Duke Power Company
Catawba Nuclear Generation Department
4800 Concord Road
York, SC 29745

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DUKE POWER

February 25, 1993

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555

Subject: Catawba Nuclear Station
Docket Nos. 50-413 and 50-414
Semiannual Radioactive Effluent Release Report

Pursuant to Catawba Nuclear Station Technical Specification 6.9.1.7 and Catawba Selected Licensee Commitments Manual Section 16.11-16.2, find enclosed the Catawba Semiannual Radioactive Effluent Release Report for the period July 1, 1992 to December 31, 1992.

Attachment I contains information regarding radioactive effluent releases.

Attachment II contains information regarding solid radioactive waste shipped offsite.

There were no revisions to the Process Control Program (PCP) or to Catawba's Offsite Dose Calculation Manual (ODCM) during this reporting period and there were no unplanned releases during this reporting period.

Very truly yours,

M. S. Tuckman

M. S. Tuckman

CRL/ARERR93.DOC

Attachments

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PDR ADOCK 05000413
R PDR

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xc: S. D. Ebneter
Regional Administrator, Region II

W. T. Orders
Senior Resident Inspector

R. E. Martin, ONRR

ATTACHMENT 1

Summary of Liquid and Gaseous Effluents Report

Supplemental Information to the Liquid and Gaseous Effluents Report

Fuel Cycle Calculations

Meteorological Survey

UNIT 1

CATAWBA NUCLEAR STATION
UNIT 1
RADIOACTIVE EFFLUENT RELEASES
DATE : 02/05/93

1. LIQUID RELEASES

YEAR : 1992

	UNITS	1ST QTR	2ND QTR	3RD QTR	4TH QTR	TOTAL
1. GROSS RADIOACTIVITY						
A. TOTAL RELEASE	CURIES	9.45E-02	5.28E-02	1.57E-01	1.61E-01	4.65E-01
B. AVERAGE CONCENTRATION RELEASED	UCI/ML	4.28E-09	2.33E-09	7.78E-09	8.38E-09	5.53E-09
C. MAXIMUM CONCENTRATION RELEASED	UCI/ML	3.40E-08	1.45E-08	2.16E-08	1.55E-08	3.40E-08
2. TRITIUM						
A. TOTAL RELEASE	CURIES	5.04E+01	7.73E+01	1.61E+02	9.83E+01	3.86E+02
B. AVERAGE CONCENTRATION RELEASED	UCI/ML	2.28E-06	3.48E-06	7.96E-06	5.12E-06	4.59E-06
3. DISSOLVED NOBLE GASES						
A. TOTAL RELEASE	CURIES	3.78E-04	3.58E-03	9.41E-04	7.79E-03	4.98E-03
B. AVERAGE CONCENTRATION RELEASED	UCI/ML	1.72E-11	1.58E-10	4.66E-11	4.06E-12	5.92E-11
4. GROSS ALPHA ACTIVITY						
A. TOTAL RELEASE	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
B. AVERAGE CONCENTRATION RELEASED	UCI/ML	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5. VOLUME OF LIQUID WASTE TO DISCHARGE CANAL	LITERS	4.27E+07	1.15E+08	1.32E+08	1.23E+08	4.13E+08
6. VOLUME OF DILUTION WATER	LITERS	2.21E+10	2.27E+10	2.02E+10	1.92E+10	8.43E+10
7. RADIONUCLIDES RELEASED	CURIES					EC RATIO
H-3		5.04E+01	7.73E+01	1.61E+02	9.83E+01	2.86E+02	4.59E-03
F-18		4.12E-04	1.65E-04	1.21E-03	1.86E-04	1.98E-03	3.28E-08
NA-24		5.43E-06	4.65E-06	2.87E-06	3.33E-05	4.92E-05	1.17E-08
CR-51		3.55E-03	0.00E+00	1.45E-02	5.60E-03	2.36E-02	5.42E-07
MN-54		3.23E-03	2.76E-03	4.08E-03	1.53E-03	1.16E-02	4.60E-06
FE-55		3.58E-02	2.41E-02	4.06E-02	3.19E-02	1.03E-01	3.58E-05
FE-59		6.32E-04	0.00E+00	1.36E-03	6.75E-04	2.69E-03	3.20E-08
CO-57		1.06E-04	1.26E-04	2.11E-04	3.15E-04	8.12E-04	1.91E-07
CO-58		2.05E-02	9.16E-03	6.31E-02	8.83E-02	1.82E-01	1.06E-04
CO-60		1.89E-02	1.34E-02	1.62E-02	8.51E-03	5.79E-02	2.30E-04
ZN-65		7.36E-05	0.00E+00	1.94E-03	4.81E-05	1.40E-04	3.03E-07
SE-75		0.00E+00	0.00E+00	0.00E+00	2.92E-05	2.92E-05	4.96E-08
BR-82		0.00E+00	1.96E-06	0.00E+00	0.00E+00	1.96E-06	5.84E-10
RB-84		0.00E+00	0.00E+00	0.00E+00	1.04E-05	1.04E-05	1.38E-10
SR-91		3.05E+00	1.82E-05	0.00E+00	0.00E+00	1.82E-05	1.06E-08
SR-92		8.26E-05	2.98E-05	8.33E-05	6.95E-05	2.65E-04	7.69E-08
ZR-95		5.37E-04	2.19E-04	8.04E-04	3.34E-04	1.89E-03	1.13E-06
ZR-97		0.00E+00	0.00E+00	6.34E-04	0.00E+00	6.34E-04	1.38E-07
NB-95		7.06E-03	4.47E-04	1.40E-03	6.29E-04	3.54E-03	1.41E-06
NB-97		6.41E-04	3.43E-04	5.64E-04	3.26E-04	1.93E-03	7.82E-08
NB-97M		7.30E+00	3.26E-06	2.18E-07	0.00E+00	3.48E-06	4.14E-06
MO-99		0.00E+00	0.00E+00	1.28E-05	0.00E+00	1.28E-05	5.06E-09
TC-99M		2.69E-04	3.62E-05	1.65E-04	4.07E-04	8.95E-04	1.77E-06
I-131		2.45E-04	1.36E-04	5.27E-04	0.00E+00	7.08E-04	8.42E-06
I-132		5.65E-07	0.00E+00	0.00E+00	0.00E+00	5.65E-07	8.01E-11
I-133		4.94E-05	4.72E-05	1.30E-05	0.00E+00	1.10E-04	1.86E-07
I-135		2.72E-06	3.30E-06	0.00E+00	0.00E+00	5.62E-06	2.23E-09
CS-134		0.00E+00	0.00E+00	7.23E-06	2.87E-04	2.15E-04	2.05E-07
CS-137		8.38E-04	2.11E-06	1.87E-04	1.55E-03	2.58E-03	4.29E-06
CS-138		5.43E-03	1.21E-02	7.23E-03	1.43E-02	2.92E-02	1.16E-05
BA-133		1.49E-04	4.52E-05	1.30E-04	4.88E-05	3.81E-04	3.54E-07
BA-139		0.00E+00	0.00E+00	5.19E-05	0.00E+00	5.19E-06	7.72E-09
BA-140		7.02E-04	2.05E-04	6.32E-04	6.72E-04	2.16E-03	2.86E-05
LA-140		2.50E-04	3.75E-04	7.28E-03	1.44E-05	4.44E-03	5.39E-05
AT-220		4.97E-07	0.00E+00	0.00E+00	0.00E+00	4.97E-07	1.49E-11
TH-228		0.00E+00	0.00E+00	3.93E-04	0.00E+00	1.88E-06	1.12E-09
TH-232		0.00E+00	0.00E+00	6.02E-06	0.00E+00	6.02E-06	2.58E-10
U-235		3.75E-07	0.00E+00	1.16E-05	0.00E+00	1.19E-05	1.77E-08
U-238		5.20E-07	0.00E+00	4.85E-05	5.49E-05	6.61E-05	2.74E-08
NP-239		0.00E+00	1.74E-04	6.00E+00	0.00E+00	1.94E-04	3.20E-10
PU-238		0.00E+00	4.00E+00	6.03E-05	2.36E-03	2.38E-03	1.42E-04
PU-239		0.00E+00	0.00E+00	0.00E+00	8.42E-06	8.58E-06	7.30E-08
AM-241		0.00E+00	4.18E-06	0.00E+00	0.00E+00	4.69E-06	5.26E-10
CM-242		2.02E-04	3.28E-03	7.19E-04	0.00E+00	4.39E-03	5.18E-07
CM-244		0.00E+00	7.48E-06	0.00E+00	2.39E-06	9.87E-06	1.17E-09
H-3		1.18E-04	1.63E-04	2.16E-04	7.30E-03	5.13E-04	6.82E-03
F-18		0.00E+00	9.21E-04	0.00E+00	0.00E+00	9.21E-04	9.79E-10
NA-24		3.12E-05	1.13E-03	7.47E-07	5.19E-07	2.09E-03	2.43E-04
CR-51		0.00E+00	0.00E+00	2.02E-04	0.00E+00	3.52E-04	3.39E-10

