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Duke Power Company
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HAL B. Tucker
Vice President
Nuclear Production
(704)373-4531

DUKE POWER

August 29, 1988

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D. C. 20555

Re: Oconee Nuclear Station
Docket Nos. 50-269, -270, -287
Semi-Annual Radioactive Effluent Release Report

Dear Sir:

Pursuant to Oconee Nuclear Station Technical Specification 6.6.1.4 and 10 CFR 50.36a (a)(2), please find attached the 1988 Semi-Annual Radioactive Effluent Release Report for January 1-June 30, 1988.

Attachment 1 contains the Semi-Annual Radioactive Effluent Release and Solid Waste Disposal Reports. Attachment 2 provides details of unplanned (or abnormal) offsite releases. The meteorological data, concurrent with the release of gaseous effluents, is included as Attachment 3. Pursuant to Technical Specification 3.5.5, please find attached a description of all Radioactive Gas and Liquid Monitors that were inoperable for greater than 30 days (Attachment 4). Please note that no revisions to the Offsite Dose Calculation Manual were made during this reporting period.

Very truly yours,

Hal B. Tucker

1459/lcc

Attachments

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

Ms. Helen Pastis
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Mr. P. H. Skinner
NRC Resident Inspector
Oconee Nuclear Station

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Duke Power Company
Oconee Nuclear Station

Attachment 1

Radioactive Effluent Release and
Solid Waste Disposal Reports

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OCONEE NUCLEAR STATION
EFFLUENT AND WASTE DISPOSAL SUPPLEMENTAL INFORMATION
REPORT DATE: 09/23/88
PERIOD COVERED: START DAY = 001 STOP DAY = 182

I. REGULATORY LIMITS - STATION

A. NOBLE GASES - AIR DOSE
1. CALENDAR QUARTER - GAMMA DOSE = 15 MRAD
2. CALENDAR QUARTER - BETA DOSE = 30 MRAD
3. CALENDAR YEAR - GAMMA DOSE = 30 MRAD
4. CALENDAR YEAR - BETA DOSE = 60 MRAD

B. LIQUID EFFLUENTS - DOSE
1. CALENDAR QUARTER - TOTAL BODY DOSE = 4.5 MREM
2. CALENDAR QUARTER - ORGAN DOSE = 15 MREM
3. CALENDAR YEAR - TOTAL BODY DOSE = 9 MREM
4. CALENDAR YEAR - ORGAN DOSE = 30 MREM

C. IODINE - 131 AND 133, TRITIUM, PARTICULATES W/T 1/2) 8 DAYS - ORGAN DOSE
1. CALENDAR QUARTER = 22.5 MREM
2. CALENDAR YEAR = 45 MREM

II. MAXIMUM PERMISSIBLE CONCENTRATIO$
A. GASEOUS EFFLUENTS - INFORMATION FOUND IN OFFSITE DOSE CALCULATION MANUAL
B. LIQUID EFFLUENTS - INFORMATION FOUND IN 10CFR20, APPENDIX B, TABLE II, COLUMN 2

III. AVERAGE ENERGY - NOT APPLICABLE

IV. MEASUREMENTS AND APPROXIMATIONS OF TOTAL RADIOACTIVITY
INFORMATION FOUND IN OFFSITE DOSE CALCULATION MANUAL

V. BATCH RELEASES

A. LIQUID EFFLUENT
1. 8.83E+02 = TOTAL NUMBER OF BATCH RELEASES
2. 4.24E+05 = TOTAL TIME(MIN.) FOR BATCH RELEASES.
3. 4.46E+04 = MAXIMUM TIME(MIN.) FOR A BATCH RELEASE.
4. 4.80E+02 = AVERAGE TIME(MIN.) FOR A BATCH RELEASE.
5. 5.00E+00 = MINIMUM TIME(MIN.) FOR A BATCH RELEASE.
6. 2.46E+05 = AVERAGE DILUTION WATER FLOW DURING RELEASES(GPM).

B. GASEOUS EFFLUENT
1. 1.48E+02 = TOTAL NUMBER OF BATCH RELEASES.
2. 6.73E+05 = TOTAL TIME(MIN.) FOR BATCH RELEASES.
3. 4.46E+04 = MAXIMUM TIME(MIN.) FOR A BATCH RELEASE.
4. 4.55E+03 = AVERAGE TIME(MIN.) FOR A BATCH RELEASE.
5. 1.50E+01 = MINIMUM TIME(MIN.) FOR A BATCH RELEASE.

