

UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION II  
230 PEACHTREE STREET, N. W. SUITE 818  
ATLANTA, GEORGIA 30303

IE Inspection Report Nos. 50-269, 50-270 and 50-287/75-3

Licensee: Duke Power Company  
Power Building  
422 South Church Street  
Charlotte, North Carolina 28201

Facility Name: Oconee Units 1, 2 and 3  
Docket No.: 50-269, 50-270 and 50-287  
License No.: DPR-38, 47 and 55  
Category: C, B2 and B2

Location: Seneca, South Carolina

Type of License: B&W, PWR, 2568, Mw(t)

Type of Inspection: Routine, Unannounced

Dates of Inspection: February 19-21 and 25-28, 1975

Dates of Previc . Inspection: February 18-21, 1975

Inspector-in-Charge: G. R. Jenkins, Radiation Specialist  
Radiological and Environmental Protection  
Branch (February 25-28, 1975)

Accompanying Inspectors: W. L. Britz, Radiation Specialist  
Radiological and Environmental Protection Branch

J. W. Hufham, Radiation Specialist  
Radiological and Environmental Protection Branch  
(February 19-21, 1975)

Principal Inspector: T. N. Epps 3-11-75  
T. N. Epps, Reactor Inspector Date  
Facilities Operations Branch

Reviewed by: F. J. Long 3/19/75  
F. J. Long, Chief Date  
Facilities Operations Branch



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SUMMARY OF FINDINGS

I. Enforcement Items

A. Infractions

1. Contrary to Technical Specification 3.9.7, the effluent control monitor was not set to alarm and automatically close the waste discharge valve so that the appropriate requirements of the specification are met.

This infraction was identified by the inspector and had the potential for causing or contributing to an occurrence with safety significance. (Details I, paragraph 2) (Units 1,2 and 3)

II. Licensee Action on Previously Identified Enforcement Matters

Noncompliance items identified in RO Inspection Report 50-269/74-9 are closed.

III. New Unresolved Items

75-3/1 Analysis of Liquid Waste Samples

The licensee has based the determination to release liquid radwaste on the results of the degassed gross beta sample analyses. Subsequent gamma spectrometry analysis results have indicated that concentrations are significantly greater than as determined by the gross analyses. In addition, discrepancies between gamma spectrometry data from NRC and licensee laboratories have revealed apparent errors in the licensee's gamma analysis results. Apparently, no specific release limits have been exceeded as a result of this problem. (Details I, paragraph 3)

IV. Status of Previously Reported Unresolved Items

74-9/1 Radiological Environmental Monitoring Procedures

Additional written procedures for implementing and controlling the radiological environmental monitoring program have been developed. This item is closed. (Details I, paragraph 6)

Other previously reported unresolved items as listed in IE inspection report 75-1 were not inspected.

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50-270/75-3,  
and 50-287/75-3

-3-

V. Unusual Occurrences

Not inspected.

VI. Other Significant Findings

None.

VII. Management Interview

A management interview was held on February 28, 1975, with J. E. Smith Plant Manager, and members of his staff. Items discussed included the item of noncompliance in Section I of this summary, the new unresolved item in Section III, and the closeout of three items of noncompliance and one unresolved item previously identified in RO Rpt. No. 50-269/74-9.

J. W. Hufham discussed review of the site emergency plan with C. L. Thames on February 21, 1975.

DETAILS I

Prepared By:

G. R. Jenkins  
G. R. Jenkins, Radiation Specialist  
Reactor Facility Section  
Radiological and Environmental  
Protection Branch

3/18/75

Date

W. L. Britz  
W. L. Britz, Radiation Specialist  
Reactor Facility Section  
Radiological and Environmental  
Protection Branch

3/18/75

Date

Dates of Inspection: February 25-28, 1975

Reviewed By:

A. F. Gibson  
A. F. Gibson, Senior Health Physicist  
Reactor Facility Section  
Radiological and Environmental  
Protection Branch

3/19/75

Date

All information in the details applies equally to Units 1, 2 and 3 except where information is identified with a specific reactor.

