

NRC DISTRIBUTION FOR PART 50 DOCKET MATERIAL

TO: N. R. C.		FROM: Duke Power Company Charlotte, North Carolina William O. Parker, Jr.		DATE OF DOCUMENT 5/17/77
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DESCRIPTION

PLANT NAME: (1-P)
Oconee Units 1-2-3

RJL

ENCLOSURE

Consists of corrections to previously submitted reports concerning radioactive effluents released for the first six months of 1976 & the last six months of 1976.....

ACKNOWLEDGED
DO NOT REMOVE

(2-P)

NOTE: IF PERSONNEL EXPOSURE IS INVOLVED SEND DIRECTLY TO KREGER/J. COLLINS

FOR ACTION/INFORMATION

BRANCH CHIEF:	SCHWENCER
W/3 CYS FOR ACTION	
LIC. ASST.:	SHEPPARD
W/1 CYS	
ACRS 16 CYS HOLDING/SENT AS CAT B	

INTERNAL DISTRIBUTION

REG FILE				
NRC PDR				
I & E (2)				
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HOUSTON				
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HANAUER				
TEDESCO/MACCARY				
EISENHUT				
BAER				
SHAO				
VOLLMER/BUNCH				
KREGER/J. COLLINS				

EXTERNAL DISTRIBUTION

LPDR: WABHALLA SC.				CONTROL NUMBER 771450091
TIC:				
NSIC:				

DUKE POWER COMPANY

POWER BUILDING

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

WILLIAM O. PARKER, JR.
VICE PRESIDENT
STEAM PRODUCTION

May 17, 1977

TELEPHONE: AREA 704
373-4083

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

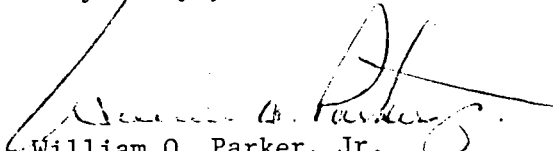
Re: Oconee Nuclear Station
Docket Nos. 50-269, -270, -287

Dear Sir:

Pursuant to 10CFR50.36a and Oconee Technical Specifications 6.6.1.2(c), reports were submitted on August 19, 1976 and February 23, 1977 concerning radioactive effluents released from Oconee Nuclear Station for the first six months of 1976 and the last six months of 1976, respectively. During review of this data, certain errors in isotope identification have been discovered. Please find attached copies of the following sheets which correct these errors.

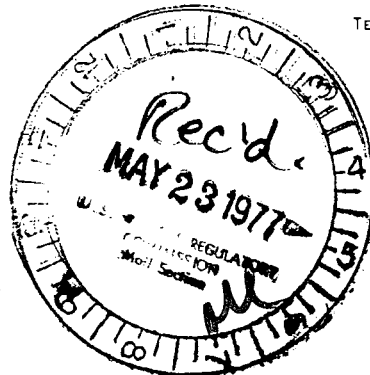
1. Summary of liquid radioactive effluent releases for the first six month period transmitted by our letter of August 19, 1976. Under item 7, the isotope designated as Ag198m is corrected to read Ag108m.
2. Summary of liquid radioactive effluent releases for the first and second six month period transmitted by our letter of February 23, 1977. Under item 7, the isotope designated as Kr87 is corrected to read Ag108m.

Very truly yours,


William O. Parker, Jr.