TOTAL EC RATIO 5.22E-03

CATAWBA UNIT 1 LIQUID RELEASE 001-091 92 2.21E+10 02/19/93

SKIN MAXIMUM DOSE- 1.03E-02 MREM CRITICAL AGE- TEEN CRITICAL PATHWAY- SHORE

CO 60	92.51 %

BONE MAXIMUM DOSE- 3.23E-02 MREM CRITICAL AGE- TEEN CRITICAL PATHWAY- FISH

FE 55	7.77 %
CO 60	25.05 %
CS 134	19.40 %
CS 137	45.15 %

LIVER MAXIMUM DOSE- 4.91E-02 MREM CRITICAL AGE- TEEN CRITICAL PATHWAY- FISH

CO 60	17.50 %
CS 134	29.97 %
CS 137	39.48 %

T. BODY MAXIMUM DOSE- 3.04E-02 MREM CRITICAL AGE- ADULT CRITICAL PATHWAY- FISH

H 3	7.71 %
CO 60	8.39 %
CS 134	38.93 %
CS 137	39.96 %

THYROID MAXIMUM DOSE- 1.21E-02 MREM CRITICAL AGE- TEEN CRITICAL PATHWAY- SHORE

H 3	14.29 %
CO 60	66.87 %
I 131	13.05 %

KIDNEY MAXIMUM DOSE- 2.25E-02 MREM CRITICAL AGE- TEEN CRITICAL PATHWAY- FISH

H 3	7.68 %
CO 60	35.93 %
CS 134	20.84 %
CS 137	29.49 %

LUNG MAXIMUM DOSE- 1.60E-02 MREM CRITICAL AGE- TEEN CRITICAL PATHWAY- SHORE

H 3	10.80 %
FE 55	7.05 %
CO 60	50.54 %
CS 134	11.30 %
CS 137	16.39 %

GI-LLI MAXIMUM DOSE- 1.86E-01 MREM CRITICAL AGE- ADULT CRITICAL PATHWAY- FISH

CO 60	5.82 %
NB 95	86.94 %

CATAWBA UNIT 1 LIQUID RELEASE 092-182 92 2.27E+10 02/19/93

SKIN MAXIMUM DOSE- 6.90E-03 MREM CRITICAL AGE- TEEN CRITICAL PATHWAY- SHORE

CO	60	9[illegible].89 %

BONE MAXIMUM DOSE- 3.00E-02 MREM CRITICAL AGE- CHILD CRITICAL PATHWAY- FISH

FE	55	7.31 %
CS	134	24.93 %
CS	137	63.64 %

LIVER MAXIMUM DOSE- 4.60E-02 MREM CRITICAL AGE- TEEN CRITICAL PATHWAY- FISH

H	3	5.59 %
CO	60	12.86 %
CS	134	31.79 %
CS	137	44.00 %

T. BODY MAXIMUM DOSE- 3.04E-02 MREM CRITICAL AGE- ADULT CRITICAL PATHWAY- FISH

H	3	11.46 %
CO	60	5.78 %
CS	134	38.70 %
CS	137	41.73 %

THYROID MAXIMUM DOSE- 9.32E-03 MREM CRITICAL AGE- TEEN CRITICAL PATHWAY- SHORE

H	3	27.55 %
CO	60	59.72 %
I	131	9.16 %

KIDNEY MAXIMUM DOSE- 2.03E-02 MREM CRITICAL AGE- TEEN CRITICAL PATHWAY- FISH

H	3	12.65 %
CO	60	27.43 %
CS	134	22.97 %
CS	137	34.15 %

LUNG MAXIMUM DOSE- 1.36E-02 MREM CRITICAL AGE- TEEN CRITICAL PATHWAY- FISH

H	3	18.86 %
FE	55	5.46 %
CO	60	40.88 %
CS	134	13.19 %
CS	137	20.11 %

GI-LLI MAXIMUM DOSE- 8.30E-02 MREM CRITICAL AGE- ADULT CRITICAL PATHWAY- FISH

CO	60	8.99 %
NB	95	78.80 %

CATAWBA UNIT 1 LIQUID RELEASE 183-274 92 2.02E+10 02/19/93

SKIN	MAXIMUM DOSE-	1.11E-02 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	SHORE	
	CO 58	5.60 %					
	CO 60	81.73 %					
	CS 137	5.46 %					
BONE	MAXIMUM DOSE-	1.77E-01 MREM	CRITICAL AGE-	CHILD	CRITICAL PATHWAY-	FISH	
	CS 134	21.79 %					
	CS 137	74.57 %					
LIVER	MAXIMUM DOSE-	2.35E-01 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	FISH	
	CS 134	31.93 %					
	CS 137	59.24 %					
T. BODY	MAXIMUM DOSE-	1.61E-01 MREM	CRITICAL AGE-	ADULT	CRITICAL PATHWAY-	FISH	
	H 3	5.12 %					
	CS 134	37.49 %					
	CS 137	54.20 %					
THYROID	MAXIMUM DOSE-	1.79E-02 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	SHORE	
	H 3	34.09 %					
	CO 60	43.02 %					
	I 131	13.07 %					
