

50-268/210/287

## NRC DISTRIBUTION FOR PART 50 DOCKET MATERIAL

FILE NUMBER

TO:  Mr. A. Schwencer		FROM: Duke Power Company Charlotte, North Carolina William O. Parker		DATE OF DOCUMENT 6/14/77
<input checked="" type="checkbox"/> LETTER <input checked="" type="checkbox"/> ORIGINAL <input type="checkbox"/> COPY		<input type="checkbox"/> NOTORIZED <input checked="" type="checkbox"/> UNCLASSIFIED	PROP	DATE RECEIVED 6/20/77
DESCRIPTION		ENCLOSURE		
RE LTR 4-18-77 <b>ACKNOWLEDGED</b> <b>DO NOT REMOVE</b> (1-P)		Consists of information related to equilibrium & transient iodine activity for the period March, 1976 to March, 1977..  (17-P)		
PLANT NAME: Oconee Units 1-2-3				
RJL 6/20/77				

SAFETY	FOR ACTION/INFORMATION	ENVIRONMENTAL
ASSIGNED AD:		ASSIGNED AD: V. MOORE (LTR)
BRANCH CHIEF:	Schwenger (sl)	BRANCH CHIEF:
PROJECT MANAGER:	Neighbors	PROJECT MANAGER:
LICENSING ASSISTANT:	Sheppard	LICENSING ASSISTANT:
		B. HARLESS

INTERNAL DISTRIBUTION			
REG FILES	SYSTEMS SAFETY	PLANT SYSTEMS	SITE SAFETY &
NRC PDR	HEINEMAN	TEDESCO	ENVIRON ANALYSIS
I & E (2)	SCHROEDER	BENAROYA	DENTON & MULLER
OELD		LAINAS	CRUTCHFIELD
GOSSICK & STAFF	ENGINEERING	IPPOLITO	
HANAHER	KNIGHT	F. ROSA	ENVIRO TECH.
MIPC	BOSNAK		ERNST
CASE	SIHWELL	OPERATING REACTORS	BALLARD
BOYD	PAWLICKI	STELLO	YOUNGBLOOD
		EISENHUT	
PROJECT MANAGEMENT	REACTOR SAFETY	SHAO	SITE TECH.
SKOVHOLT	ROSS	BAER	
P. COLLINS	NOVAK	BUTLER	GAMMILL (2)
HOUSTON	ROSZTOCZY	GRIMES	
MELTZ	CHECK		SITE ANALYSIS
HELTEMES			VOLLMER
SK	AT&I		BUNCH
	SALTZMAN		J. COLLINS
	RUTBERG		KREGER

EXTERNAL DISTRIBUTION		CONTROL NUMBER
LPDR: Walhalla SC		
TIC	NSIC	
NAT LAB		
REG IV (J. HANCHETT)		
16 CYS ACRS SENT CATEGORY	B	
		771710068

# DUKE POWER COMPANY

POWER BUILDING

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

June 14, 1977

WILLIAM O. PARKER, JR.  
VICE PRESIDENT  
STEAM PRODUCTION

TELEPHONE: AREA 704  
373-4083

## REGULATORY DOCKET FILE COPY

Mr. A. Schwencer, Chief  
Operating Reactor Branch #1  
Division of Operating Reactors  
U. S. Nuclear Regulatory Commission  
Washington, D. C. 20555



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

Dear Mr. Schwencer:

As requested by your letter of April 18, 1977, please find attached information related to equilibrium and transient iodine activity at Oconee Nuclear Station for the period March, 1976 to March, 1977.

Very truly yours,

*W. O. Parker, Jr.*

William O. Parker, Jr. *By [Signature]*

WOP/jm

cc: Mr. R. T. Bond	Mr. H. B. Tucker
Mr. J. E. Smith	Mr. K. S. Canady
Mr. R. F. Wardell	Mr. D. C. Holt
Mr. R. B. Thompson	Mr. M. S. Tuckman
Mr. W. A. Haller	Mr. Lionel Lewis
Mr. C. T. Yongue	
Master File: OS 801.03	
Section File: OS 801.03	

771710068

OCONEE NUCLEAR STATION

EQUILIBRIUM AND TRANSIENT IODINE ACTIVITY

EXPLANATORY NOTES

- 1.0 Date - Date transient occurred.
- 2.0 Percent Power - Net power changes in excess of 25%. Length of time over which power change occurred is not qualified due to the relative inaccessibility of this data.
- 3.0 Isotope - Isotopes as requested.
- 4.0 Concentration - Expressed as microcuries per milliliter.
  - 4.1 First and second columns are measurements taken prior to transient.
  - 4.2 Third column is measurement of transient peak.
  - 4.3 Fourth column is measurement of post-transient equilibrium.
- 5.0 Measurements were not reported if they were less than  $10^{-3}$  microcuries per milliliter or were not taken based on previously indicated activity levels.
- 6.0 Units that operated at constant power level for entire month experienced no transients.
- 7.0 Units that were out of service for the entire month experienced no transients.