VI. ABNORMAL RELEASES

A. LIQUID
1. NUMBER OF RELEASES 1
2. TOTAL ACTIVITY RELEASED(CURIES) 6.53 CI

B. GASEOUS
1. NUMBER OF RELEASES 0
2. TOTAL ACTIVITY RELEASED(CURIES) 0

SUPPLEMENTAL REPORT PAGE 2
OCONEE NUCLEAR STATION

VALUES REPRESENTED BY "0.00E+00" WITHIN THE BODY OF THE SEMI-ANNUAL AND/OR ANNUAL REPORT ARE BELOW THE MINIMUM DETECTABLE LIMITS OF THE OCONEE COUNTING SYSTEMS. TYPICAL MDA'S FOR THE OCONEE COUNTING SYSTEM'S ARE LISTED BELOW:

ISOTOPE	ENERGY(Kev)	AVERAGE MDA
XE-133	80	1.32E-06
CE-144	133	1.42E-06
KR-88	196	1.82E-06
XE-135	249	5.04E-07
KR-87	402	9.99E-07
CS-137	661	3.17E-07
MO-99	778	1.22E-06
MN-54	834	2.18E-07
ZN-65	1115	4.27E-07
CO-60	1332	2.24E-07

OCONEE NUCLEAR STATION

The estimated percentage of error for both Liquid and Gaseous effluent release data at Oconee Nuclear Station has been determined to be ±23%. This number was derived by summing the following individual estimates of errors:

1) Flow rate determining devices = ± 5%

2) Counting error = ±15%

3) Sample preparation error = ± 3%

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OCONEE NUCLEAR STATION
RADIOACTIVE EFFLUENT RELEASES
DATE : 08/23/88

I. LIQUID RELEASES

YEAR : 1988

	UNITS	1ST QTR	2ND QTR	SUBTOTAL
1. GROSS RADIOACTIVITY				
A. TOTAL RELEASE	CURIES	7.85E-01	7.85E-01	1.57E+00
B. AVERAGE CONCENTRATION RELEASED	UCI/ML	6.08E-09	2.46E-09	3.50E-09
C. MAXIMUM CONCENTRATION RELEASED	UCI/ML	1.60E-07	1.29E-07	1.60E-07
2. TRITIUM				
A. TOTAL RELEASE	CURIES	2.40E+02	1.88E+02	4.28E+02
B. AVERAGE CONCENTRATION RELEASED	UCI/ML	1.86E-06	5.90E-07	9.56E-07
3. DISSOLVED NOBLE GASES				
A. TOTAL RELEASE	CURIES	1.93E+00	2.02E+00	3.94E+00
B. AVERAGE CONCENTRATION RELEASED	UCI/ML	1.49E-08	6.32E-09	8.81E-09
4. GROSS ALPHA ACTIVITY				
A. TOTAL RELEASE	CURIES	0.00E+00	0.00E+00	0.00E+00
B. AVERAGE CONCENTRATION RELEASED	UCI/ML	0.00E+00	0.00E+00	0.00E+00
5. VOLUME OF LIQUID WASTE TO DISCHARGE CANAL	LITERS	1.26E+09	1.04E+09	2.30E+09
6. VOLUME OF DILUTION WATER	LITERS	1.29E+11	3.19E+11	4.48E+11
7. RADIONUCLIDES RELEASED	CURIES			
NA-24		1.95E-04	1.22E-03	1.42E-03
CR-51		2.70E-02	2.91E-02	5.62E-02
MN-54		6.39E-04	1.16E-03	1.80E-03
FE-55		1.75E-02	5.56E-03	2.31E-02
FE-59		2.75E-04	1.07E-04	3.82E-04
CO-57		3.72E-04	1.76E-04	5.48E-04
CO-58		3.21E-01	5.91E-02	3.80E-01
CO-60		1.55E-02	1.43E-02	2.98E-02
RB-88		2.41E-04	0.00E+00	2.41E-04
SR-89		0.00E+00	2.66E-04	2.66E-04
SR-90		1.62E-05	9.45E-05	1.11E-04
SR-92		8.72E-04	8.26E-03	9.13E-03
ZR-95		1.58E-02	2.75E-03	1.86E-02
NB-95		1.60E-02	1.22E-02	2.82E-02
NB-97		3.76E-03	4.45E-02	4.83E-02
MO-99		0.00E+00	2.40E-04	2.40E-04
TC-99M		4.55E-04	4.39E-04	8.94E-04
RU-103		1.75E-02	1.54E-03	1.90E-02
RU-106		1.00E-02	0.00E+00	1.00E-02
AG-110M		1.74E-02	5.04E-02	6.78E-02
I-131		4.21E-02	4.46E-02	8.67E-02
I-132		1.18E-03	3.37E-04	1.52E-03
I-133		2.88E-02	2.59E-04	2.90E-02
SB-122		2.65E-03	3.28E-04	2.98E-03
SB-124		1.32E-02	5.46E-02	6.79E-02
SB-125		1.61E-01	3.84E-01	5.46E-01
CS-134		1.34E-02	6.99E-03	2.04E-02
CS-136		5.98E-06	1.79E-05	2.39E-05
CS-137		3.41E-02	2.29E-02	5.69E-02
CS-138		3.95E-04	1.41E-03	1.81E-03
BA-139		0.00E+00	2.78E-02	2.78E-02
BA-140		4.57E-04	1.09E-04	5.66E-04
LA-140		3.70E-03	4.37E-03	8.08E-03
CE-141		5.33E-03	3.11E-04	5.64E-03
CE-144		9.93E-03	2.97E-03	1.29E-02
W-187		0.00E+00	1.99E-04	1.99E-04
NP-239		3.02E-03	5.78E-04	3.60E-03
SB-126		2.73E-04	1.04E-03	1.32E-03
AR-41		2.67E-05	0.00E+00	2.67E-05
KR-85		4.40E-04	3.25E-03	3.69E-03
XE-131M		9.52E-03	3.28E-02	4.23E-02
XE-133		1.89E+00	1.96E+00	3.85E+00
XE-133M		1.38E-02	1.42E-02	2.80E-02
XE-135		1.69E-02	2.89E-03	1.98E-02