KIDNEY	MAXIMUM DOSE-	8.74E-02 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	FISH	
	H 3	6.96 %					
	CO 60	8.79 %					
	CS 134	27.45 %					
	CS 137	54.70 %					
LUNG	MAXIMUM DOSE-	4.46E-02 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	FISH	
	H 3	13.66 %					
	CO 60	17.24 %					
	CS 134	20.75 %					
	CS 137	42.40 %					
GI-LLI	MAXIMUM DOSE-	2.78E-01 MREM	CRITICAL AGE-	ADULT	CRITICAL PATHWAY-	FISH	
	NB 95	83.77 %					

CATAWBA UNIT 1 LIQUID RELEASE 275-366 92 1.92E+10 02/19/93

SKIN	MAXIMUM DOSE-	8.34E-03	MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	SHORE
	CO 58	10.95 %					
	CO 60	66.80 %					
	SB 125	10.50 %					
BONE	MAXIMUM DOSE-	1.43E-01	MREM	CRITICAL AGE-	CHILD	CRITICAL PATHWAY-	FISH
	CS 134	24.93 %					
	CS 137	61.23 %					
	TH 228	10.27 %					
LIVER	MAXIMUM DOSE-	1.78E-01	MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	FISH
	CS 134	39.20 %					
	CS 137	52.21 %					
T. BODY	MAXIMUM DOSE-	1.25E-01	MREM	CRITICAL AGE-	ADULT	CRITICAL PATHWAY-	FISH
	CS 134	44.96 %					
	CS 137	46.66 %					
THYROID	MAXIMUM DOSE-	1.11E-02	MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	SHORE
	H 3	35.47 %					
	CO 58	7.05 %					
	CO 60	42.78 %					
	SB 125	7.01 %					
KIDNEY	MAXIMUM DOSE-	6.62E-02	MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	FISH
	H 3	5.93 %					
	CO 60	7.16 %					
	CS 134	33.60 %					
	CS 137	48.07 %					
LUNG	MAXIMUM DOSE-	3.30E-02	MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	FISH
	H 3	11.90 %					
	CO 60	14.35 %					
	CS 134	25.97 %					
	CS 137	38.10 %					
GI-LLI	MAXIMUM DOSE-	1.61E-01	MREM	CRITICAL AGE-	ADULT	CRITICAL PATHWAY-	FISH
	CO 58	11.95 %					
	NB 95	68.49 %					
	TH 228	7.33 %					

CATAWBA UNIT 1 LIQUID RELEASE 001-366 92 8.41E+10 02/19/93

SKIN	MAXIMUM DOSE-	3.66E-02 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	SHORE	
	CO 60	84.55 %					
BONE	MAXIMUM DOSE-	3.65E-01 MREM	CRITICAL AGE-	CHILD	CRITICAL PATHWAY-	FISH	
	CS 134	23.41 %					
	CS 137	67.37 %					
LIVER	MAXIMUM DOSE-	4.89E-01 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	FISH	
	CO 60	5.71 %					
	CS 134	34.12 %					
	CS 137	53.26 %					
T. BODY	MAXIMUM DOSE-	3.33E-01 MREM	CRITICAL AGE-	ADULT	CRITICAL PATHWAY-	FISH	
	H 3	5.70 %					
	CS 134	40.30 %					
	CS 137	49.01 %					
THYROID	MAXIMUM DOSE-	5.01E-02 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	SHORE	
	H 3	27.96 %					
	CO 60	52.46 %					
	I 131	9.67 %					
KIDNEY	MAXIMUM DOSE-	1.70E-01 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	FISH	
	H 3	7.38 %					
	CO 60	13.85 %					
	CS 134	28.06 %					
	CS 137	47.04 %					
LUNG	MAXIMUM DOSE-	1.04E-01 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	FISH	
	H 3	13.42 %					
	CO 60	25.17 %					
	CS 134	19.66 %					
	CS 137	33.79 %					
GI-LLI	MAXIMUM DOSE-	6.99E-01 MREM	CRITICAL AGE-	ADULT	CRITICAL PATHWAY-	FISH	
	CO 58	5.13 %					
	CO 60	5.04 %					
	NB 95	80.84 %					