# OCONEE NUCLEAR STATION

UNIT NO. 1

1. 100% Reactor Thermal Power = 2568 MWE
2. RC System Cleanup Flowrate = 70 GPM
3. RC System Temperature = 532°F
4. RC System Pressure = 2155 PSI

DATE	% POWER	ISOTOPE	RC SYSTEM ACTIVITY			
			CONCENTRATION $\mu\text{Ci}/\text{ml}$			
3-23-77	100 down	I-131	$5.5 \times 10^{-1}$	0.30	0.42	0.30
		I-133	0.18	0.55	0.35	0.12
		Xe-133	1.40	1.35	1.75	0.10
		Xe-135	0.37	0.82	0.57	0.13
3-13-77	100 up	I-131	$6.4 \times 10^{-1}$	0.28	0.12	$4.4 \times 10^{-1}$
		I-133		$<10^{-3}$		
		Xe-133	0.62	0.90	1.20	0.62
		Xe-135	0.60	0.70	0.75	0.37
2-28-77	100 down	I-131	0.10	1.90	0.95	0.65
		I-133	0.25	1.50	0.38	0.14
		Xe-133	2.70	2.20	3.70	3.0
		Xe-135	0.80	0.90	0.70	0.40
2- 8-77	100 up	I-131	0.17	0.32	0.35	0.19
		I-133	$3 \times 10^{-2}$	$3.6 \times 10^{-1}$	$8.5 \times 10^{-1}$	$5 \times 10^{-1}$
		Xe-133	0.36	0.50	0.80	0.14
		Xe-135	0.62	0.78	0.90	0.14
2- 1-77	100 down	I-131	$4.3 \times 10^{-1}$	0.25	0.37	0.27
		I-133	0.17	0.55	0.34	0.12
		Xe-133	1.20	1.70	1.30	0.90
		Xe-135	0.90	0.85	0.75	0.65

# OCONEE NUCLEAR STATION

UNIT NO. 1

DATE	% POWER	ISOTOPE	RC SYSTEM ACTIVITY			
			CONCENTRATION $\mu\text{Ci}/\text{Ml}$			
1-26-77	100 Up	I-131	0.11	$5.8 \times 10^{-1}$	$4.7 \times 10^{-1}$	$3.4 \times 10^{-1}$
		I-133	$7.8 \times 10^{-1}$	0.10	0.13	0.14
		Xe-133	0.33	0.64	1.20	0.70
		Xe-135	0.59	0.90	0.88	0.75
1-16-77	100 down	I-131	$9.0 \times 10^{-1}$	0.98	1.09	0.95
		I-133	0.16	0.65	0.60	0.48
		Xe-133	3.20	3.20	3.50	2.40
		Xe-135	0.90	0.92	0.40	0.30
12-23-76	30 Up	I-131	$1.3 \times 10^{-1}$	$1.6 \times 10^{-1}$	$1.8 \times 10^{-1}$	$2.3 \times 10^{-1}$
		I-133	0.11	0.13	0.12	
		Xe-133	0.40	0.66	0.95	0.87
		Xe-135	0.82	0.81	0.88	0.62
12-22-76	70 Up	I-131	$3.2 \times 10^{-2}$	$2.3 \times 10^{-1}$	$1.6 \times 10^{-1}$	$9.0 \times 10^{-2}$
		I-133	$8.7 \times 10^{-1}$	0.12	0.22	0.11
		Xe-133	$1 \times 10^{-2}$	$0.95 \times 10^{-2}$	$2 \times 10^{-1}$	$1.5 \times 10^{-1}$
		Xe-135	$6 \times 10^{-1}$	$6 \times 10^{-1}$	0.82	
12- 8-76	100 down	I-131	$3 \times 10^{-1}$	$7 \times 10^{-1}$	$4 \times 10^{-1}$	$2 \times 10^{-1}$
		I-133	$4 \times 10^{-1}$	$8 \times 10^{-1}$	0.10	$3 \times 10^{-1}$
		Xe-133	$3.8 \times 10^{-2}$	0.02	$0.9 \times 10^{-1}$	
		Xe-135	$4 \times 10^{-2}$	$3 \times 10^{-1}$	0.15	$3 \times 10^{-1}$
12- 7-76	100 down	I-131	$7 \times 10^{-1}$	$2 \times 10^{-1}$	$1 \times 10^{-1}$	
		I-133		$<10^{-3}$		
		Xe-133	$7 \times 10^{-1}$	0.13	$4 \times 10^{-1}$	$3 \times 10^{-1}$
		Xe-135		$<10^{-3}$		