1. Individuals Contacted

Duke Power Company (DPC)

J. E. Smith - Plant Manager  
R. M. Koehler - Superintendent of Technical Services  
C. L. Thames - Health Physics Supervisor  
D. L. Davidson - Assistant Health Physics Supervisor  
M. C. Williams - Assistant Health Physics Supervisor  
J. Stewart - Laboratory Technician  
D. C. Smith - Chemist

2. Liquid Waste Management

- a. The inspector reviewed liquid waste release records to determine if releases were within Technical Specification limits, and made spot-check comparisons with the values reported in the Semi-Annual Report for the period ending June 30, 1974. Based on this review, it appeared that the licensee had not exceeded any Technical Specification release limits nor had the design objectives been exceeded. An inspector noted a discrepancy in the semi-annual report, in that  $2.18 \times 10^{-4}$  Ci of Kr-87 was reported as released in April 1974 and no Cr-51 was reported

for that month. The review of licensee records showed that the report should have reflected  $2.18 \times 10^{-4}$  Ci of Cr-51 and no Kr-87. A licensee representative stated that this error apparently occurred in preparing the report in Charlotte based on data supplied from the station.

- b. In reviewing the Liquid Waste Release Form, which is Enclosure 3 to OP/1&2/A/1104/07, an inspector noted that the procedure had been changed such that the ALERT alarm setpoint for the liquid effluent monitor (RIA-33) was set at "1/2 decade above detector background activity or tank activity (whichever is higher)." A licensee representative stated that the ALERT alarm is used to automatically close the discharge valve to terminate a release. The inspector stated that the licensee's method of setting the alarm does not comply with Technical Specification 3.9.7, which requires that the effluent control monitor be set to alarm and automatically close the waste discharge valve such that the appropriate requirements of the specification are met. The inspector noted that Technical Specification 3.9.3 requires that the instantaneous concentrations released from the Restricted Area not exceed the values listed in 10 CFR 20, Appendix B, Table II, Column 2. A licensee representative stated that the procedure had been changed because the excessive liquid monitor background had prohibited use of the setpoint value previously specified in the procedure. He stated that the liquid monitor had recently been relocated to the turbine building floor, and the chamber decontaminated, in order to reduce the background. He stated that although this reduced the background, it was still excessive. The licensee has ordered another monitor chamber to permit removal of old chamber at a time for decontamination. Licensee management stated that a review would be made to determine what action could be taken to insure compliance with Technical Specification 3.9.7.

### 3. Liquid Waste Analysis

- a. The licensee is required to measure the quantities and concentrations of radioactive material in effluents from his facility to assure that they are within the limits specified in his license and the NRC Regulations. The inspection consisted of testing the licensee's measurements of radioactivity in samples of his effluents and prepared test standards by comparing his measurements with those of the NRC's reference laboratory. The measurements made by the NRC laboratory are referenced to the National Bureau of Standards radioactivity measurements system by laboratory intercomparisons.

- b. The test results from previous split sample measurements in June and September 1974, showed the licensee's measurements to have several discrepancies. Capability test standards were sent to the licensee in June and October 1974, to resolve the discrepancies. See Tables 1-4. The discrepancies were partially resolved by the analysis of the test standards. Except for strontium, most remaining discrepancies are in the conservative direction. The strontium procedures are currently being evaluated by our reference laboratory to resolve the disagreement in measurements. On February 19, a particulate filter test standard with a complex gamma spectrum was brought to the licensee to analyze. The purpose was to further resolve the licensee's large differences on previous split sample measurements and his failure to identify all the isotopes present. It was determined that previously used efficiency curves were not good in certain energy ranges, that the computer program was inadequate to identify many isotopes found in their liquid waste, that isotope spectrums were not being fully analyzed by the computer or personnel, and that the computer program contained some constants which were wrong. The computer program is now being updated and licensee management stated that this would be completed by April 1, 1975. New calibrations have been and are being performed. The results of the charcoal adsorber and particulate filter standards are now in agreement. See Table 5. The criteria used for comparisons are attached. Apparently, no specific isotopic release limits have been exceeded as a result of the above findings.
- c. Liquid waste discharge records were examined. It was found that several releases a day were being made based on the analysis of degassed gross beta samples. One release per day was being analyzed by gamma spectrometry. This analysis was used to quantify releases and was consistently significantly higher than the gross beta measurement. Gross beta analysis had not been normalized against results of the specific isotopic analysis. Apparently, no specific isotopic release limits have been exceeded. An inspector stated that future releases by gross measurements should be normalized to the isotopic analysis, and that this normalization factor should be verified periodically for changes in the isotopic spectrum. Licensee management stated that a normalization factor would be applied beginning March 10, 1975. This item is carried as an unresolved item.