CATAWBA NUCLEAR STATION
UNIT 1
RADIOACTIVE EFFLUENT RELEASES
DATE : 02/03/93

II. AIRBORNE RELEASES — YEAR : 1992

	UNITS	1ST QTR	2ND QTR	3RD QTR	4TH QTR	TOTAL	
1. TOTAL NOBLE GASES	CURIES	5.82E+01	7.11E+01	2.01E+02	9.82E+01	4.26E+02	
2. TOTAL HALOGENS	CURIES	5.31E-04	1.54E-05	3.62E-05	2.45E-06	5.65E-04	
3. TOTAL PARTICULATE GROSS BETA-GAMMA	CURIES	1.17E-04	3.35E-05	3.81E-04	9.99E-05	6.32E-04	
4. TOTAL TRITIUM	CURIES	2.15E+01	2.62E+01	2.41E+01	1.73E+01	8.91E+01	
5. TOTAL PARTICULATE GROSS ALPHA ACTIVITY	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
6. MAXIMUM NOBLE GAS RELEASE RATE	UCI/SEC	1.60E+02	1.60E+03	1.60E+02	1.60E+03	8.00E+02	
7. RADIONUCLIDES RELEASED	CURIES						EC RATIO
H-3		2.15E+01	2.62E+01	2.41E+01	1.73E+01	8.91E+01	6.17E-04
PARTICULATES							
F-18		7.72E-05	1.00E-03	2.03E-06	6.24E-06	9.55E-05	9.38E-10
NA-24		0.00E+00	6.37E-04	3.23E-08	3.23E-08	1.49E-07	2.08E-11
CR-51		0.00E+00	5.00E+00	1.99E-04	8.27E-06	2.07E-04	6.79E-09
MN-54		5.10E-06	2.54E-06	3.76E-04	0.00E+00	1.14E-03	1.12E-08
MN-56		1.12E-06	1.57E-07	1.27E-06	0.00E+00	1.81E-07	8.89E-12
CO-57		0.00E+00	0.00E+00	3.74E-08	2.18E-10	3.76E-08	4.11E-11
CO-58		9.30E-06	7.21E-06	1.27E-04	7.56E-05	2.12E-04	2.08E-07
CO-60		0.00E+00	4.82E-10	2.93E-05	3.83E-06	3.31E-05	6.51E-07
SE-75		7.87E-07	2.18E-07	0.00E+00	0.00E+00	1.01E-06	1.23E-09
SR-82		6.42E-08	1.12E-07	6.04E-08	7.75E-08	3.64E-07	7.15E-11
RB-86		2.35E-05	1.58E-05	8.75E-07	0.00E+00	4.03E-05	4.40E-10
RB-89		0.00E+00	1.25E-07	0.00E+00	0.00E+00	1.25E-07	6.16E-13
Y-91M		0.00E+00	5.33E-10	0.00E+00	0.00E+00	5.33E-10	2.62E-15
ZR-97		0.00E+00	0.00E+00	0.00E+00	6.84E-09	6.84E-09	3.36E-12
NB-97		8.01E-10	0.00E+00	0.00E+00	0.00E+00	8.01E-10	7.87E-15
MO-99		0.00E+00	3.42E-09	0.00E+00	0.00E+00	3.42E-09	1.69E-12
RU-106		0.00E+00	2.06E-08	0.00E+00	0.00E+00	2.06E-08	1.01E-09
SB-124		0.00E+00	2.71E-10	0.00E+00	0.00E+00	2.71E-10	1.22E-12
TE-131M		0.00E+00	4.41E-09	0.00E+00	0.00E+00	4.41E-09	4.33E-11
CS-134		0.00E+00	2.42E-06	3.34E-06	5.76E-06	1.15E-05	5.64E-11
CS-136		1.00E-10	0.00E+00	1.90E-05	0.00E+00	1.90E-05	2.07E-08
CS-137		6.50E-07	8.25E-06	0.00E+00	4.00E-06	1.22E-05	6.01E-11
CS-138		1.02E-07	4.14E-06	9.82E-06	5.72E-06	1.86E-05	1.75E-10
BA-139		3.32E-09	5.54E-08	3.22E-09	0.00E+00	6.19E-08	1.52E-12
CE-141		7.98E-07	0.00E+00	0.00E+00	0.00E+00	7.98E-07	9.80E-10
W-187		0.00E+00	6.62E-10	0.00E+00	0.00E+00	9.62E-10	8.45E-14
SB-128		5.83E-10	4.63E-08	3.84E-06	0.00E+00	4.49E-06	5.06E-13
BR-80M		3.62E-07	2.37E-06	1.29E-07	2.86E-08	5.41E-07	2.66E-11
HALOGENS							
I-131		2.72E-04	2.22E-06	1.28E-05	0.00E+00	2.87E-04	1.41E-08
I-132		8.73E-07	2.77E-06	7.29E-05	4.10E-06	2.06E-05	1.31E-09
I-133		2.56E-04	4.34E-06	2.77E-07	2.61E-06	2.65E-04	2.80E-07
I-134		1.94E-06	3.04E-06	1.40E-07	0.00E+00	5.25E-06	5.24E-11
I-135		4.28E-07	2.69E-06	7.60E-06	0.00E+00	3.48E-06	5.79E-10
GASES							
AR-41		1.86E+01	1.71E+01	9.46E+01	7.58E+01	2.07E+02	1.97E-02
KR-85		2.13E-01	0.00E+00	0.00E+00	0.00E+00	2.13E-01	7.86E-07
KR-85M		1.37E-01	1.66E-01	8.73E-03	2.67E-02	3.69E-01	3.82E-06
KR-87		8.25E-03	3.75E-02	3.95E-02	0.00E+00	5.92E-02	2.91E-06
KR-88		2.04E-01	1.73E-01	8.80E-02	8.80E-03	5.44E-01	4.30E-05
XE-131M		1.21E-01	7.81E-03	1.42E+00	0.00E+00	1.62E+00	7.93E-03
XE-133		3.15E+01	5.49E+01	1.00E+02	1.88E+01	2.57E+02	4.13E-04
XE-133M		5.62E-01	7.75E-01	1.49E+00	2.85E-01	3.31E+00	3.43E-06
XE-135		3.03E+00	3.44E+00	2.91E+00	2.17E+00	1.19E+01	1.64E-04
XE-135M		3.53E-05	2.29E-03	3.22E-04	1.18E+00	1.17E+00	2.73E-05
XE-138		5.52E+00	5.76E-04	0.00E+00	1.09E-03	5.97E+00	1.90E-08
						TOTAL EC RATIO	2.13E-02