OCONEE NUCLEAR STATION

UNIT NO. 1

DATE	% POWER	ISOTOPE	RC SYSTEM ACTIVITY			
			CONCENTRATION $\mu\text{Ci}/\text{Ml}$			
11-18-76	100 down	I-131	$4 \times 10^{-1}$	0.26	$8 \times 10^{-1}$	
		I-133	0.15	0.46	$7 \times 10^{-1}$	
		Xe-133	0.24	0.60	0.58	0.38
		Xe-135	0.65	0.80	0.23	$3 \times 10^{-1}$
11-16-76	50 up	I-131	0.11			
		I-133		$<10^{-3}$		
		Xe-133		$<2 \times 10^{-1}$		
		Xe-135		$<10^{-3}$		
11-15-76	40 up	I-131	$5 \times 10^{-1}$			
		I-133		$<10^{-3}$		
		Xe-133		$<2 \times 10^{-1}$		
		Xe-135		$<10^{-1}$		
10-31-76	100 down	I-131	0.19	0.46	0.49	0.38
		I-133	0.13	0.13	0.13	$8 \times 10^{-1}$
		Xe-133	1.0	1.5	1.6	$1.5 \times 10^{-1}$
		Xe-135	0.40	0.40	0.25	$7 \times 10^{-1}$
10-26-76	100 down	I-131	$8 \times 10^{-1}$	2.6	0.92	0.25
		I-133	0.11	2.0	0.55	0.14
		Xe-133	2.80	4.80	4.30	1.20
		Xe-135	0.85	0.97	1.00	0.85
10- 8-76	50 down	I-131	0.12	0.58	0.18	0.10
		I-133	0.14	0.22	0.24	0.13
		Xe-133	2.40	3.10	3.10	2.80
		Xe-135	0.78	0.80	0.90	0.61

# OCONEE NUCLEAR STATION

UNIT NO. 1

DATE	% POWER	ISOTOPE	RC SYSTEM ACTIVITY			
			CONCENTRATION $\mu\text{Ci}/\text{Ml}$			
9- 5-76	55 Up	I-131	$8.5 \times 10^{-1}$	0.12	0.10	$7 \times 10^{-1}$
		I-133	0.16	0.25	0.18	$7 \times 10^{-1}$
		Xe-133	1.80	2.30	1.80	
		Xe-135	0.80	0.88	0.68	
9- 4-76	100 down	I-131	$6 \times 10^{-1}$	0.70	0.34	0.14
		I-133	0.12	0.96	0.23	0.13
		Xe-133	1.70	2.30	1.40	
		Xe-135	0.40	0.52	0.24	
8-29-76	50 down	I-131	$9 \times 10^{-1}$	0.22	0.16	0.10
		I-133	0.12	0.35	0.18	0.15
		Xe-133	1.50	1.70	3.90	2.30
		Xe-135	0.58	0.54	1.20	0.54
8-14-76	75 down	I-131	$9 \times 10^{-1}$	0.55	0.38	0.11
		I-133	$9 \times 10^{-1}$	0.21	$9 \times 10^{-1}$	
		Xe-133	0.90	0.95	1.20	1.00
		Xe-135	0.30	0.46	0.60	0.45
7-13-76	100 down	I-131	$9 \times 10^{-1}$	0.38	0.12	$9 \times 10^{-1}$
		I-133	0.23	0.51	0.23	0.18
		Xe-133	1.60	2.10	1.80	1.20
		Xe-135	0.33	0.50	0.41	0.30
7- 7-76	100 down	I-131	0.10	0.65	0.16	$9 \times 10^{-1}$
		I-133	0.24	0.90	0.22	0.19
		Xe-133	1.80	2.20	2.10	1.40
		Xe-135	0.38	0.44	0.36	