#### 4. Tests of Reactor Coolant Quality

The reactor coolant chemistry records were examined and discussed with the chemistry supervisor. The records examined were in order and indicated no apparent Technical Specification noncompliance.

5. Gaseous Waste Management

The inspectors reviewed gaseous waste release records to determine if releases were within Technical Specification limits, and made spot-check comparisons with the values reported in the Semi-Annual Report for the period ending June 30, 1974. Within the scope of this review it appeared that the licensee had maintained gaseous releases within the design objectives and had not exceeded any Technical Specification release limits. Also, the release values reported in the semi-annual report appeared to agree with the licensee's records.

6. Radiological Environmental Monitoring Procedures (74-9/1)

An inspector reviewed the following procedures which had been developed for implementing and controlling the radiological environmental monitoring program:

- a. HP/O/B/1000/62/A through HP/O/B/1000/62/P
- b. Radiological Environmental Procedures Manual, Section 4.0, "Sampling Procedures"
- c. Check-lists used to insure that periodic sampling requirements are met.

The inspector had no further questions.



NRG and Licensee Sample Results Compilation  
 Laboratory Being Tested Oconee, June 1974

Verification x  
 Capability                     

| Sample Description | Analyzed For | NRC Results<br>uCi/ml | Licensee Results<br>uCi/ml | NRC<br>Resolution | Licensee/NRC<br>Ratio | Type of<br>Licensee<br>Agreement |
|--------------------|--------------|-----------------------|----------------------------|-------------------|-----------------------|----------------------------------|
| Liquid             | Co 57        | 2.0 + .4E-6           | --                         | 5                 | --                    |                                  |
|                    | Ce 141       | 3.1 + .5E-5           | --                         | 6                 | --                    | D(1)                             |
|                    | Cr 51        | 3 + 1E-5              | 3.17E-5                    | 3                 | 1.05                  | A                                |
|                    | I-131        | 5.8 + .06E-4          | 8.37E-4                    | 97                | 1.44                  | D                                |
|                    | Cs 134       | 3.7 + .5E-5           | 1.59E-5                    | 7                 | .42                   | P                                |
|                    | Cs 137       | 1.96 + .02E-4         | 2.69E-4                    | 98                | 1.37                  | D                                |
|                    | Zr 95        | 1.05 ± .01E-5         | .458E-5                    | 105               | .43                   | D                                |
|                    | Nb 95        | 1.79 + .08E-5         | 24.5E-5                    | 22                | 13.7                  | D                                |
|                    | Co 58        | 9.81 + .03E-4         | 14.4E-4                    | 327               | 1.47                  | D                                |
|                    | Mn 54        | 5.35 + .06E-5         | 7.35E-5                    | 89                | 1.37                  | D                                |
|                    | Ag 110m      | 7.5 + .5E-6           | 7.81E-6                    | 15                | 1.04                  | A                                |
|                    | Fe 59        | 4.2 + .9E-6           | 4.42E-6                    | 5                 | 1.05                  | A                                |

POOR ORIGINAL

Legend  
 A = Agreement  
 P = Possible Agreement  
 D = Disagreement

(1) Present in concentrations greater than 10% of 10 CFR 20 and thus in disagreement.



NRC and Licensee Sample Results Compilation  
Laboratory Being Tested Oconee, June 1974