OCONEE LIQUID DOSE RELEASE 001-091 88 ALL 08/23/88

SKIN	MAXIMUM DOSE-	5.23D-03 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	SHORE	
	CO 58	9.09 %					
	CO 60	24.93 %					
	SB 125	27.04 %					
	CS 134	6.80 %					
	CS 137	26.08 %					
BONE	MAXIMUM DOSE-	3.99D-01 MREM	CRITICAL AGE-	CHILD	CRITICAL PATHWAY-	FISH	
	CS 134	21.71 %					
	CS 137	77.29 %					
LIVER	MAXIMUM DOSE-	5.17D-01 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	FISH	
	CS 134	32.11 %					
	CS 137	61.97 %					
T. BODY	MAXIMUM DOSE-	3.75D-01 MREM	CRITICAL AGE-	ADULT	CRITICAL PATHWAY-	FISH	
	H 3	9.73 %					
	CS 134	35.71 %					
	CS 137	53.70 %					
THYROID	MAXIMUM DOSE-	4.45D-01 MREM	CRITICAL AGE-	INFANT	CRITICAL PATHWAY-	DRINKING	
	H 3	10.58 %					
	I 131	80.26 %					
	I 133	9.15 %					
KIDNEY	MAXIMUM DOSE-	1.96D-01 MREM	CRITICAL AGE-	ADULT	CRITICAL PATHWAY-	FISH	
	H 3	18.64 %					
	CS 134	27.10 %					
	CS 137	53.37 %					
LUNG	MAXIMUM DOSE-	1.01D-01 MREM	CRITICAL AGE-	CHILD	CRITICAL PATHWAY-	DRINKING	
	H 3	48.20 %					
	CS 134	15.74 %					
	CS 137	34.56 %					
GI-LLI	MAXIMUM DOSE-	4.83D-01 MREM	CRITICAL AGE-	ADULT	CRITICAL PATHWAY-	FISH	
	H 3	7.55 %					
	NB 95	83.18 %					

OCONEE LIQUID DOSE RELEASE 092-182 88 ALL 08/23/88

SKIN	MAXIMUM DOSE-	7.38D-03 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	SHORE	
	CO 60	18.26 %					
	AG 110M	10.25 %					
	SB 125	51.22 %					
	CS 137	13.91 %					
BONE	MAXIMUM DOSE-	2.91D-01 MREM	CRITICAL AGE-	CHILD	CRITICAL PATHWAY-	FISH	
	CS 134	17.40 %					
	CS 137	79.71 %					
LIVER	MAXIMUM DOSE-	3.67D-01 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	FISH	
	H 3	6.19 %					
	CS 134	26.41 %					
	CS 137	65.62 %					
T. BODY	MAXIMUM DOSE-	2.64D-01 MREM	CRITICAL AGE-	ADULT	CRITICAL PATHWAY-	FISH	
	H 3	12.16 %					
	CS 134	29.57 %					
	CS 137	57.25 %					
THYROID	MAXIMUM DOSE-	4.66D-01 MREM	CRITICAL AGE-	INFANT	CRITICAL PATHWAY-	DRINKING	
	H 3	8.92 %					
	I 131	90.99 %					
KIDNEY	MAXIMUM DOSE-	1.44D-01 MREM	CRITICAL AGE-	CHILD	CRITICAL PATHWAY-	FISH	
	H 3	29.76 %					
	CS 134	17.90 %					
	CS 137	50.35 %					
LUNG	MAXIMUM DOSE-	8.16D-02 MREM	CRITICAL AGE-	CHILD	CRITICAL PATHWAY-	DRINKING	
	H 3	52.51 %					
	CS 134	11.36 %					
	CS 137	32.11 %					
GI-LLI	MAXIMUM DOSE-	4.16D-01 MREM	CRITICAL AGE-	ADULT	CRITICAL PATHWAY-	FISH	
	H 3	7.74 %					
	NB 95	82.53 %					