OCONEE NUCLEAR STATION

UNIT NO. 1

DATE	% POWER	ISOTOPE	RC SYSTEM ACTIVITY			
			CONCENTRATION $\mu\text{Ci}/\text{Ml}$			
6-29-76	30 Up	I-131	0.10	0.10	0.10	
		I-133	0.25	0.23	0.25	
		Xe-133	1.50	2.80	1.40	
		Xe-135	0.43	0.36	0.55	
6-28-76	70 Up	I-131	0.10	0.10		
		I-133	0.25	0.27		
		Xe-133	0.45	1.80	1.70	
		Xe-135	0.13	0.41	0.41	
6-27-76	100 down	I-131	0.10	0.70	0.15	0.10
		I-133	0.30	1.0	0.25	0.26
		Xe-133	1.20	2.30	1.80	
		Xe-135	0.24	0.41	0.36	
6-22-76	90 Up	I-131	0.11	0.10	0.10	
		I-133	0.25	0.30	0.30	
		Xe-133	1.50	2.20	2.00	
		Xe-135	0.41	0.47	0.49	
6-21-76	100 down	I-131	0.12	0.36	0.20	0.11
		I-133	0.30	0.65	0.38	0.25
		Xe-133	2.60	2.80	1.50	
		Xe-135	0.38	0.55	0.41	
6 -9-76	90 Up	I-131	$8 \times 10^{-1}$	0.28	$6 \times 10^{-1}$	
		I-133	0.30	0.70	0.30	
		Xe-133	1.10	1.40	1.30	
		Xe-135	0.40	0.42	0.35	



# OCONEE NUCLEAR STATION

UNIT NO. 1

DATE	% POWER	ISOTOPE	RC SYSTEM ACTIVITY			
			CONCENTRATION $\mu\text{Ci}/\text{Ml}$			
6- 8-76	100 down	I-131	$8 \times 10^{-1}$	0.29	0.14	$6.4 \times 10^{-1}$
		I-133	0.30	0.80	0.32	0.22
		Xe-133	0.41	0.90	0.82	
		Xe-135	0.28	0.37	0.18	
6-1-76	40 Up	I-131	$4.4 \times 10^{-2}$	$4.5 \times 10^{-2}$	$5.8 \times 10^{-2}$	
		I-133		$<10^{-3}$		
		Xe-133	0.35	0.44	0.41	
		Xe-135	0.24	0.38	0.36	
5-31-76	40 Up	I-131		$<10^{-3}$		
		I-133		$<10^{-3}$		
		Xe-133		$<10^{-3}$		
		Xe-135		$<10^{-3}$		
4-18-76	70 down	I-131	$1.4 \times 10^{-2}$	$3.2 \times 10^{-1}$	$1.8 \times 10^{-1}$	
		I-133	$8.2 \times 10^{-1}$	$9.0 \times 10^{-1}$	$7.5 \times 10^{-1}$	
		Xe-133	0.21	0.32	0.30	
		Xe-135	0.13	0.17	$8 \times 10^{-1}$	

NOTE: Unit did not operate during March, 1976

# OCONEE NUCLEAR STATION

UNIT NO. 2

1. 100% Reactor Thermal Power = 2568 MWE
2. RC System Cleanup Flowrate = 70 GPM
3. RC System Temperature = 532°F
4. RC System Pressure = 2155 PSI

DATE	% POWER	ISOTOPE	RC SYSTEM ACTIVITY			
			CONCENTRATION $\mu$ Ci/MI			
3-29-77	65 Up	I-131	0.38	0.37	0.33	0.31
		I-133	0.55	0.43	0.45	
		Xe-133	10.3	7.63	8.80	7.00
		Xe-135	5.5	3.43	3.80	3.10
3-28-77	65 down	I-131	0.25	0.26	0.58	0.50
		I-133	0.48	0.78	0.66	0.63
		Xe-133	0.48	0.47	10.3	7.60
		Xe-135	2.60	2.70	5.50	3.40
3-24-77	80 Up	I-131	0.26	0.25	0.26	
		I-133	0.34	0.27	0.36	
		Xe-133	7.80	5.80	5.20	5.00
		Xe-135	2.50	2.30	1.90	1.90
3-23-77	100 down	I-131	0.27	6.20	1.20	0.47
		I-133	0.22	3.30	0.58	0.33
		Xe-133	6.80	4.70	9.50	7.80
		Xe-135	3.40	2.50	2.20	1.90