CATAWBA UNIT 1 GAS DOSE 001-091 92 RELEASE WEIGHTED MET REPORT SUMMARY 02/24/93
SPECIAL LOCATION
AT 0.50 MILES NNE

NOBLE GAS EXPOSURE:

BETA AIR DOSE = 1.11E-01 MILLIRADS
GAMMA AIR DOSE = 2.05E-01 MILLIRADS

TOTAL BODY DOSE = 1.36E-01 MILLIREM
XE133 5.27%
AR 41 89.63%

TOTAL SKIN DOSE = 2.31E-01 MILLIREM
XE133 8.71%
AR 41 84.55%

CATAWBA UNIT 1 GAS DOSE 001-091 92 RELEASE WEIGHTED MET REPORT SUMMARY 02/24/93
SPECIAL LOCATION
AT 0.50 MILES ENE

IODINE, PARTICULATE, AND TRITIUM EXPOSURE SUMMARY:

MAXIMUM ORGAN - THYROID
CRITICAL AGE - CHILD
CRITICAL PATHWAY - VEGET @ 77.51%

MAXIMUM ORGAN DOSE = 1.14E-01 MILLIREM
H 3 84.13%
I 131 14.89%

CATAWBA UNIT 1 GAS DOSE 092-182 92 RELEASE WEIGHTED MET REPORT SUMMARY 02/24/93
SPECIAL LOCATION
AT 0.50 MILES S

NOBLE GAS EXPOSURE:

BETA AIR DOSE = 9.64E-02 MILLIRADS
GAMMA AIR DOSE = 1.24E-01 MILLIRADS

TOTAL BODY DOSE = 8.10E-02 MILLIREM

XE133	12.53%
XE135	5.49%
AR 41	79.62%

TOTAL SKIN DOSE = 1.48E-01 MILLIREM

XE133	19.36%
XE135	7.99%
AR 41	70.09%

CATAWBA UNIT 1 GAS DOSE 092-182 92 RELEASE WEIGHTED MET REPORT SUMMARY 02/24/93
SPECIAL LOCATION
AT 0.50 MILES S

IODINE, PARTICULATE, AND TRITIUM EXPOSURE SUMMARY:

MAXIMUM ORGAN - THYROID
CRITICAL AGE - CHILD
CRITICAL PATHWAY - VEGET @ 78.18%

MAXIMUM ORGAN DOSE = 8.20E-02 MILLIREM
H 3 99.77%

CATAWBA UNIT 1 GAS DOSE 183-274 92 RELEASE WEIGHTED MET REPORT SUMMARY 02/24/93
SPECIAL LOCATION
AT 0.50 MILES NE

NOBLE GAS EXPOSURE:

BETA AIR DOSE = 6.20E-01 MILLIRADS
GAMMA AIR DOSE = 1.23E+00 MILLIRADS

TOTAL BODY DOSE = 8.14E-01 MILLIREM
XE133 4.66%
AR 41 94.55%

TOTAL SKIN DOSE = 1.36E+00 MILLIREM
XE133 7.88%
AR 41 90.63%

CATAWBA UNIT 1 GAS DOSE 183-274 92 RELEASE WEIGHTED MET REPORT SUMMARY 02/24/93
SPECIAL LOCATION
AT 0.50 MILES ENE

IODINE, PARTICULATE, AND TRITIUM EXPOSURE SUMMARY:

MAXIMUM ORGAN - THYROID
CRITICAL AGE - CHILD
CRITICAL PATHWAY - VEGET @ 77.76%

MAXIMUM ORGAN DOSE = 1.18E-01 MILLIREM
H 3 97.11%

CATAWBA UNIT 1 GAS DOSE 275-366 92 RELEASE WEIGHTED MET REPORT SUMMARY 02/24/93
SPECIAL LOCATION
AT 0.50 MILES NE

NOBLE GAS EXPOSURE:

BETA AIR DOSE = 6.07E-01 MILLIRADS
GAMMA AIR DOSE = 1.62E+00 MILLIRADS

TOTAL BODY DOSE = 1.08E+00 MILLIREM
AR 41 98.36%

TOTAL SKIN DOSE = 1.74E+00 MILLIREM
AR 41 97.59%

CATAWBA UNIT 1 GAS DOSE 275-366 92 RELEASE WEIGHTED MET REPORT SUMMARY 03/24/93
SPECIAL LOCATION
AT 0.50 MILES S

IODINE, PARTICULATE, AND TRITIUM EXPOSURE SUMMARY:

MAXIMUM ORGAN - GI-TRACK
CRITICAL AGE - CHILD
CRITICAL PATHWAY - VEGET @ 77.95%

MAXIMUM ORGAN DOSE = 8.86E-02 MILLIREM
H 3 99.56%

CATAWBA UNIT 1 GAS DOSE 001-366 92 RELEASE WEIGHTED MET REPORT SUMMARY 02/24/93
SPECIAL LOCATION
AT 0.50 MILES NE

NOBLE GAS EXPOSURE:

BETA AIR DOSE = 1.41E+00 MILLIRADS
GAMMA AIR DOSE = 3.14E+00 MILLIRADS

TOTAL BODY DOSE = 2.08E+00 MILLIREM
AR 41 95.70%

TOTAL SKIN DOSE = 3.43E+00 MILLIREM
AR 41 92.97%

CATAWBA UNIT 1 GAS DOSE 001-366 92 RELEASE WEIGHTED MET REPORT SUMMARY 02/24/93
SPECIAL LOCATION
AT 0.50 MILES ENE

IODINE, PARTICULATE, AND TRITIUM EXPOSURE SUMMARY:

MAXIMUM ORGAN - THYROID
CRITICAL AGE - CHILD
CRITICAL PATHWAY - VEGET @ 77.89%

MAXIMUM ORGAN DOSE = 3.40E-01 MILLIREM
H 3 93.81%
I 131 5.62%

UNIT 2

CATAWBA NUCLEAR STATION
UNIT 2
RADIOACTIVE EFFLUENT RELEASES
DATE : 02/05/93

1. LIQUID RELEASES

TEAR : 1992

	UNITS	1ST QTR	2ND QTR	3RD QTR	4TH QTR	TOTAL
1. GROSS RADIOACTIVITY						
A. TOTAL RELEASE	CURIES	9.45E-02	5.29E-02	1.57E-01	1.61E-01	4.65E-01
B. AVERAGE CONCENTRATION RELEASED	UCI/ML	4.28E-09	2.37E-09	7.78E-09	8.38E-09	5.52E-09
C. MAXIMUM CONCENTRATION RELEASED	UCI/ML	3.40E-08	1.45E-08	2.16E-08	1.55E-08	3.40E-08
2. TRITIUM						
A. TOTAL RELEASE	CURIES	5.84E+01	7.71E+01	1.61E+02	9.83E+01	3.86E+02
B. AVERAGE CONCENTRATION RELEASED	UCI/ML	2.28E-06	3.40E-06	7.96E-06	5.12E-06	4.59E-06
3. DISSOLVED NOBLE GASES						
A. TOTAL RELEASE	CURIES	3.73E-04	3.58E-03	9.41E-04	7.19E-05	4.98E-03
B. AVERAGE CONCENTRATION RELEASED	UCI/ML	1.72E-11	1.58E-10	4.66E-11	4.96E-12	5.92E-11
4. GROSS ALPHA ACTIVITY						
A. TOTAL RELEASE	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
B. AVERAGE CONCENTRATION RELEASED	UCI/ML	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5. VOLUME OF LIQUID WASTE TO DISCHARGE CANAL	LITERS	4.27E+07	1.15E+08	1.32E+08	1.23E+08	4.13E+08
6. VOLUME OF DILUTION WATER	LITERS	2.21E+10	2.22E+10	2.02E+10	1.92E+10	8.41E+10
7. RADIONUCLIDES RELEASED	CURIES					EC RATIO
H-3		5.84E+01	7.71E+01	1.61E+02	9.83E+01	3.86E+02	4.59E-03
F-18		4.17E-04	1.65E-04	1.21E-03	1.86E-04	1.98E-03	3.36E-08
NA-24		5.43E-06	6.65E-06	3.87E-06	3.32E-05	4.82E-05	1.17E-08
CR-51		3.55E-03	0.00E+00	1.45E-02	5.60E-03	2.36E-02	3.62E-07
MN-54		3.23E-03	2.76E-03	4.08E-03	1.53E-03	1.16E-02	4.60E-06
FE-55		3.59E-02	2.41E-02	4.09E-02	3.19E-02	1.33E-01	1.58E-05
FE-59		4.52E-04	1.00E+00	1.36E-03	8.75E-04	2.69E-03	2.20E-05
CO-57		1.59E-04	1.26E-04	2.11E-04	3.35E-04	8.12E-04	1.61E-07
CO-58		2.15E-02	8.16E-03	9.34E-02	8.93E-02	1.92E-01	1.73E-03
CO-60		1.89E-02	1.34E-02	1.62E-02	4.51E-02	8.76E-02	2.77E-04
ZN-65		2.16E-05	0.00E+00	1.99E-05	4.51E-05	1.47E-04	1.22E-07
SE-75		0.00E+00	0.00E+00	0.00E+00	2.02E-05	2.02E-05	4.98E-09
SR-87		0.77E-07	1.98E-06	0.00E+00	0.00E+00	1.98E-06	5.64E-10
SR-89		0.00E+00	0.00E+00	0.00E+00	1.04E-05	1.04E-05	3.39E-10
SR-91		0.90E+02	1.82E-05	0.00E+00	0.00E+00	1.82E-05	1.09E-07
SR-92		8.26E-05	2.95E-05	8.33E-05	8.85E-05	2.45E-04	7.83E-08
ZR-95		5.37E-04	2.79E-04	8.04E-04	3.34E-04	1.69E-03	1.12E-06
ZR-97		0.00E+00	0.00E+00	6.34E-04	0.00E+00	6.34E-04	8.33E-07
NB-95		1.08E-03	4.47E-04	1.40E-03	6.26E-04	3.56E-03	1.41E-06
NB-97		9.43E-04	3.43E-04	8.64E-04	3.26E-04	1.97E-03	7.82E-08
MO-99M		0.00E+00	3.26E-06	2.18E-07	0.00E+00	3.48E-06	4.14E-06
RU-103		0.00E+00	0.00E+00	1.28E-05	0.00E+00	1.28E-05	5.66E-09
AG-110M		2.87E-04	3.62E-05	1.65E-04	4.07E-04	8.65E-04	1.72E-06
I-131		2.45E-04	1.30E-04	3.27E-04	0.00E+00	7.08E-04	8.42E-05
I-132		5.03E-07	0.00E+00	0.00E+00	0.00E+00	5.03E-07	9.01E-11
I-133		4.94E-05	4.72E-05	1.30E-05	0.00E+00	1.10E-04	1.86E-07
I-135		2.72E-06	3.50E-06	0.00E+00	0.00E+00	5.92E-06	2.23E-09
SB-122		0.00E+00	0.00E+00	7.22E-06	2.07E-04	2.15E-04	2.55E-07
SB-124		8.39E-04	2.73E-06	1.87E-04	1.35E-03	2.56E-03	4.39E-06
SB-125		5.93E-07	1.21E-03	7.72E-03	1.43E-02	3.82E-02	1.76E-05
SN-113		1.49E-04	4.97E-05	1.30E-04	4.88E-05	2.69E-04	1.34E-07
TE-131M		0.00E+00	0.00E+00	5.19E-06	0.00E+00	5.19E-06	7.72E-09
CS-134		1.02E-04	2.03E-04	9.32E-04	6.72E-04	2.36E-03	2.66E-05
CS-137		3.50E-04	3.75E-04	2.28E-03	1.44E-03	4.44E-03	5.23E-05
CS-138		4.97E-07	0.00E+00	0.00E+00	0.00E+00	4.97E-07	1.49E-11
BA-133		0.00E+00	0.00E+00	1.88E-06	6.00E+00	1.80E-05	1.12E-09
BA-139		0.00E+00	0.00E+00	6.02E-06	0.00E+00	6.02E-06	3.58E-10
BA-140		3.25E-07	0.00E+00	1.15E-05	0.00E+00	1.19E-05	1.77E-09
LA-140		4.20E-07	8.21E-06	4.65E-05	4.69E-06	6.41E-05	8.74E-09
AC-228		0.00E+00	1.34E-06	0.00E+00	0.00E+00	1.34E-06	3.30E-10
TH-228		0.00E+00	0.00E+00	0.00E+00	2.78E-03	2.78E-03	1.42E-04
TH-126		0.00E+00	0.00E+00	0.00E+00	8.93E-06	8.93E-06	1.27E-09
KR-41		0.00E+00	4.43E-06	0.00E+00	0.00E+00	4.43E-06	5.56E-10
KR-85		7.53E-04	3.39E-03	7.19E-04	0.00E+00	4.25E-03	5.31E-07
KR-88		0.00E+00	7.48E-05	0.00E+00	2.39E-06	9.87E-06	1.13E-09
XE-133		1.10E-04	1.62E-04	2.18E-04	7.59E-05	5.23E-04	5.82E-01
XE-133M		0.00E+00	8.21E-06	0.00E+00	0.00E+00	8.21E-06	9.78E-10
XE-135		8.17E-06	1.13E-05	7.47E-07	5.34E-07	2.09E-05	2.47E-09
XE-138		0.00E+00	0.00E+00	3.02E-06	0.00E+00	3.02E-06	3.59E-10