| Sample Description | Analyzed For | NRC Results<br>uCi/ml | Licensee Results<br>uCi/ml | NRC<br>Resolution | Licensee/NRC<br>Ratio | Type of<br>Licensee<br>Agreement |
|--------------------|--------------|-----------------------|----------------------------|-------------------|-----------------------|----------------------------------|
|                    | Co 60        | 6.5 + .07E-5          | 11.5E-5                    | 93                | 1.76                  | D                                |
|                    | La 140       | 1.8 + .2E-6           | 79.1E-6                    | 9                 |                       | (2)                              |
|                    | Sb 124       | 1.1 + .3E-6           | 97.7E-6                    | 4                 | 88.5                  | D                                |
|                    | Ce 144       | 4 + 1E-6              | --                         | 4                 | ---                   | D(1)                             |
| Gas                | Xe 133       | 3.7 + .01E-2          | 4.76E-2                    | 370               | 1.29                  | P                                |
|                    | Xe 133m      | 2.1 + .7E-3           | .827E-3                    | 3                 | .39                   | A                                |
|                    | Kr 85        | 1.3 + .3E-3           | ----                       | 4                 | ---                   | D(1)                             |
| Charc l Adsorption | I-131        | 17 + 5E-11            | 1.82E-11                   | 3                 | .11                   | D                                |
| Particulate Filter | Cs-137       | 4 + 4E-12             |                            | 1                 |                       | -                                |
|                    | Co 60        |                       | 1.13E-10                   |                   |                       | -                                |
| Liquid             | Alpha        | 8 + 2E-8              | 6.75E-8                    | 4                 | .84                   | A                                |
|                    | Beta         | 7.2 + .4E-4           | 6.18E-4                    | 18                | .85                   | A                                |

POOR ORIGINAL

- Legend
- (1) Present in concentrations greater than 10% of 10 CFR 20 and thus in disagreement.
- (2) Not counted on same date and therefore not comparable.

A = Agreement

P = Possible Agreement

D = Disagreement



Environmental \_\_\_\_\_

NRC and Licensee Sample Results Compilation  
 Laboratory Being Tested Oconee 3, June 1974

Verification \_\_\_\_\_  
 Capability x

| Sample Description | Analyzed For | NRC Results<br>uCi/ml | Licensee Results<br>uCi/ml | NRC<br>Resolution | Licensee/NRC<br>Ratio | Type of<br>Licensee<br>Agreement |
|--------------------|--------------|-----------------------|----------------------------|-------------------|-----------------------|----------------------------------|
| Charcoal           | I-131        | 8.46 ± .01E4          | 4.25 ± .06E4               | 846               | .50                   | D                                |
| Particulate Filter | Ce 144       | 1.57 ± .09E4          | 2.17 ± .05E4               | 17                | 1.38                  | P                                |
|                    | Cs 137       | 3.76 ± .09E3          | 6.39 ± .3E3                | 42                | 1.69                  | D                                |
|                    | Co 60        | 1.12 ± .02E4          | 1.37 ± .03E4               | 56                | 1.22                  | A                                |
|                    | Sr 89        | 4.52 ± .05E3          | 3.1 ± .4E3                 | 90                | .68                   | P                                |
|                    | Sr 90        | 10.4 ± .1E2           | 3.55 ± .4E2                | 104               | .34                   | D                                |
| Liquid, HSL #3     | H-3          | 2.41 ± .04E3          | 3.53 ± .706E3              | 60                | 1.46                  | D                                |
|                    | Mn 54        | 6.68 ± .04E3          | 6.57 ± .986E3              | 167               | .98                   | A                                |
|                    | Zn 65        | 1.21 ± .03E4          | 1.56 ± .234E4              | 40                | 1.29                  | A                                |
|                    | Ce 144       | 1.32 ± .05E4          | 1.36 ± .204E4              | 26                | 1.03                  | A                                |

Legend

- A = Agreement
- P = Possible Agreement
- D = Disagreement





NRC and Licensee Sample Results Compilation  
 Laboratory Being Tested Oconee, September 1974