NOTE: Unit operated at 100% power February and January

12-28-76	60 Up	I-131	0.10	0.12	0.13	0.15
		I-133	0.38	0.46	0.47	0.35
		Xe-133	0.14	0.95	0.95	1.2
		Xe-135	0.60	0.35	1.40	1.60

# OCONEE NUCLEAR STATION

UNIT NO. 2

DATE	% POWER	ISOTOPE	RC SYSTEM ACTIVITY			
			CONCENTRATION $\mu\text{Ci}/\text{Ml}$			
12-27-76	100 down	I-131	0.12	0.77	0.18	0.10
		I-133	0.26	2.40	0.37	0.34
		Xe-133	$4 \times 10^{-1}$	0.10	0.19	0.14
		Xe-135	$<10^{-2}$	0.40	0.60	0.35
12-25-76	70 Up	I-131	0.47	1.20	0.30	0.12
		I-133		$<10^{-2}$		
		Xe-133	$4 \times 10^{-1}$	0.10	0.19	0.14
		Xe-135		$<10^{-2}$		
12- 5-76	100 down	I-131	0.31	5.00	3.50	3.52
		I-133	0.25	5.00	1.30	0.72
		Xe-133	4.5	9.3	8.6	1.7
		Xe-135	2.5	2.5	0.85	$4.5 \times 10^{-1}$

NOTE: Unit operated at 100% power during November

10-17-76	80 Up	I-131	0.40	0.35	0.50	0.40
		I-133	0.42	0.45	0.60	0.52
		Xe-133	6.8	4.7	2.4	
		Xe-135	0.92	1.3	1.4	
10-16-76	60 down	I-131	0.37	5.00	1.6	0.40
		I-133	0.14	1.40	0.30	0.33
		Xe-133	5.7	3.7	6.8	4.7
		Xe-135	1.4	0.85	0.92	1.3
10-13-76	40 down	I-131	0.50	0.60	0.92	0.68
		I-133	0.50	0.60	0.90	0.48
		Xe-133	3.7	4.6	5.0	4.4
		Xe-135	1.9	2.1	1.8	1.2

OCONEE NUCLEAR STATION

UNIT NO. 2

DATE	% POWER	ISOTOPE	RC SYSTEM ACTIVITY			
			CONCENTRATION $\mu\text{Ci}/\text{Ml}$			
10- 4-76	30 Up	I-131	0.37	0.75	0.77	0.55
		I-133	0.57	0.93	0.75	0.60
		Xe-133	5.8	7.2	3.6	5.6
		Xe-135	2.0	2.7	1.6	
10- 3-76	40 down	I-131	0.46	0.38	0.55	0.37
		I-133	0.70	0.56	0.90	0.57
		Xe-133	4.5	3.2	5.8	7.0
		Xe-135	2.2	1.5	2.0	2.7
9-19-76	40 Up	I-131	0.50	0.49	0.65	0.65
		I-133	0.85	0.85	0.75	0.75
		Xe-133	3.5	5.8	7.6	5.8
		Xe-135	1.7	2.1	2.0	1.8
9-18-76	40 down	I-131	0.50	0.49	0.65	0.65
		I-133	0.85	0.85	0.75	0.75
		Xe-133	3.5	5.8	7.6	5.8
		Xe-135	1.7	2.1	2.0	1.8
9-10-76	90 Up	I-131	0.52	3.70	1.60	0.63
		I-133	0.11	5.10	0.12	0.58
		Xe-133	3.6	6.5	4.6	4.0
		Xe-135	1.0	1.0	1.3	1.5
9- 8-76	100 down	I-131	0.52	3.70	1.60	0.63
		I-133	0.11	5.10	0.12	0.58
		Xe-133	4.7	3.6	6.5	4.6
		Xe-135	1.7	1.0	1.0	1.3

