submitted within 60 days after January 1. In addition this report shall include a tabulation of the following information:

Job Function	Number of Personnel		Man-Rem	
	Temporary	Permanent	Temporary	Permanent
Reactor Operations & Surveillance				
Routine Maintenance				
Special Maintenance				
Waste Processing				
Refueling				
TOTAL	*	*		
Grand Total				

* Represents total number of personnel monitored, regardless of the job function.

This report shall also identify, in general terms, the cause(s) of individual exposures exceeding 3 rem for the year. The report should also include a brief description of any extraordinary circumstances which tended to increase overall personnel exposure.

b) In the report submitted within 60 days after July 1, provide the information required by 10 CFR 20.407 with the exception that the reporting need not exceed 6 rem (special reports, 10 CFR 20.405, are then required).