OCONEE LIQUID DOSE RELEASE 001-182 88 ALL 08/23/88

SKIN	MAXIMUM DOSE-	1.25D-02 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	SHORE	
	CO 60	21.20 %					
	AG 110M	7.68 %					
	SB 125	40.57 %					
	CS 137	19.26 %					
BONE	MAXIMUM DOSE-	6.96D-01 MREM	CRITICAL AGE-	CHILD	CRITICAL PATHWAY-	FISH	
	CS 134	20.05 %					
	CS 137	78.21 %					
LIVER	MAXIMUM DOSE-	8.92D-01 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	FISH	
	H 3	5.45 %					
	CS 134	29.95 %					
	CS 137	63.34 %					
T. BODY	MAXIMUM DOSE-	6.45D-01 MREM	CRITICAL AGE-	ADULT	CRITICAL PATHWAY-	FISH	
	H 3	10.66 %					
	CS 134	33.39 %					
	CS 137	55.03 %					
THYROID	MAXIMUM DOSE-	9.10D-01 MREM	CRITICAL AGE-	INFANT	CRITICAL PATHWAY-	DRINKING	
	H 3	9.76 %					
	I 131	85.47 %					
KIDNEY	MAXIMUM DOSE-	3.42D-01 MREM	CRITICAL AGE-	ADULT	CRITICAL PATHWAY-	FISH	
	H 3	20.10 %					
	CS 134	24.94 %					
	CS 137	53.84 %					
LUNG	MAXIMUM DOSE-	1.83D-01 MREM	CRITICAL AGE-	CHILD	CRITICAL PATHWAY-	DRINKING	
	H 3	49.97 %					
	CS 134	13.93 %					
	CS 137	33.53 %					
GI-LLI	MAXIMUM DOSE-	9.02D-01 MREM	CRITICAL AGE-	ADULT	CRITICAL PATHWAY-	FISH	
	H 3	7.62 %					
	NB 95	82.91 %					

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OCONEE NUCLEAR STATION
RADIOACTIVE EFFLUENT RELEASES
DATE : 08/23/88

II. AIRBORNE RELEASES

YEAR : 1988

	UNITS	1ST QTR	2ND QTR	SUBTOTAL
1. TOTAL NOBLE GASES	CURIES	4.35E+03	1.41E+04	1.85E+04
2. TOTAL HALOGENS	CURIES	1.24E-02	2.43E-02	3.67E-02
3. TOTAL PARTICULATE GROSS BETA-GAMMA	CURIES	4.90E-02	1.17E-02	6.07E-02
4. TOTAL TRITIUM	CURIES	1.48E+01	4.36E+00	1.91E+01
5. TOTAL PARTICULATE GROSS ALPHA ACTIVITY	CURIES	0.00E+00	0.00E+00	0.00E+00
6. MAXIMUM NOBLE GAS RELEASE RATE	UCI/SEC	1.60E+03	1.60E+03	1.60E+03
7. RADIONUCLIDES RELEASED	CURIES			
PARTICULATES				
NA-24		0.00E+00	9.02E-09	9.02E-09
MN-54		0.00E+00	6.05E-07	6.05E-07
CO-57		3.08E-08	1.57E-07	1.88E-07
CO-58		2.13E-06	3.24E-05	3.46E-05
CO-60		4.41E-06	7.30E-05	7.74E-05
RB-88		3.07E-02	9.18E-03	3.99E-02
RB-89		0.00E+00	1.35E-05	1.35E-05
SR-89		1.50E-02	9.81E-07	1.50E-02
SR-90		0.00E+00	3.03E-07	3.03E-07
SR-92		0.00E+00	5.28E-07	5.28E-07
ZR-95		0.00E+00	9.26E-07	9.26E-07
NB-95		0.00E+00	1.37E-06	1.37E-06
NB-97		2.59E-07	3.65E-06	3.91E-06
TC-99M		0.00E+00	4.65E-07	4.65E-07
RU-103		1.01E-05	2.23E-05	3.24E-05
RU-106		0.00E+00	3.48E-05	3.48E-05
AG-110M		0.00E+00	8.28E-06	8.28E-06
SB-122		3.51E-07	0.00E+00	3.51E-07
SB-125		6.35E-07	3.28E-06	3.91E-06
CS-134		9.00E-05	2.51E-04	3.41E-04
CS-136		6.48E-07	5.62E-06	6.26E-06
CS-137		3.32E-04	5.75E-04	9.07E-04
CS-138		2.83E-03	1.46E-03	4.29E-03
LA-140		0.00E+00	1.33E-08	1.33E-08
CE-141		0.00E+00	2.02E-07	2.02E-07
CE-143		8.24E-06	8.27E-06	1.65E-05
CE-144		0.00E+00	3.52E-06	3.52E-06
HALOGENS				
I-131		8.24E-03	1.47E-02	2.30E-02
I-132		2.18E-04	7.74E-04	9.93E-04
I-133		3.08E-03	6.59E-03	9.67E-03
I-134		1.39E-04	2.38E-05	1.63E-04
I-135		7.32E-04	2.12E-03	2.85E-03
GASES				
AR-41		0.00E+00	7.88E+00	7.88E+00
KR-85		9.15E+02	7.47E+02	1.66E+03
KR-85M		4.16E-01	1.05E+01	1.09E+01
KR-87		0.00E+00	2.30E+00	2.30E+00
KR-88		1.27E+00	8.98E+00	1.03E+01
XE-131M		5.21E+01	3.01E+02	3.53E+02
XE-133		3.34E+03	1.28E+04	1.61E+04
XE-133M		1.57E+01	7.96E+01	9.53E+01
XE-135		1.94E+01	1.61E+02	1.80E+02
XE-135M		0.00E+00	1.20E+00	1.20E+00