OCONEE NUCLEAR STATION

UNIT NO. 2

DATE	% POWER	ISOTOPE	RC SYSTEM ACTIVITY			
			CONCENTRATION $\mu\text{Ci}/\text{Ml}$			
8-30-76	90 Up	I-131	2.00	0.65	0.48	0.42
		I-133	1.20	0.77	0.85	0.85
		Xe-133	1.6	6.5	6.5	4.6
		Xe-135	0.20	1.4	1.4	1.6
8-29-76	90 down	I-131	0.42	0.42	0.50	8.50
		I-133	0.85	1.00	0.88	6.50
		Xe-133	5.8	5.1	6.2	1.6
		Xe-135	1.9	1.7	1.2	0.20
8- 4-76	60 Up	I-131	0.52	1.10	0.58	
		I-133	$1.1 \times 10^{-2}$	$1.0 \times 10^{-2}$	$3.3 \times 10^{-1}$	
		Xe-133	0.62	0.45	0.58	0.68
		Xe-135	$<10^{-3}$	$<10^{-3}$	0.11	0.56
7-27-76	70 down	I-131	1.20	$3.5 \times 10^{-1}$	$8.5 \times 10^{-1}$	1.80
		I-133	$3 \times 10^{-1}$	$4.5 \times 10^{-2}$	$6.2 \times 10^{-2}$	$6.6 \times 10^{-2}$
		Xe-133	2.4	2.5	5.0	3.5
		Xe-135	0.58	0.61	0.13	$1.8 \times 10^{-1}$
7-26-76	30 down	I-131	0.31	0.25	1.0	0.40
		I-133	0.98	0.52	1.4	0.20
		Xe-133	1.9	2.4	2.5	2.4
		Xe-135	.48	0.88	0.95	0.94
7-15-76	35 Up	I-131	$1.5 \times 10^{-2}$	$1.2 \times 10^{-2}$	$2.6 \times 10^{-2}$	
		I-133	$1.2 \times 10^{-1}$	$1.0 \times 10^{-1}$	$1.9 \times 10^{-1}$	
		Xe-133	$1.8 \times 10^{-1}$	$2.3 \times 10^{-1}$	$5.1 \times 10^{-1}$	
		Xe-135	$2.5 \times 10^{-1}$	$4.8 \times 10^{-1}$	$5.1 \times 10^{-1}$	

# OCONEE NUCLEAR STATION

UNIT NO. 2

DATE	% POWER	ISOTOPE	RC SYSTEM ACTIVITY			
			CONCENTRATION $\mu\text{Ci}/\text{Ml}$			
7-13-76	40 Up	I-131		$<10^{-3}$		
		I-133	$5.5 \times 10^{-2}$	$3.7 \times 10^{-1}$	$1.1 \times 10^{-1}$	
		Xe-133	$<10^{-3}$	$7.8 \times 10^{-2}$	$1.9 \times 10^{-1}$	
		Xe-135	$1.3 \times 10^{-2}$	$2.5 \times 10^{-2}$	$5.0 \times 10^{-1}$	
7-12-76	25 down	I-131		$<10^{-3}$		
		I-133		$<10^{-3}$		
		Xe-133		$<10^{-3}$		
		Xe-135		$<10^{-3}$		
7-11-76	25 Up	I-131		$<10^{-3}$		
		I-133		$<10^{-3}$		
		Xe-133		$<10^{-3}$		
		Xe-135		$<10^{-3}$		
NOTE: Unit did not operate during June and May						
4- 7-76	70 down	I-131	$1.7 \times 10^{-1}$	$1.6 \times 10^{-1}$	1.9	1.6
		I-133	$1.3 \times 10^{-1}$	$1.7 \times 10^{-1}$	1.2	$4.2 \times 10^{-1}$
		Xe-133	0.90	0.90	1.3	0.65
		Xe-135	0.24	0.24	0.36	0.20
3-27-76	30 down	I-131	$1.6 \times 10^{-1}$	$1.8 \times 10^{-1}$	$2.0 \times 10^{-1}$	$1.5 \times 10^{-1}$
		I-133	$2.2 \times 10^{-1}$	$2.5 \times 10^{-1}$	$2.9 \times 10^{-1}$	$1.8 \times 10^{-1}$
		Xe-133	0.90	0.30	0.86	$8.8 \times 10^{-1}$
		Xe-135	0.23	$5.3 \times 10^{-1}$	0.13	$1.6 \times 10^{-1}$

# OCONEE NUCLEAR STATION

UNIT NO. 3

1. 100% Reactor Thermal Power = 2568 MWE
2. RC System Cleanup Flowrate = 70 GPM
3. RC System Temperature = 532°F
4. RC System Pressure = 2155 PSI