TOTAL EC RATIO 5.22E-03

CATAWBA UNIT 2 LIQUID RELEASE 001-091 92 2.21E+10 02/19/93

SKIN	MAXIMUM DOSE-	1.03E-02	MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	SHORE	
	CO 60	92.51 %						
BONE	MAXIMUM DOSE-	3.23E-02	MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	FISH	
	FE 55	7.77 %						
	CO 60	25.05 %						
	CS 134	19.40 %						
	CS 137	45.15 %						
LIVER	MAXIMUM DOSE-	4.91E-02	MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	FISH	
	CO 60	17.50 %						
	CS 134	29.97 %						
	CS 137	39.48 %						
T. BODY	MAXIMUM DOSE-	3.04E-02	MREM	CRITICAL AGE-	ADULT	CRITICAL PATHWAY-	FISH	
	H 3	7.71 %						
	CO 60	8.39 %						
	CS 134	38.93 %						
	CS 137	39.96 %						
THYROID	MAXIMUM DOSE-	1.21E-02	MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	SHORE	
	H 3	14.29 %						
	CO 60	66.87 %						
	I 131	13.05 %						
KIDNEY	MAXIMUM DOSE-	2.25E-02	MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	FISH	
	H 3	7.68 %						
	CO 60	35.93 %						
	CS 134	20.84 %						
	CS 137	29.49 %						
LUNG	MAXIMUM DOSE-	1.60E-02	MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	SHORE	
	H 3	10.80 %						
	FE 55	7.05 %						
	CO 60	50.54 %						
	CS 134	11.30 %						
	CS 137	16.39 %						
GI-LLI	MAXIMUM DOSE-	1.86E-01	MREM	CRITICAL AGE-	ADULT	CRITICAL PATHWAY-	FISH	
	CO 60	5.82 %						
	NB 95	86.94 %						

CATAWBA UNIT 2 LIQUID RELEASE 092-182 92 2.27E+10 02/19/93

SKIN	MAXIMUM DOSE-	6.90E-03	MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	SHORE
	CO 60	94.89 %					
BONE	MAXIMUM DOSE-	3.00E-02	MREM	CRITICAL AGE-	CHILD	CRITICAL PATHWAY-	FISH
	FE 55	7.31 %					
	CS 134	24.93 %					
	CS 137	63.64 %					
LIVER	MAXIMUM DOSE-	4.60E-02	MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	FISH
	H 3	5.59 %					
	CO 60	12.86 %					
	CS 134	31.79 %					
	CS 137	44.00 %					
T. BODY	MAXIMUM DOSE-	3.04E-02	MREM	CRITICAL AGE-	ADULT	CRITICAL PATHWAY-	FISH
	H 3	11.46 %					
	CO 60	5.78 %					
	CS 134	38.70 %					
	CS 137	41.73 %					
THYROID	MAXIMUM DOSE-	9.32E-03	MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	SHORE
	H 3	27.55 %					
	CO 60	59.72 %					
	I 131	9.16 %					
KIDNEY	MAXIMUM DOSE-	2.03E-02	MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	FISH
	H 3	12.65 %					
	CO 60	27.43 %					
	CS 134	22.97 %					
	CS 137	34.15 %					
LUNG	MAXIMUM DOSE-	1.36E-02	MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	FISH
	H 3	18.86 %					
	FE 55	5.46 %					
	CO 60	40.88 %					
	CS 134	13.19 %					
	CS 137	20.11 %					
GI-LLI	MAXIMUM DOSE-	8.30E-02	MREM	CRITICAL AGE-	ADULT	CRITICAL PATHWAY-	FISH
	CO 60	8.99 %					
	NB 95	78.80 %					