OCONEE GROUND AND ELEVATED COMBINED SUMMARY 001-091 88 08/23/88
SPECIAL LOCATION
AT 4.00 MILES S

NOBLE GAS EXPOSURE:

BETA AIR DOSE = 7.07E-02 MILLIRADS
GAMMA AIR DOSE = 1.65E-02 MILLIRADS

TOTAL BODY DOSE = 9.66E-03 MILLIREM TOTAL SKIN DOSE = 4.31E-02 MILLIREM
KR 85 1.38% 37.39%
XE133 92.68% 58.53%

OCONEE GROUND AND ELEVATED COMBINED SUMMARY 001-091 88 08/23/88
SPECIAL LOCATION
AT 4.50 MILES WNW

IODINE, PARTICULATE, AND TRITIUM EXPOSURE SUMMARY:

MAXIMUM ORGAN - THYROID
CRITICAL AGE - INFANT
CRITICAL PATHWAY - COW MILK @ 99.84%

MAXIMUM ORGAN DOSE = 1.16E-01 MILLIREM
I 131 99.57%

OCONEE GROUND AND ELEVATED COMBINED SUMMARY 092-182 88 08/23/88
SPECIAL LOCATION
AT 4.00 MILES S

NOBLE GAS EXPOSURE:

BETA AIR DOSE = 2.07E-01 MILLIRADS
GAMMA AIR DOSE = 6.71E-02 MILLIRADS

TOTAL BODY DOSE = 3.96E-02 MILLIREM		TOTAL SKIN DOSE = 1.24E-01 MILLIREM
KR 85	0.27%	10.58%
XE133	86.63%	78.02%
XE135	6.66%	5.63%

OCONEE GROUND AND ELEVATED COMBINED SUMMARY 092-182 88 08/23/88
SPECIAL LOCATION
AT 2.00 MILES W

IODINE, PARTICULATE, AND TRITIUM EXPOSURE SUMMARY:

MAXIMUM ORGAN - THYROID
CRITICAL AGE - INFANT
CRITICAL PATHWAY - COW MILK @ 99.30%

MAXIMUM ORGAN DOSE = 2.08E-01 MILLIREM
I 131 99.18%

OCONEE GROUND AND ELEVATED COMBINED SUMMARY 001-182 88 08/23/88
SPECIAL LOCATION
AT 4.00 MILES S

NOBLE GAS EXPOSURE:

BETA AIR DOSE = 2.77E-01 MILLIRADS
GAMMA AIR DOSE = 8.36E-02 MILLIRADS

TOTAL BODY DOSE = 4.93E-02 MILLIREM		TOTAL SKIN DOSE = 1.67E-01 MILLIREM	
KR 85	0.49%		17.59%
XE133	87.82%		72.87%
XE135	6.02%		4.71%

OCONEE GROUND AND ELEVATED COMBINED SUMMARY 001-182 88 08/23/88
SPECIAL LOCATION
AT 3.50 MILES NNE

IODINE, PARTICULATE, AND TRITIUM EXPOSURE SUMMARY:

MAXIMUM ORGAN - THYROID
CRITICAL AGE - INFANT
CRITICAL PATHWAY - GOATMILK @ 99.49%

MAXIMUM ORGAN DOSE = 3.19E-01 MILLIREM
I 131 99.35%

OCONEE NUCLEAR STATION

SOLID RADIOACTIVE WASTE SHIPPED TO A DISPOSAL FACILITY

REPORT PERIOD 1/1/88 THROUGH 6/30/88

	TYPES OF WASTE SHIPPED	NUMBER OF SHIPMENTS	NUMBER OF CONTAINERS	WASTE CLASS	CONT. TYPE	BURIAL VOLUME (ft^3)	BURIAL VOLUME (m^3)	TOTAL ACT. Ci	EST. TOTAL ERROR %
1	WASTE FROM LIQUID SYSIEMS								
	(A) Dewatered Secondary Resins	5	15	AU	STC	3091.5	87.54	1.47	10
	(B) Dewatered Bead Resins	0	0	N/A	N/A	0	0	0	N/A
	(C) Evaporator Concentrates	0	0	N/A	N/A	0	0	0	N/A
	(D) Dewatered Mechanical Filters	2	7	1AS,4AU 2B	A,STC A	482.9	13.67	16.46	15
	(E) Dewatered Demineralizers	7	21	B	STC	804.3	22.78	127.16	10
	(F) Solidified Oils, Acids, Sludges	0	0	N/A	N/A	0	0	0	N/A
2	DRY SOLID WASTE								
	(A) Dry Active Waste (compacted)	0	0	N/A	N/A	0	0	0	N/A
	(B) Dry Active Waste (non-compac)	1	9	AU	STC	828.0	23.45	0.12	15
	(C) Dry Active Waste (brokered)	---	---	AU	STC	3734.1	105.74	7.76	15
	(D) Irradiated Components	3	3	C	B	172.2	4.88	11,130.0	15
	TOTALS	18**	55**	--	--	9113.0	258.06	11,282.97	--