DATE	% POWER	ISOTOPE	RC SYSTEM ACTIVITY			
			CONCENTRATION $\mu\text{Ci}/\text{Ml}$			
3-17-76	70 Up	I-131	$1.5 \times 10^{-2}$	$2.3 \times 10^{-2}$	$1.2 \times 10^{-1}$	$4.8 \times 10^{-2}$
		I-133	$1.6 \times 10^{-2}$	$1.8 \times 10^{-2}$	$1.4 \times 10^{-1}$	$3.8 \times 10^{-2}$
		Xe-133	$8.1 \times 10^{-1}$	$8.0 \times 10^{-1}$	$8.0 \times 10^{-1}$	$6.9 \times 10^{-1}$
		Xe-135	$1.5 \times 10^{-1}$	$1.7 \times 10^{-1}$	$1.8 \times 10^{-1}$	$1.9 \times 10^{-1}$
3-16-77	100 down	I-131	$1.5 \times 10^{-2}$	$2.3 \times 10^{-2}$	$1.2 \times 10^{-1}$	$4.8 \times 10^{-2}$
		I-133	$1.6 \times 10^{-2}$	$1.8 \times 10^{-2}$	$1.4 \times 10^{-1}$	$3.8 \times 10^{-2}$
		Xe-133	$2.8 \times 10^{-1}$	$2.6 \times 10^{-1}$	1.20	$8.2 \times 10^{-1}$
		Xe-135	$1.1 \times 10^{-1}$	$1.1 \times 10^{-1}$	$2.7 \times 10^{-1}$	$1.5 \times 10^{-1}$
2-26-77	50 Up	I-131	$1.6 \times 10^{-2}$		$<10^{-3}$	
		I-133	$4.0 \times 10^{-2}$		$<10^{-3}$	
		Xe-133	$6.1 \times 10^{-2}$	$7.9 \times 10^{-2}$	$1 \times 10^{-1}$	$9.1 \times 10^{-2}$
		Xe-135	$<10^{-3}$	$4 \times 10^{-2}$	$5.8 \times 10^{-2}$	$<10^{-3}$
2-14-77	100 down	I-131	$<10^{-3}$	$1.8 \times 10^{-1}$	$9 \times 10^{-2}$	$<10^{-3}$
		I-133	$<10^{-3}$	$9 \times 10^{-2}$	$1.7 \times 10^{-2}$	$<10^{-3}$
		Xe-133	$3.4 \times 10^{-2}$	$2.1 \times 10^{-1}$	$4.9 \times 10^{-1}$	$1.8 \times 10^{-1}$
		Xe-135	$<10^{-3}$	$1.2 \times 10^{-2}$	$3.5 \times 10^{-2}$	$<10^{-3}$

NOTE: Unit at 100% power during January and December

11-17-76	35 Up	I-131		$<10^{-3}$		
		I-133		$<10^{-3}$		
		Xe-133	$1.6 \times 10^{-2}$	$1.2 \times 10^{-2}$	$<10^{-3}$	
		Xe-135		$<10^{-3}$		

OCONEE NUCLEAR STATION

UNIT NO. 3

DATE	% POWER	ISOTOPE	RC SYSTEM ACTIVITY			
			CONCENTRATION $\mu\text{Ci}/\text{Ml}$			
11-15-76	40 Up	I-131		$<10^{-3}$		
		I-133		$<10^{-3}$		
		Xe-133	$1.4 \times 10^{-2}$	$1.6 \times 10^{-2}$	$1.2 \times 10^{-2}$	$1.3 \times 10^{-2}$
		Xe-135		$<10^{-3}$		
11-14-76	40 down	I-131		$<10^{-3}$		
		I-133		$<10^{-3}$		
		Xe-133	$1.8 \times 10^{-2}$	$1.3 \times 10^{-2}$	$1.6 \times 10^{-2}$	
		Xe-135		$<10^{-3}$		
11-13-76	40 Up	I-131		$<10^{-3}$		
		I-133		$<10^{-3}$		
		Xe-133		$<10^{-3}$		
		Xe-135		$<10^{-3}$		