| Sample Description | Analyzed For | NRC Results<br>uCi/ml | Licensee Results<br>uCi/ml | NRC<br>Resolution | Licensee/NRC<br>Ratio | Type of<br>Licensee<br>Agreement |
|--------------------|--------------|-----------------------|----------------------------|-------------------|-----------------------|----------------------------------|
| Gas                | Xe 133       | 5.2 + .2E-2           | 8.0E-2                     | 26                | 1.54                  | P                                |
| Liquid             | Gross Beta   | 1.79 + .01E-3         | .45E-3                     | 179               | .25                   | (1)                              |
|                    | H-3          | 2.12 + .01E-2         | 1.9E-2                     | 212               | .90                   | A                                |
|                    | Sr 89        | 6.0 + .4E-6           | 0                          | 15                |                       | D                                |
|                    | Sr 90        | 5 + 1E-7              | 0                          | 5                 |                       | D                                |
|                    | Cr 51        | 1.4 + .1E-4           | 5.4E-4                     | 14                | 3.85                  | D                                |
|                    | I-131        | 2.88 + .06E-3         | 3.1E-3                     | 48                | 1.08                  | A                                |
|                    | Cs 137       | 1.08 + .02E-3         | .98E-3                     | 54                | .91                   | A                                |
|                    | Zr 95        | 4.1 + .9E-6           | 13E-6                      | 5                 | 3.17                  | D                                |
|                    | Cs 134       | 2.83 + .06E-4         | --                         | 47                |                       | D(2)                             |
|                    | Co 58        | 5.0 + .1E-4           | 8.6E-4                     | 50                | 1.72                  | D                                |
|                    | Cs 136       | 3.4 + .2E-5           | 1.1E-5                     | 17                | .32                   | D                                |

POOR ORIGINAL

Legend  
 A = Agreement  
 P = Possible Agreement  
 D = Disagreement

(1) Not counted on same date and therefore not comparable.  
 (2) Present in concentrations greater than 10% of 10 CFR 20, thus in disagreement.



Effluent            x             
 Environmental           

NRC and Licensee Sample Results Compilation  
 Laboratory Being Tested Oconee, September 1974

Verification            x             
 Capability           

| Sample Description | Analyzed For | NRC Results<br>uCi/ml | Licensee Results<br>uCi/ml | NRC<br>Resolution | Licensee/NRC<br>Ratio | Type of<br>Licensee<br>Agreement |
|--------------------|--------------|-----------------------|----------------------------|-------------------|-----------------------|----------------------------------|
|                    | Mn 54        | 2.72 + .07E-5         | 3.7E-5                     | 39                | 1.36                  | P                                |
|                    | Ag 110m      | 4.5 + .5E-6           | 6.3E-6                     | 9                 | 1.40                  | A                                |
|                    | Fe 59        | 1.9 + .1E-5           | 3.3E-5                     | 19                | 1.74                  | D                                |
|                    | Co 60        | 4.3 + .1E-5           | 9.1E-5                     | 43                | 2.12                  | D                                |
|                    | Sb 124       | 1.1 + .2E-6           | 2.8E-4                     | 6                 | 254                   | D                                |
|                    | Nb 95        | 1.5 + .1E-5           | 1.0E-3                     | 15                | --                    | (1)                              |
|                    | La 140       | 2.3 + .2E-6           | 91E-6                      | 12                | --                    | (1)                              |
|                    |              |                       |                            |                   |                       |                                  |
|                    |              |                       |                            |                   |                       |                                  |
|                    |              |                       |                            |                   |                       |                                  |
|                    |              |                       |                            |                   |                       |                                  |
|                    |              |                       |                            |                   |                       |                                  |
|                    |              |                       |                            |                   |                       |                                  |
|                    |              |                       |                            |                   |                       |                                  |

Legend  
 A = Agreement  
 P = Possible Agreement  
 D = Disagreement

(1) Not counted on same date and therefore not comparable.





# CRITERIA FOR COMPARING ANALYTICAL MEASUREMENTS

## General

The following provides criteria for comparing results of verification measurements. The criteria are based on an empirical relationship which combines prior experience and the accuracy needs of this program.

In these criteria, the agreement limits vary in relation to the ratio of the NRC Reference Laboratory's value to its associated uncertainty. As that ratio, referred to in this program as "Resolution", increases the acceptability of a licensee's measurement should be more selective. Conversely, poorer agreement must be considered acceptable as the resolution decreases.

| <u>Criteria</u>   | RATIO            | LICENSEE VALUE<br>(-----)<br>NRC REFERENCE VALUE |                      |
|-------------------|------------------|--------------------------------------------------|----------------------|
|                   |                  | Possible Agreement A                             | Possible Agreement B |
| <u>Resolution</u> | <u>Agreement</u> |                                                  |                      |
| <3                | 0.4 - 2.5        | 0.3 - 3.0                                        | No Comparison        |
| 4 - 7             | 0.5 - 2.0        | 0.4 - 2.5                                        | 0.3 - 3.0            |
| 8 - 15            | 0.6 - 1.66       | 0.5 - 2.0                                        | 0.4 - 2.5            |
| 16 - 50           | 0.75 - 1.33      | 0.6 - 1.66                                       | 0.5 - 2.0            |
| 51 - 200          | 0.80 - 1.25      | 0.75 - 1.33                                      | 0.6 - 1.66           |
| >200              | 0.85 - 1.18      | 0.80 - 1.25                                      | 0.75 - 1.33          |

"A" criteria are applied to the following analyses:

Gamma Spectrometry where principal gamma energy used for identification is greater than 200 Kev.