** does not include brokered totals

SUMMARY OF MAJOR RADIONUCLIDE COMPOSITION

Type of Wastes	Radionuclide	% Abundance*
1. Wastes from Liquid Systems		
(A) Dewatered Powdex Resins	C-14	0.3
	Nb95	0.1
	Ba140	0.2
	Xe133	0.9
	Xe131m	0.4
	La140	0.2
	Cr51	0.7
	Co58	10.1
	Co60	0.9
	Ni63	1.3
	Cs134	13.8
	Cs136	0.2
	Cs137	49.7
	Fe55	2.9
	I131	17.4
	Mn54	0.5
	Ag110M	0.4
(B) Dewatered Bead Resins	(None Shipped This Period)	
(C) Evaporator Concentrates	(None Shipped This Period)	
(D) Dewatered Mechanical Filters	Mn54	2.6
	Ag110M	2.2
	Sb125	.56
	C14	1.1
	Co58	7.6
	Co60	14.95
	Ni63	13.33
	Cs134	2.7
	Cs137	35.2
	Fe55	19.67
(E) Dewatered Demineralizers	Cs137	36.0
	Fe55	3.0
	I131	1.0
	Mn54	0.3
	Ag110M	1.1
	Sb125	0.6
	Nb95	0.2
	Cr51	1.0
	Zr95	0.1
	Ru103	1.0
	Co58	22.0
	Co60	2.0
	Ni63	5.0
	Cs134	27.0
	Cs136	0.2
(F) Solidified Acids, Oils, Sludges	(None Shipped This Period)	

*average % abundance for all shipments

CONTINUED.....

Type of Wastes	Radionuclide	% Abundance*
2. Dry Solid Waste		
(A) Dry Active Waste (Compacted)	TRU	0.01
	Sr90	0.03
	H3	0.28
	Mn54	1.92
	Co58	4.61
	Co60	14.32
	Ag110M	2.42
	Cs134	9.43
	Cs137	29.87
	Ni63	9.74
	Fe55	25.5
	C14	0.80
	Pu241	1.07
(B) Dry Active Waste (Non-Compacted)	Co58	4.6
	Co60	14.3
	Ni63	9.7
	Sr90	0.03
	Cs134	9.4
	Cs137	29.9
	Fe55	25.5
	Mn54	1.9
	Ag110M	2.4
	C14	0.8
	H3	0.3
	Pu241	1.1
(C) Irradiated Components	Co58	8.3
	Co60	48.1
	Ni63	17.6
	Fe55	19.16
	Mn54	2.1
	Sb125	4.0
	H3	0.46
	Ni59	0.13

Duke Power Company
Oconee Nuclear Station

Attachment 2

Summary of Unplanned Radioactive
Releases to Unrestricted Areas

Date: February 11, 1988

Description and Equipment

Valve packing for the Unit 1 Loop "A" High Pressure Injection (HPI) instrument root valve ruptured under system pressure when the gland nut was loosened by Maintenance personnel. Unit 1 was at 100% power.

Cause

The valve being worked on was thought to be a Unit 2 instrument root valve, but inadequate component identification and verification directed the Maintenance personnel to a Unit 1 valve.

Corrective Action to Prevent Recurrence

The leaking valve was isolated and repacked. Proper component identification and verification have been emphasized to all appropriate personnel.

Consequences

Approximately 500 gallons of radioactive water and noble gases were released into the Auxiliary Building, and two Maintenance mechanics were slightly contaminated. Approximately 4.12 Curies and 2.41 Curies were released from Units 1 and 2, respectively, resulting in approximately 3.45 E-5 mrad gamma air dose and 8.84 E-5 mrad beta air dose. Doses to the public were well below Technical Specification limits.

Duke Power Company
Oconee Nuclear Station

Attachment 3

Meteorological Data

PASQUILL STABILITY A

	WIND SPEED CLASS										
	0.45-1.49	1.50-2.49	2.50-3.49	3.50-4.49	4.50-5.49	5.50-6.49	6.50-7.49	7.50-8.49	8.50-9.49	>9.50 M/S	TOTAL
	NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.
SECTOR											
-N-	7	11	3	1	.	1	1	.	.	.	24
-NNE-	3	15	6	3	2	1	.	.	.	.	30
-NE-	3	4	10	6	2	.	1	.	.	.	26
-ENE-	2	2	3	12	2	4	1	2	1	.	29
-E-	.	1	5	9	4	3	2	.	.	.	24
-ESE-	.	5	5	2	.	.	.	.	.	.	12
-SE-	1	6	11	.	1	.	.	.	.	.	19
-SSE-	2	9	21	8	1	.	.	.	.	1	42
-S-	5	14	25	19	8	1	1	.	.	1	74
-SSW-	9	36	50	22	29	9	4	2	1	2	164
-SW-	7	49	49	25	7	14	5	1	.	5	162
-WSW-	13	29	23	4	3	5	5	4	.	2	88
-W-	11	14	8	3	.	1	2	3	4	.	46
-WNW-	11	5	4	3	8	10	10	5	7	9	72
-NW-	7	4	3	2	1	4	11	5	1	4	42
-NNW-	8	6	1	2	3	.	2	.	.	.	22
-CALM-	1	.	.	.	.	.	.	.	.	.	1
TOTAL	90	210	227	121	71	53	45	22	14	24	877