NOTE: Unit did not operate during October

9-18-76	80 down	I-131		$<10^{-3}$		
		I-133		$<10^{-3}$		
		Xe-133	$1.7 \times 10^{-2}$	$1.4 \times 10^{-2}$	$1.5 \times 10^{-2}$	
		Xe-135		$<10^{-3}$		
9-17-76	80 Up	I-131		$<10^{-3}$		
		I-133		$<10^{-3}$		
		Xe-133	$1.6 \times 10^{-2}$	$1.5 \times 10^{-2}$	$1.7 \times 10^{-2}$	$1.4 \times 10^{-2}$
		Xe-135		$<10^{-3}$		
9-16-76	45 down	I-131		$<10^{-3}$		
		I-133		$<10^{-3}$		
		Xe-133	$1.4 \times 10^{-2}$	$1.6 \times 10^{-2}$	$1.5 \times 10^{-2}$	$1.6 \times 10^{-2}$
		Xe-135		$<10^{-3}$		



OCONEE NUCLEAR STATION

UNIT NO. 3

DATE	% POWER	ISOTOPE	RC SYSTEM ACTIVITY			
			CONCENTRATION $\mu\text{Ci}/\text{Ml}$			
9-10-76	60 down	I-131	$2 \times 10^{-2}$	$<10^{-3}$	$2.5 \times 10^{-2}$	$2.8 \times 10^{-2}$
		I-133		$<10^{-3}$		
		Xe-133		$<10^{-3}$		
		Xe-135		$<10^{-3}$		
8-17-76	40 down	I-131		$<10^{-3}$		
		I-133		$<10^{-3}$		
		Xe-133		$<10^{-3}$		
		Xe-135		$<10^{-3}$		
8- 1-76	60 Up	I-131		$<10^{-3}$		
		I-133		$<10^{-3}$		
		Xe-133		$<10^{-3}$		
		Xe-135		$<10^{-3}$		
7-21-76	100 down	I-131		$<10^{-3}$		
		I-133		$<10^{-3}$		
		Xe-133		$<10^{-3}$		
		Xe-135		$<10^{-3}$		
7-12-76	80 Up	I-131		$<10^{-3}$		
		I-133		$<10^{-3}$		
		Xe-133		$<10^{-3}$		
		Xe-135		$<10^{-3}$		
7-11-76	80 down	I-131		$<10^{-3}$		
		I-133		$<10^{-3}$		
		Xe-133		$<10^{-3}$		
		Xe-135		$<10^{-3}$		

# OCONEE NUCLEAR STATION

UNIT NO. 3

DATE	%	ISOTOPE	RC SYSTEM ACTIVITY	
	POWER		CONCENTRATION $\mu\text{Ci}/\text{Ml}$	
7- 9-76	80	I-131	$<10^{-3}$	
	Up	I-133	$<10^{-3}$	
		Xe-133	$<10^{-3}$	
		Xe-135	$<10^{-3}$	
7- 2-76	100	I-131	$<10^{-3}$	
	down	I-133	$<10^{-3}$	
		Xe-133	$<10^{-3}$	
		Xe-135	$<10^{-3}$	
NOTE: Unit at 100% power during June and May				
4-23-76	35	I-131	$<10^{-3}$	
	Up	I-133	$<10^{-3}$	
		Xe-133	$<10^{-3}$	
		Xe-135	$<10^{-3}$	
4-22-76	35	I-131	$<10^{-3}$	
	down	I-133	$<10^{-3}$	
		Xe-133	$<10^{-3}$	
		Xe-135	$<10^{-3}$	
4-21-76	80	I-131	$<10^{-3}$	
	UP	I-133	$<10^{-3}$	
		Xe-133	$<10^{-3}$	
		Xe-135	$<10^{-3}$	
4-20-76	100	I-131	$<10^{-3}$	
	down	I-133	$<10^{-3}$	
		Xe-133	$<10^{-3}$	
		Xe-135	$<10^{-3}$	

# OCONEE NUCLEAR STATION

UNIT NO. 3

DATE	% POWER	RC SYSTEM ACTIVITY	
		ISOTOPE	CONCENTRATION $\mu\text{Ci}/\text{Ml}$
4-17-76	80 Up	I-131	$<10^{-3}$
		I-133	$<10^{-3}$
		Xe-133	$<10^{-3}$
		Xe-135	$<10^{-3}$
3-20-76	100 down	I-131	$<10^{-3}$
		I-133	$<10^{-3}$
		Xe-133	$<10^{-3}$
		Xe-135	$<10^{-3}$