

50(269)/270/287

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FILE NUMBER

TO: B.C. Rusche

FROM: Duke Power Co.
Charlotte, N.C.
W.O. Parker, Jr.DATE OF DOCUMENT
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DESCRIPTION

Ltr. re. their 5-6-76 ltr.....
Advising that a shutdown for replacement of
suppressors on Oconee # 2 will be completed in
Late June 1976.....

(1 Signed Cy. Received)

(2 Page)

ENCLOSURE

DO NOT REMOVE
ACKNOWLEDGED

PLANT NAME: Oconee # 1,2, &3

SAFETY

FOR ACTION/INFORMATION

ENVIRO

SAB 6-21-76

ASSIGNED AD :

✓ BRANCH CHIEF :

PROJECT MANAGER:

✓ LIC. ASST. :

Schwencer (6)

Sheppard

ASSIGNED AD :

BRANCH CHIEF :

PROJECT MANAGER :

LIC. ASST. :

INTERNAL DISTRIBUTION

✓ REG FILE

✓ NRC PDR

✓ I & E (2)

✓ OELD

GOSSICK & STAFF

MIPC

CASE

HANAUER

HARLESS

SYSTEMS SAFETY

HEINEMAN

SCHROEDER

ENGINEERING

MACCARY

KNIGHT

SIHWEIL

PAWLICKI

PLANT SYSTEMS

TEDESCO

BENAROYA

LAINAS

IPPOLITO

ENVIRO TECH

ERNST

BALLARD

SPANGLER

PROJECT MANAGEMENT

BOYD

P. COLLINS

HOUSTON

PETERSON

MELTZ

HEITEMES

SKOVHOLT

REACTOR SAFETY

ROSS

NOVAK

ROSZTOCZY

CHECK

AT & I

SALTZMAN

RUTBERG

OPERATING TECH

✓ EISENHUT

✓ SHAO

✓ BAER

✓ SCHWENCER

✓ CRIMES

SITE ANALYSIS

VOLLMER

BUNCH

✓ J. COLLINS

KREGER

SITE SAFETY & ENVIRO
ANALYSIS

DENTON & MULLER

EXTERNAL DISTRIBUTION

CONTROL NUMBER

✓ LPDR: Walhalla, S.C.

✓ TIC

✓ NSIC

✓ ASLB

✓ ACRS 16 HOLDING/SENT

NATL LAB

REG. V-IE

LA PDR

CONSULTANTS

BROOKHAVEN NATL LAB

ULRIKSON(ORNL)

6074

DUKE POWER COMPANY

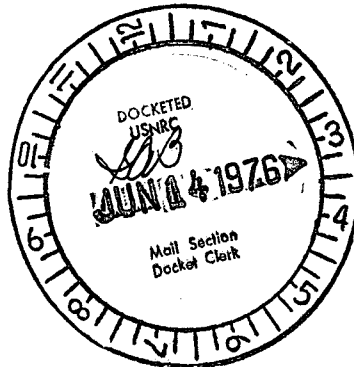
POWER BUILDING

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

WILLIAM O. PARKER, JR.
VICE PRESIDENT
STEAM PRODUCTION

TELEPHONE: AREA 704
373-4083

June 10, 1976



Mr. Benard C. Rusche
Director of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

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



Dear Mr. Rusche:

My letter dated May 6, 1976 appraised you of a situation in which several hydraulic shock suppressors at the Oconee Nuclear Station were determined to contain material which may not be compatible with the operating environment. It was stated that the seal material in those suppressors which were identified as being possibly defective on Oconee 1 and 2 would be replaced prior to their respective startups. For Oconee 3, it was stated that a shutdown would occur no later than June 20, 1976 for replacement of these suppressors.

At present, the Oconee 1 suppressors of the type identified have been repaired or replaced. This work is also in progress on Oconee 2 and will be completed before its startup in late June, 1976. However, necessary material to complete the Unit 3 repairs is not available for a scheduled outage beginning June 20, 1976. Therefore, the outage has been rescheduled to begin not later than July 4, 1976 in order to allow additional time to expedite material delivery. It is considered that the rescheduling of this outage of Oconee 3 will not be inimical to the health and safety of the public.

Very truly yours,

William O. Parker, Jr.