PASQUILL STABILITY C

	WIND SPEED CLASS										
	0.45-1.49	1.50-2.49	2.50-3.49	3.50-4.49	4.50-5.49	5.50-6.49	6.50-7.49	7.50-8.49	8.50-9.49	>9.50 M/S	TOTAL
	NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.
SECTOR											
-N-	2	2	1	.	.	.	1	.	.	.	6
-NNE-	1	8	6	2	1	1	.	.	.	.	19
-NE-	1	2	1	2	1	3	4	.	.	.	14
-ENE-	.	.	2	3	1	2	2	.	.	.	10
-E-	2	3	1	1	1	1	.	.	.	.	9
-ESE-	1	4	1	2	2	1	.	.	.	.	11
-SE-	1	1	.	1	.	.	.	.	.	.	3
-SSE-	2	4	7	3	1	.	.	.	.	.	17
-S-	2	4	8	1	1	.	.	.	.	.	16
-SSW-	1	5	8	4	2	4	.	.	.	1	25
-SW-	1	11	5	4	3	.	2	1	2	.	29
-WSW-	4	11	2	2	1	.	1	.	1	.	22
-W-	5	5	.	1	1	1	1	2	.	2	18
-WNW-	3	4	2	2	1	2	3	1	5	2	25
-NW-	3	3	4	2	4	3	2	3	.	.	24
-NNW-	4	3	.	1	.	1	.	.	.	1	10
TOTAL	33	70	48	31	20	19	16	7	8	6	258

PASQUILL STABILITY D

	WIND SPEED CLASS										
	0.45-1.49	1.50-2.49	2.50-3.49	3.50-4.49	4.50-5.49	5.50-6.49	6.50-7.49	7.50-8.49	8.50-9.49	>9.50 M/S	TOTAL
SECTOR	NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.
-N-	8	19	4	7	4	2	4	.	1	.	49
-NNE-	13	19	7	9	8	2	5	2	.	.	65
-NE-	3	6	9	8	9	5	2	1	1	.	44
-ENE-	3	6	6	14	13	15	8	1	1	.	67
-E-	4	8	5	7	2	1	.	.	.	.	27
-ESE-	2	5	13	2	.	.	.	.	.	.	22
-SE-	1	9	7	3	.	.	.	.	.	.	20
-SSE-	8	20	15	7	2	1	1	.	.	.	54
-S-	9	14	7	7	1	1	2	.	.	.	41
-SSW-	14	8	7	11	5	6	2	.	.	1	54
-SW-	5	14	12	17	19	9	4	4	1	.	85
-WSW-	8	10	13	10	5	3	5	3	2	4	63
-W-	10	11	2	4	4	12	6	2	6	2	59
-WNW-	13	7	4	.	6	12	16	12	11	4	85
-NW-	9	9	7	7	2	5	9	8	5	4	65
-NNW-	10	11	1	5	1	2	.	4	.	.	34
TOTAL	120	176	119	118	81	76	64	37	28	15	834

PASQUILL STABILITY E

	WIND SPEED CLASS										
	0.45-1.49	1.50-2.49	2.50-3.49	3.50-4.49	4.50-5.49	5.50-6.49	6.50-7.49	7.50-8.49	8.50-9.49	>9.50 M/S	TOTAL
	NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.
SECTOR											
-N-	19	72	28	7	2	.	1	.	.	1	130
-NNE-	14	46	29	6	1	.	.	.	.	.	96
-NE-	7	24	25	14	2	.	.	1	.	.	73
-ENE-	6	14	17	12	7	1	3	2	1	.	63
-E-	3	12	12	11	2	1	.	.	.	.	41
-ESE-	9	14	10	1	.	.	.	.	.	.	34
-SE-	6	14	13	8	1	.	.	.	.	.	42
-SSE-	9	16	19	18	4	1	.	.	.	.	67
-S-	8	13	11	9	7	2	.	.	.	.	50
-SSW-	6	15	25	11	7	6	.	.	.	.	70
-SW-	13	31	26	25	12	4	2	.	.	5	118
-WSW-	16	21	14	9	6	3	2	.	.	4	75
-W-	17	14	12	18	15	7	2	3	2	2	92
-WNW-	28	11	10	16	15	8	13	1	3	3	108
-NW-	29	20	12	13	5	6	2	1	1	1	90
-NNW-	22	28	10	3	6	2	.	.	.	.	71
-CALM-	6	.	.	.	.	.	.	.	.	.	6
TOTAL	218	365	273	181	92	41	25	8	7	16	1226