Tritium analyses of liquid samples.

Iodine on adsorbers.

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"B" criteria are applied to the following analyses:

Gamma spectrometry where principal gamma energy used for identification is less than 250 Kev.

$^{89}\text{Sr}$  and  $^{90}\text{Sr}$  Determinations.

Gross Beta where samples are counted on the same date using the same reference nuclide.

Procedure

- a. The NRC Reference Laboratory value should be divided by its associated uncertainty (1 $\sigma$ ) to obtain the resolution.
- b. The ratio of the two measurements to be compared should be determined by dividing the result to be compared by the NRC Reference Laboratory result.
- c. Agreement is considered obtained if the ratio falls within the range given in the "Agreement" column for the associated resolution. For example, consider a comparison of  $^{90}\text{Sr}$  determinations. A licensee obtains a value of  $1.97 \pm .08 \times 10^{-5}$  uCi/ml and the NRC Reference Laboratory reports a result of  $2.53 \pm .06 \times 10^{-5}$  uCi/ml. The resolution would be 42, i.e.  $2.53/.06$ , and the ratio is 0.78, i.e.  $1.97/2.53$ . This pair of measurements would be considered to be in "agreement" because for this resolution, the "agreement" range is 0.75 - 1.33.
- d. If "agreement" is not achieved, the ratio should be evaluated for "possible agreement". In this case, consideration is made for the type of analyses conducted by selecting a range in the appropriate column; i.e., "A" criteria or "B" criteria.
- e. If the ratio falls outside the appropriate "possible agreement" column, the two measurements will be considered to be in "disagreement".
- f. Licensee results are NOT ACCEPTABLE for isotopes that are not identified by the licensee but are identified by the NRC reference lab as being present in concentrations greater than 10% of their respective MPC's as specified in 10 CFR 20, Table II.

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DETAILS II

Prepared by:

J. W. Hufham  
J. W. Hufham, Radiation Specialist  
Reactor Facility Section  
Radiological and Environmental  
Protection Branch

3/18/75  
Date

Dates of Inspection: February 19-21, 1975

Reviewed by:

A. F. Gibson  
A. F. Gibson, Senior Health Physicist  
Reactor Facility Section  
Radiological and Environmental  
Protection Branch

3/18/75  
Date

1. Individuals Contacted

A. Individuals Contacted Through Meetings

(1) Duke Power Company (Oconee Nuclear Station)

Ed Smith - Plant Manager  
Charlie Thames - Health Physics Supervisor  
Jerry Itin - Industrial Safety Supervisor  
Roger Nichols - Training Supervisor

(2) State of South Carolina - Radiation Protection Branch

Heyward G. Shealy - Director  
Division of Radiological Health  
South Carolina Department of Health and Environmental Control

(3) Oconee County Civil Defense

Bunyan Black, Jr.  
Civil Defense Director

(4) Oconee Memorial Hospital

Dr. D. A. Richardson (Duke Power Physician)  
Ms. Billie Moyle - Assistant Hospital Administrator

B. Individuals Contacted By Telephone

(1) Pickens County Civil Defense

Jack Wood  
Civil Defense Director

(2) Oconee County Sheriff Department

M. F. Green - Oconee County Sheriff

(3) U.S. ERDA - Savannah River Radiological Assistance Team

D. C. Collins - Coordinator, Radiological Assistance Team

2. Coordination of Emergency Plan With Offsite Agencies

A. The inspector made arrangements to meet with selected offsite officials to determine if emergency agreements between agencies had been completed and maintained current.