LJB:ge
Attachment

cc: Mr. Ernst Volgenau



Regulatory Docket File

771450091

Radioactive Effluent Releases

Year 1976

I. Liquid Releases

	Units	January	February	March	April	May	June	Sub-Total
1. Gross radioactivity (B,y)								
a. total release	Curies	1.89	1.64	1.34	1.40×10^{-1}	1.23×10^{-1}	1.03×10^{-1}	5.24
b. average concentration released	$\mu\text{Ci/ml}$	1.67×10^{-8}	1.59×10^{-8}	1.09×10^{-8}	1.29×10^{-9}	8.55×10^{-10}	6.71×10^{-10}	7.72×10^{-9}
c. maximum concentration released	$\mu\text{Ci/ml}$	2.94×10^{-6}	3.79×10^{-6}	2.07×10^{-6}	2.50×10^{-7}	2.80×10^{-7}	3.22×10^{-6}	2.09×10^{-5}
2. Tritium								
a. total release	Curies	3.60×10^2	3.00×10^2	3.30×10^2	1.49×10^2	8.25×10	5.12×10	1.27×10^3
b. average concentration released	$\mu\text{Ci/ml}$	3.17×10^{-6}	2.89×10^{-6}	2.69×10^{-6}	1.38×10^{-6}	5.73×10^{-7}	3.35×10^{-7}	1.84×10^{-6}
3. Dissolved noble gases								
a. total release	Curies	5.01×10^{-2}	4.64×10^{-1}	4.26×10^{-1}	1.31×10^{-1}	2.32×10^{-3}	5.43×10^{-3}	1.08
b. average concentration released	$\mu\text{Ci/ml}$	4.41×10^{-10}	4.47×10^{-9}	3.47×10^{-9}	1.21×10^{-9}	1.61×10^{-11}	3.56×10^{-11}	1.61×10^{-9}
4. Gross alpha radioactivity								
a. total release	Curies	0	0	0	0	0	0	0
b. average concentration released	$\mu\text{Ci/ml}$	0	0	0	0	0	0	0
5. Volume of liquid waste to discharge canal	Liters	1.79×10^6	1.20×10^6	1.79×10^6	1.55×10^6	1.22×10^6	1.83×10^6	9.38×10^6
6. Volume of dilution water	Liters	1.14×10^{11}	1.04×10^{11}	1.23×10^{11}	1.08×10^{11}	1.44×10^{11}	1.53×10^{11}	7.46×10^{11}
7. Isotopes released	Curies							
Ba-La-140			1.49×10^{-2}	6.70×10^{-5}	8.86×10^{-6}	4.52×10^{-5}	7.50×10^{-5}	1.51×10^{-2}
Sr-89		2.26×10^{-3}	3.13×10^{-3}	1.96×10^{-3}	0	1.17×10^{-4}	2.93×10^{-4}	7.76×10^{-3}
I-131		6.35×10^{-1}	5.14×10^{-1}	1.44×10^{-1}	2.05×10^{-2}	1.48×10^{-2}	5.00×10^{-3}	1.33
I-133		3.52×10^{-2}	2.21×10^{-2}	8.25×10^{-4}	1.59×10^{-3}	0	4.90×10^{-4}	6.02×10^{-2}
Xe-133		5.01×10^{-2}	4.62×10^{-1}	4.23×10^{-1}	1.03×10^{-1}	2.32×10^{-3}	5.11×10^{-3}	1.05
Xe-135		0	1.16×10^{-3}	1.50×10^{-3}	2.65×10^{-2}	0	2.81×10^{-4}	2.94×10^{-2}
Cs-137		4.71×10^{-1}	3.39×10^{-1}	7.56×10^{-2}	5.50×10^{-3}	9.48×10^{-3}	3.86×10^{-3}	9.04×10^{-1}
Cs-134		2.94×10^{-1}	2.29×10^{-1}	5.96×10^{-2}	4.37×10^{-3}	6.35×10^{-3}	3.28×10^{-3}	5.97×10^{-1}