MST:vr

cc: Mr. Norman C. Moseley

6074

Central File
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DUKE POWER COMPANY
POWER BUILDING
422 SOUTH CHURCH STREET, CHARLOTTE, N. C. 28242

WILLIAM O. PARKER, JR.
VICE PRESIDENT
STEAM PRODUCTION

TELEPHONE: AREA 704
373-4083

June 9, 1976

Mr. Norman C. Moseley, Director
U. S. Nuclear Regulatory Commission
Suite 818
230 Peachtree Street, Northwest
Atlanta, Georgia 30303

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

Dear Mr. Moseley:

Oconee Nuclear Station Appendix B Technical Specification 1.2, Table 1.2-1 specifies a limiting quantity of 4760 pounds of solid laundry detergent to be used per year at Oconee. On June 2, 1976, during the monthly bulk chemical inventory, it was noted that the total usage of solid laundry detergent for this year through May, 1976, was 5625 pounds. The following is a description of details relating to this incident.

In February, 1976, a station modification was completed allowing segregation of laundry wastes from other radioactive wastes. Prior to this time, laundry wastes had been mixed with other radioactive wastes in the low activity waste tank, and due to in-plant chemical problems caused by the detergent, the laundry system was used very infrequently. Contaminated laundry was sent off-site for processing and on-site use of detergent was minimal. However, segregation of laundry wastes enabled Oconee to begin processing all laundry on site, resulting in maximum usage of solid laundry detergent. Additionally, the increased number of unit outages, both scheduled and unscheduled, during 1976, has led to an unusually high manpower requirement at Oconee and consequently, has resulted in a larger than anticipated amount of contaminated laundry to be processed.

The limiting value for laundry detergent usage, as stated in Table 1.2-1, was established prior to station operation and was based upon an estimate at that time of the expected quantities of laundry waste to be generated. However, due to increased manpower requirements and a higher than expected quantity of laundry to be processed, this value has been demonstrated to be very overly conservative for present and future operation.

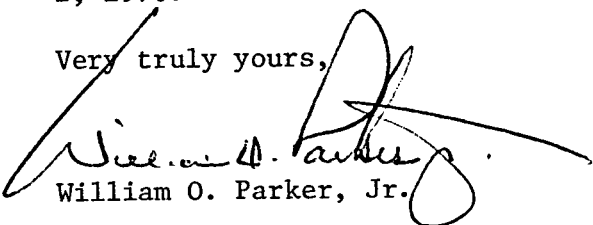
Mr. Norman C. Moseley

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June 9, 1976

Accordingly, Table 1.2-1 is being reviewed and will be revised to update chemical discharge limits to more realistic values while complying with current existing state and federal regulations regarding chemical discharges to the environment. This review will be completed and appropriate Technical Specifications change requests will be submitted by September 1, 1976.

Very truly yours,



William O. Parker, Jr.

EDB:vr

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

WILLIAM O. PARKER, JR.
VICE PRESIDENT
STEAM PRODUCTION

TELEPHONE: AREA 704
373-4083

June 8, 1976

Mr. Norman C. Moseley, Director
U. S. Nuclear Regulatory Commission
Suite 818
230 Peachtree Street, Northwest
Atlanta, Georgia 30303

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

Dear Mr. Moseley:

Pursuant to the requirements of Oconee Nuclear Station Technical Specifications 6.6.2.2.c and d, this report is submitted describing a condition in which a measured level of radioactivity exceeded the control level by greater than ten times and describing conditions in which measured levels of radioactivity exceeded control levels by greater than four times but less than ten times.

On June 1, 1976, analytical results of surface water samples collected on a monthly frequency for March and April, 1976 and composite water supply samples collected in March, 1976 were reviewed. Given below is a summary of the pertinent results of the radioactivity concentration of these samples:

<u>Sample Location</u>	<u>Type Sample</u>	<u>Collection Date</u>	<u>Radionuclide</u>	<u>Concentration $\mu\text{Ci/ml}$</u>
000.3 Bridge N. of Site on Hwy. 183 Connecting Canal (Control)	Surface Water	March	gross beta	$(0.0 \pm 5.3)\text{E-9}$
			I-131	$(0.0 \pm 6.2)\text{E-11}$
			Co-58	$< 8.2\text{E-9}$
			Cs-134	$< 8.8\text{E-9}$
			H-3	$(3.1 \pm 0.7)\text{E-7}$
000.7 Bridge S. of Site on Hwy. 183	Surface Water	March	gross beta	$(1.9 \pm 0.1)\text{E-7}$
			I-131	$(1.2 \pm 0.1)\text{E-8}$
			Co-58	$(2.7 \pm 0.2)\text{E-7}$
			Cs-134	$(3.4 \pm 1.0)\text{E-8}$
			H-3	$(4.44 \pm 0.03)\text{E-5}$
		March Composite	H-3	$(5.6 \pm 0.6)\text{E-5}$