(1) State of South Carolina - Division of Radiological Health

On February 19, 1975, the inspector met with a representative of the State of South Carolina, Division of Radiological Health, to thoroughly determine the responsibilities of the State and the licensee in an emergency situation relating to the Oconee Nuclear Station. The inspector was informed and observed that the State of South Carolina has a well equipped and organized radiological assistance team. The state also has a comprehensive radiation emergency plan that is maintained current every six months. In addition to the existing radiation emergency plan, the State is presently developing specific radiation emergency plans for each of the eleven major nuclear facilities within the State. The State of South Carolina recently purchased a large mobile van that is being converted into a laboratory and will be equipped with emergency supplies. The van will be used as a mobile laboratory for routine surveillance and as an emergency laboratory for emergency situations. In addition to the mobile laboratory the State has a central radiological laboratory that is well equipped and appeared to be adequately staffed.

(2) Oconee County Civil Defense

The inspector met with the Oconee County Civil Defense Director on February 20, 1975, to discuss the many responsibilities of the civil defense office in emergency situations relative to the Oconee Nuclear Plant. The civil defense director was aware of his evacuation responsibilities and appeared to be capable

of executing his functions in an emergency. The director has participated with the Oconee Nuclear Station in emergency drills and is presently developing an Oconee County Civil Defense Emergency Plan that will be specific for the plant.

(3) Offsite Medical Treatment Facilities

The inspector met on February 20, 1975, with officials of the offsite medical treatment facility, Oconee Memorial Hospital, to determine that the arrangements for medical support and treatment were complete. Emergency treatment procedures were discussed with the hospital officials and a visual inspection of the emergency treatment rooms was performed. The hospital is presently constructing a new addition to the hospital and the new structure will house a decontamination area and shower.

B. Telephone Contacts With Offsite Support Agencies

Telephone contacts were made with the Pickens County Civil Defense, Oconee County Sheriff's Department, and the U. S. ERDA Radiological Assistance Team at Savannah River. All of these agencies had been recently contacted by the licensee and were aware of their emergency responsibilities.

3. Facilities and Equipment

A. Emergency Kits

The availability of emergency kits located in the control room and the offsite emergency control center was confirmed. The kit equipment was contained in large metal drums that were sealed for security purposes. During this inspection the seals were not broken to visually inspect the kits, but the contents appeared to be adequate based on review of inventory lists that were posted on the outside of the drums.

B. Onsite First Aid Facilities

The Oconee Nuclear Station has two onsite first aid facilities. One first aid station is located in the administrative building and the other is located in the restricted area of the auxiliary building. Both facilities were inspected and appeared to be adequately supplied and equipped.

C. Ambulance Transportation Service

The ambulance that was available at the site has been assigned to the construction contractor until all construction work is complete. After construction is complete ambulance arrangements have been made with the Oconee Memorial Hospital. The time required for an ambulance to reach the site and return to the hospital with an emergency individual was discussed with a representative of the licensee. The total time of approximately thirty minutes for the round-trip service appeared to be a satisfactory arrangement with the licensee representative and in accordance with the ambulance procedures of the Emergency Plan.

D. Training

All phases of training were discussed with the training supervisor in order to assess the completeness of the emergency training and retraining. Emergency training and emergency retraining has previously been performed by the health physics section. A training supervisor has been employed by the station and will be responsible for coordinating all training, retraining, and training records.

E. Offsite Control Center

The offsite control center, located at the visitors information center, was observed to assure that a control area had been established offsite and that an emergency kit was available. The director of the information center was interviewed to verify that she had been trained in emergency procedures and especially in emergency procedures involving groups of visitors at the center.

F. Emergency Drills

In accordance with the Technical Specifications, quarterly emergency drills have been performed to verify communications with offsite agencies and assembly procedures for evacuation offsite. The inspector was informed that an extensive emergency drill that involved numerous support agencies was conducted on February 27, 1974. The drill included the participation of other licensees, State personnel, and several Federal government agencies. On the date of this inspection no plans had been made to perform a drill of this magnitude for 1975.

G. Implementing Procedures

The emergency procedures that were approved February 18, 1975, were reviewed by the inspector. The inspector recommended to the licensee representative that additional emergency procedures were warranted concerning locations and inventories of emergency kits, drill procedures, emergency training procedures, and procedures defining the specific responsibilities of support agencies.