Co-60		7.48×10^{-2}	5.78×10^{-2}	1.25×10^{-1}	1.41×10^{-2}	1.34×10^{-2}	1.93×10^{-2}	3.04×10^{-1}
Cs-59		3.15×10^{-1}	3.99×10^{-1}	8.71×10^{-1}	7.37×10^{-2}	6.17×10^{-2}	4.75×10^{-2}	1.74
Cr-51		1.75×10^{-2}	1.50×10^{-3}	1.40×10^{-2}	7.30×10^{-3}	1.47×10^{-3}	1.31×10^{-2}	5.46×10^{-2}
Mn-54		1.61×10^{-2}	2.57×10^{-2}	1.68×10^{-2}	3.43×10^{-3}	1.28×10^{-2}	5.42×10^{-3}	9.72×10^{-2}
Ag-108m			2.48×10^{-5}					2.48×10^{-5}
Ni-65					1.84×10^{-5}			1.84×10^{-5}
Nb-97				4.69×10^{-3}	6.63×10^{-3}	3.81×10^{-4}	3.18×10^{-4}	1.20×10^{-2}
Na-24		3.68×10^{-3}	2.08×10^{-3}	1.60×10^{-5}	2.52×10^{-5}		6.19×10^{-5}	5.86×10^{-3}
Xe-133m			1.31×10^{-3}	1.12×10^{-3}	6.56×10^{-4}		3.82×10^{-5}	3.12×10^{-3}
I-132		1.45×10^{-4}	9.63×10^{-5}		8.24×10^{-5}			3.24×10^{-4}
Cs-136		1.34×10^{-2}	1.38×10^{-2}	8.57×10^{-3}	1.45×10^{-4}	1.35×10^{-4}	2.61×10^{-5}	3.61×10^{-2}
Kr-85m				3.31×10^{-6}				3.31×10^{-6}
Kr-88				2.10×10^{-3}				2.10×10^{-3}
Np-239					1.95×10^{-5}			1.95×10^{-5}
Sr-90		1.41×10^{-4}	1.44×10^{-4}	8.94×10^{-5}	4.41×10^{-5}	1.22×10^{-5}	5.67×10^{-5}	4.85×10^{-4}
Sr-92								
Ce-144				1.29×10^{-4}				1.29×10^{-4}
Mn-56				2.80×10^{-4}				2.80×10^{-4}
Mo-99		2.16×10^{-3}						2.16×10^{-3}
Zr-97						3.81×10^{-6}		3.81×10^{-6}
Ag-110m		3.76×10^{-3}	4.71×10^{-4}	8.24×10^{-3}	2.50×10^{-3}	2.39×10^{-3}	2.54×10^{-3}	1.99×10^{-2}
Eu-139				3.42×10^{-4}				3.42×10^{-4}
Rb-95		3.69×10^{-4}		2.52×10^{-4}	9.33×10^{-5}	5.76×10^{-5}	4.53×10^{-4}	1.22×10^{-3}
Fe-59			6.43×10^{-6}	1.06×10^{-3}	3.33×10^{-4}	9.11×10^{-5}	5.15×10^{-5}	2.18×10^{-3}
Sr-124								
Co-57				5.54×10^{-4}	7.16×10^{-5}	2.56×10^{-5}	1.31×10^{-4}	7.82×10^{-4}
K-147								
Cs-135m								
Xe-131m					3.97×10^{-4}			3.97×10^{-4}
Zr-95		8.69×10^{-6}				2.38×10^{-5}	1.49×10^{-4}	2.23×10^{-5}
I-134				4.15×10^{-5}				2.44×10^{-5}
In-115m		1.94×10^{-4}	2.73×10^{-4}		2.15×10^{-6}			4.69×10^{-4}
Tc-99m		1.11×10^{-2}	3.24×10^{-2}	2.93×10^{-3}	7.31×10^{-5}		2.74×10^{-5}	4.65×10^{-2}
Cd-115		1.31×10^{-3}		3.74×10^{-4}			6.68×10^{-4}	2.35×10^{-3}
Sn-125		2.98×10^{-3}						2.98×10^{-3}
Ru-103			4.09×10^{-5}		6.95×10^{-6}			4.79×10^{-5}
8. Percent of Technical Specifications limit (15 Ci) for total activity released		12.65	10.93	8.93	0.93	0.82	0.68	34.94