Mr. Norman C. Moseley

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June 8, 1976

<u>Sample Location</u>	<u>Type Sample</u>	<u>Collection Date</u>	<u>Radionuclide</u>	<u>Concentration μCi/ml</u>
0005.2 Hwy. 27 Bridge at Newry	Surface Water	March	gross beta	$(6.1 \pm 0.9)E-8$
			I-131	$(5.2 \pm 0.2)E-9$
			Co-58	$(3.5 \pm 1.3)E-8$
			H-3	$(2.8 \pm 0.1)E-6$
013 Hartwell Reservoir, 5.8 miles S. of Keowee Dam	Surface Water	March	gross beta	$(2.4 \pm 0.7)E-8$
004.1 Seneca (Control)	Raw Water	March Composite	H-3	$(1.4 \pm 0.9)E-7$
006.1 Clemson	Raw Water	March Composite	H-3	$(2.6 \pm 0.1)E-6$
012 Anderson	Raw Water	March Composite	H-3	$(1.68 \pm 0.12)E-6$
004.1 Seneca (Control)	Finished Water	March Composite	H-3	$(3.7 \pm 1.0)E-7$
006.1 Clemson	Finished Water	March Composite	H-3	$(2.7 \pm 0.1)E-6$

Additional samples were collected from the following locations on April 4, 1976 and were analyzed for I-131:

<u>Sample Location</u>	<u>Type Sample</u>	<u>Concentration μCi/ml</u>
000.7 Bridge S. of Site on Hwy. 183	Surface Water	$(1.3 \pm 0.1)E-8$
005.2 Hwy. 27 Bridge at Newry	Surface Water	$(0.0 \pm 6.8)E-11$
013 Hartwell Reservoir, 5.8 miles S. of Keowee Dam	Surface Water	$(0.0 \pm 7.1)E-11$

Radionuclide concentrations in the water samples collected are dependent upon the radionuclide concentrations in liquid effluents released from the station. The following table summarizes these releases for March, 1976:

Mr. Norman C. Moseley
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<u>Radionuclide</u>	<u>Curies</u>	<u>Maximum Tailrace Concentration $\mu\text{Ci/ml}$</u>	<u>Average Tailrace Concentration $\mu\text{Ci/ml}$</u>	<u>Station Objective Concentration $\mu\text{Ci/ml}$</u>
Corrosion & Fission Products (gross beta)	1.34E0	2.77E-6	1.09E-8	2E-8
I-131	1.44E-1	2.98E-7	1.17E-9	2E-8
Co-58	8.71E-1	1.80E-6	7.08E-9	2E-8
CS-134	5.96E-2	1.23E-8	4.85E-10	2E-8
H-3	3.30E+2	6.83E-4	2.69E-6	5E-6

From the above data, it can be seen that the average concentrations for the month in liquid effluents are within the objective concentrations.

Dilution and dispersion of tritium in liquid effluents between Oconee Nuclear Station and the Clemson water intake has been calculated using the equation for instantaneous release taken from the U. S. Geological Survey Paper No. 433-B, "Dispersion of Dissolved or Suspended Materials in Flowing Streams," by Robert E. Glover (1964), p.5. This equation accounts for longitudinal dispersion only. Conservatism was used in selecting parameters for substitution in the instantaneous release equation to determine the concentration of effluents at the Clemson water intake. These assumptions were (1) the elevation of Lake Hartwell is 654.00 feet and (2) the flow of the Keowee River is 1100 cfs, the yearly average. The calculated concentration of tritium at the Clemson water intake, using the above method, is $3.47\text{E-}6 \mu\text{Ci/ml}$. The observed concentration at the Clemson water intake is $2.7\text{E-}6 \mu\text{Ci/ml}$.

The Final Environmental Statement for Oconee states that "the largest estimates of dose to individuals from liquid effluents are at Clemson and Pendleton where drinking water is withdrawn from the Keowee River. The radionuclide making the most important contribution to dose at these locations is tritium (more than 50%)."
The dose estimate for any individual consuming Clemson water containing $2.70\text{E-}6 \mu\text{Ci/ml}$ of tritium is 0.27 mrem/year if these tritium concentrations were maintained over the year. This estimate of dose is less than 0.5% of the dose from natural background and less than 0.1% of the limits of 10CFR20. Therefore, it is concluded that the observed anomalous tritium concentrations do not adversely affect public health and safety.

Very truly yours,

William O. Parker, Jr.

William O. Parker, Jr.

W.O.P.

EDB:vr