PASQUILL STABILITY F

	WIND SPEED CLASS								
	0.45-1.49	1.50-2.49	2.50-3.49	3.50-4.49	4.50-5.49	5.50-6.49	7.50-8.49	>9.50 M/S	TOTAL
	NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.
SECTOR									
-N-	22	74	45	1	.	.	.	.	142
-NNE-	16	44	24	1	.	.	.	.	85
-NE-	5	12	5	1	.	.	.	.	23
-ENE-	7	5	5	.	.	.	.	.	17
-E-	7	6	3	1	.	.	.	.	17
-ESE-	5	8	4	2	.	.	.	.	19
-SE-	2	7	4	1	1	.	.	.	15
-SSE-	5	10	3	3	.	.	.	1	22
-S-	4	3	3	2	2	.	.	.	14
-SSW-	2	7	6	5	.	.	.	.	20
-SW-	4	5	6	3	.	.	.	.	18
-WSW-	8	13	8	2	1	1	.	.	33
-W-	12	5	3	2	2	1	1	.	26
-WNW-	10	13	3	1	2	.	.	.	29
-NW-	22	12	1	1	1	.	.	.	37
-NNW-	15	24	5	.	.	.	.	.	44
-CALM-	2	.	.	.	.	.	.	.	2
TOTAL	148	248	128	26	9	2	1	1	563

PASQUILL STABILITY G

	WIND SPEED CLASS					
	0.45-1.49	1.50-2.49	2.50-3.49	3.50-4.49	7.50-8.49	TOTAL
SECTOR	NO.	NO.	NO.	NO.	NO.	NO.
-N-	8	25	8	1	.	42
-NNE-	9	12	10	1	.	32
-NE-	3	10	2	.	.	15
-ENE-	3	1	.	.	.	4
-E-	5	2	.	.	.	7
-ESE-	4	3	.	.	.	7
-SE-	2	3	1	.	.	6
-SSE-	.	3	1	1	.	5
-S-	4	3	1	1	.	9
-SSW-	3	2	3	1	.	9
-SW-	8	4	6	1	.	19
-WSW-	6	5	2	1	2	16
-W-	2	3	.	1	.	6
-WNW-	5	2	3	.	.	10
-NW-	6	6	1	.	.	13
-NNW-	5	10	4	.	.	19
TOTAL	73	94	42	8	2	219

ALL STABILITY CLASSES

	WIND SPEED CLASS										
	0.45-1.49	1.50-2.49	2.50-3.49	3.50-4.49	4.50-5.49	5.50-6.49	6.50-7.49	7.50-8.49	8.50-9.49	>9.50 M/S	TOTAL
	NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.
SECTOR											
-N-	66	203	89	17	6	3	7	.	1	1	393
-NNE-	56	144	82	22	12	4	5	2	.	.	327
-NE-	22	58	52	31	14	8	7	2	1	.	195
-ENE-	21	28	33	41	23	22	14	5	3	.	190
-E-	21	32	26	29	9	6	2	.	.	.	125
-ESE-	21	39	33	9	2	1	.	.	.	.	105
-SE-	13	40	36	13	3	.	.	.	.	.	105
-SSE-	26	62	66	40	8	2	1	.	.	2	207
-S-	32	51	55	39	19	4	3	.	.	1	204
-SSW-	35	73	99	54	43	25	6	2	1	4	342
-SW-	38	114	104	75	41	27	13	6	3	10	431
-WSW-	55	89	62	28	16	12	13	9	3	10	297
-W-	57	52	25	29	22	22	11	11	12	6	247
-WNW-	70	42	26	22	32	32	42	19	26	18	329
-NW-	76	54	28	25	13	18	24	17	7	9	271
-NNW-	64	82	21	11	10	5	2	4	.	1	200
-CALM-	9	.	.	.	.	.	.	.	.	.	9
TOTAL	682	1163	837	485	273	191	150	77	57	62	3977

Duke Power Company
Oconee Nuclear Station

Attachment 4

Radioactive Gas and Liquid Monitors
Inoperable for Greater Than 30 Days

Radioactive Gas and Liquid Monitors

Inoperable Greater Than 30 Days

1, 2, 3 RIA-35

RIA-35 for each unit has been inoperable during the entire reporting period, January 1, 1988 to June 30, 1988. These RIAs which monitor Low Pressure Service Water (LPSW) have been out of service for an extended period due to system design inadequacies. As presently configured, these monitors do not receive a sufficiently representative composite sample for all portions of the LPSW system. These monitors will be returned to service following implementation of a Nuclear Station Modification which will identify and resolve LPSW design difficulties.

Hot Machine Shop Ventilation Particulate and Iodine Samplers

The Particulate and Iodine Samplers for the Hot Machine Shop Ventilation System were out of service for the entire reporting period, January 1, 1988 to June 30, 1988. These Samplers have never operated reliably since initial attempts to place them in service, apparently due to design problems. Resolution is being pursued with site and corporate design engineers to determine the problems and provide corrective actions.

Radwaste Facility Ventilation Monitoring System

The Radwaste Facility Noble Gas Activity Monitor (4 RIA-45), the Iodine Sampler, the Particulate Sampler, the Effluent Flow Rate Monitor, and the Sampler Flow Rate Monitor were all out of service for the entire reporting period, January 1, 1988 to June 30, 1988. These instruments are all integrated into one system which has not operated satisfactorily since initial employment of the Radwaste Facility for radwaste processing. The apparent design problems in this system will be resolved by a Nuclear Station Modification and the system will be put into service.