Radioactive Effluent Releases

1. Liquid Releases

	Units	Jan.-June	July-Dec.	1976
		1st 6 months	2nd 6 months	TOTAL
1. Gross radioactivity (E,γ)				
a. total release	Curies	5.24	1.43	6.67
b. average concentration released	μCi/ml	7.72×10^{-9}	9.34×10^{-9}	8.53×10^{-9}
c. maximum concentration released	μCi/ml	2.09×10^{-6}	1.27×10^{-3}	1.28×10^{-3}
2. Tritium				
a. total release	Curies	1.27×10^3	9.20×10^2	2.19×10^3
b. average concentration released	μCi/ml	1.84×10^{-6}	8.03×10^{-6}	4.94×10^{-6}
3. Dissolved noble gases				
a. total release	Curies	1.08	1.88×10^{-1}	1.27
b. average concentration released	μCi/ml	1.61×10^{-9}	1.39×10^{-9}	1.50×10^{-9}
4. Gross alpha radioactivity				
a. total release	Curies	0	0	0
b. average concentration released	μCi/ml	0	0	0
5. Volume of liquid waste to discharge canal	Liters	9.38×10^6	1.01×10^7	1.95×10^7
6. Volume of dilution water	Liters	7.46×10^{11}	4.62×10^{11}	1.21×10^{12}
7. Isotopes released	Curies			
Ba-La-140		1.51×10^{-2}	3.10×10^{-3}	1.82×10^{-2}
Sr-89		7.76×10^{-3}	2.64×10^{-3}	1.04×10^{-2}
I-131		1.33	5.75×10^{-1}	1.91
I-133		6.02×10^{-2}	2.05×10^{-2}	8.07×10^{-2}
Xe-133		1.05	1.76×10^{-2}	1.07
Xe-135		2.94×10^{-2}	1.02×10^{-2}	3.96×10^{-2}
Cs-137		9.04×10^{-1}	1.40×10^{-1}	1.04
Cs-134		5.97×10^{-1}	3.85×10^{-2}	6.36×10^{-1}
Co-60		3.04×10^{-1}	6.38×10^{-2}	3.68×10^{-1}
Co-58		1.76	2.51×10^{-1}	2.01
Cr-51		5.46×10^{-2}	2.18×10^{-2}	7.64×10^{-2}
Mn-54		8.03×10^{-2}	1.51×10^{-1}	2.31×10^{-1}
Ag-108m		2.48×10^{-5}	0	2.48×10^{-5}
Zr-97		2.22×10^{-5}	1.18×10^{-4}	1.40×10^{-4}
Rh-97		1.20×10^{-2}	9.03×10^{-3}	2.10×10^{-2}
Na-24		5.86×10^{-3}	1.42×10^{-3}	7.28×10^{-3}
Xe-133m		3.12×10^{-3}	4.71×10^{-4}	3.59×10^{-3}
I-132		3.24×10^{-4}	0	3.24×10^{-4}
Cs-136		3.61×10^{-2}	1.06×10^{-2}	4.67×10^{-2}
Kr-85m		3.31×10^{-6}	3.45×10^{-4}	3.48×10^{-4}
Kr-88		2.10×10^{-3}	8.63×10^{-4}	2.96×10^{-3}
Zn-65		1.95×10^{-5}	0	1.95×10^{-5}
Sr-90		4.85×10^{-4}	1.65×10^{-4}	6.50×10^{-4}
Sr-92		-	3.28×10^{-4}	3.28×10^{-4}
Ce-144		1.29×10^{-4}	0	1.29×10^{-4}
Mn-56		2.80×10^{-4}	1.91×10^{-5}	2.99×10^{-4}
Mo-99		2.16×10^{-3}	3.77×10^{-3}	5.93×10^{-3}
Y-92		-	1.18×10^{-6}	1.18×10^{-6}
Ac-110m		1.99×10^{-2}	1.31×10^{-2}	3.30×10^{-2}
Ba-139		3.42×10^{-4}	0	3.42×10^{-4}
Nb-95		1.22×10^{-3}	1.02×10^{-3}	2.24×10^{-3}
Fe-59		2.18×10^{-3}	3.94×10^{-3}	6.12×10^{-3}
Co-57		7.82×10^{-4}	4.01×10^{-4}	1.18×10^{-3}
Xe-131m		3.97×10^{-4}	0	3.97×10^{-4}
Zr-95		2.23×10^{-4}	1.52×10^{-3}	1.74×10^{-3}
I-134		2.44×10^{-5}	1.42×10^{-4}	1.66×10^{-4}
In-115m		4.69×10^{-4}	2.79×10^{-5}	5.00×10^{-4}
Tc-99m		4.65×10^{-2}	5.87×10^{-3}	5.24×10^{-2}
Cd-115		2.35×10^{-3}	1.80×10^{-3}	4.15×10^{-3}
Sn-125m		2.98×10^{-3}	1.21×10^{-2}	1.51×10^{-2}
Ru-103		4.79×10^{-5}	0	4.79×10^{-5}
I-135		-	5.45×10^{-4}	5.45×10^{-4}
W-187		-	1.08×10^{-4}	1.08×10^{-4}
Cd-115m		-	5.01×10^{-4}	5.01×10^{-4}
Ce-134		-	3.17×10^{-3}	3.17×10^{-3}
Ar-41		-	2.06×10^{-5}	2.06×10^{-5}
Rb-88		-	2.95×10^{-2}	2.95×10^{-2}
8. Percent of Technical Specifications limit (15 Ci) for total activity released.		34.94	9.43	44.37