CATAWBA UNIT 2 LIQUID RELEASE 183-274 92 2.02E+10 02/19/93

SKIN MAXIMUM DOSE- 1.11E-02 MREM CRITICAL AGE- TEEN CRITICAL PATHWAY- SHORE

CO 58	5.60 %
CO 60	81.73 %
CS 137	5.46 %

BONE MAXIMUM DOSE- 1.77E-01 MREM CRITICAL AGE- CHILD CRITICAL PATHWAY- FISH

CS 134	21.79 %
CS 137	74.57 %

LIVER MAXIMUM DOSE- 2.35E-01 MREM CRITICAL AGE- TEEN CRITICAL PATHWAY- FISH

CS 134	31.93 %
CS 137	59.24 %

T. BODY MAXIMUM DOSE- 1.61E-01 MREM CRITICAL AGE- ADULT CRITICAL PATHWAY- FISH

H 3	5.12 %
CS 134	37.49 %
CS 137	54.20 %

THYROID MAXIMUM DOSE- 1.79E-02 MREM CRITICAL AGE- TEEN CRITICAL PATHWAY- SHORE

H 3	34.09 %
CO 60	43.02 %
I 131	13.07 %

KIDNEY MAXIMUM DOSE- 8.74E-02 MREM CRITICAL AGE- TEEN CRITICAL PATHWAY- FISH

H 3	6.96 %
CO 60	8.79 %
CS 134	27.45 %
CS 137	54.70 %

LUNG MAXIMUM DOSE- 4.46E-02 MREM CRITICAL AGE- TEEN CRITICAL PATHWAY- FISH

H 3	13.66 %
CO 60	17.24 %
CS 134	20.75 %
CS 137	42.40 %

GI-LLI MAXIMUM DOSE- 2.78E-01 MREM CRITICAL AGE- ADULT CRITICAL PATHWAY- FISH

NB 95	83.77 %

CATAWBA UNIT 2 LIQUID RELEASE 275-366 92 1.92E+10 02/19/93

SKIN MAXIMUM DOSE- 8.34E-03 MREM CRITICAL AGE- TEEN CRITICAL PATHWAY- SHORE

CO 58	10.95 %
CO 60	66.80 %
SB 125	10.50 %

BONE MAXIMUM DOSE- 1.43E-01 MREM CRITICAL AGE- CHILD CRITICAL PATHWAY- FISH

CS 134	24.93 %
CS 137	61.23 %
TH 228	10.27 %

LIVER MAXIMUM DOSE- 1.78E-01 MREM CRITICAL AGE- TEEN CRITICAL PATHWAY- FISH

CS 134	39.20 %
CS 137	52.21 %

T. BODY MAXIMUM DOSE- 1.25E-01 MREM CRITICAL AGE- ADULT CRITICAL PATHWAY- FISH

CS 134	44.96 %
CS 137	46.66 %

THYROID MAXIMUM DOSE- 1.11E-02 MREM CRITICAL AGE- TEEN CRITICAL PATHWAY- SHORE

H 3	35.47 %
CO 58	7.05 %
CO 60	42.78 %
SB 125	7.01 %

KIDNEY MAXIMUM DOSE- 6.62E-02 MREM CRITICAL AGE- TEEN CRITICAL PATHWAY- FISH

H 3	5.93 %
CO 60	7.16 %
CS 134	33.60 %
CS 137	48.07 %

LUNG MAXIMUM DOSE- 3.30E-02 MREM CRITICAL AGE- TEEN CRITICAL PATHWAY- FISH

H 3	11.90 %
CO 60	14.35 %
CS 134	25.97 %
CS 137	38.10 %

GI-LLI MAXIMUM DOSE- 1.61E-01 MREM CRITICAL AGE- ADULT CRITICAL PATHWAY- FISH

CO 58	11.95 %
NB 95	68.49 %
TH 228	7.33 %

CATAWBA UNIT 2 LIQUID RELEASE 001-366 92 8.41E+10 02/19/93

SKIN MAXIMUM DOSE- 3.66E-02 MREM CRITICAL AGE- TEEN CRITICAL PATHWAY- SHORE

CO 60 84.55 %

BONE MAXIMUM DOSE- 3.65E-01 MREM CRITICAL AGE- CHILD CRITICAL PATHWAY- FISH

CS 134 23.41 %
CS 137 67.37 %

LIVER MAXIMUM DOSE- 4.89E-01 MREM CRITICAL AGE- TEEN CRITICAL PATHWAY- FISH

CO 60 5.71 %
CS 134 34.12 %
CS 137 53.26 %

T. BODY MAXIMUM DOSE- 3.33E-01 MREM CRITICAL AGE- ADULT CRITICAL PATHWAY- FISH

H 3 5.70 %
CS 134 40.30 %
CS 137 49.01 %

THYROID MAXIMUM DOSE- 5.01E-02 MREM CRITICAL AGE- TEEN CRITICAL PATHWAY- SHORE

H 3 27.96 %
CO 60 52.46 %
I 131 9.67 %

KIDNEY MAXIMUM DOSE- 1.90E-01 MREM CRITICAL AGE- TEEN CRITICAL PATHWAY- FISH

H 3 7.38 %
CO 60 13.85 %
CS 134 28.06 %
CS 137 47.04 %

LUNG MAXIMUM DOSE- 1.04E-01 MREM CRITICAL AGE TEEN CRITICAL PATHWAY- FISH

H 3 13.42 %
CO 60 25.17 %
CS 134 19.66 %
CS 137 33.79 %

GI-LLI MAXIMUM DOSE- 6.99E-01 MREM CRITICAL AGE- ADULT CRITICAL PATHWAY- FISH

CO 58 5.13 %
CO 60 5.04 %
NB 95 80.84 %

CATAWBA NUCLEAR STATION
UNIT 2
RADIOACTIVE EFFLUENT RELEASES
DATE : 02/03/93

II. AIRBORNE RELEASES — YEAR : 1992

	UNITS	1ST QTR	2ND QTR	3RD QTR	4TH QTR	TOTAL
1. TOTAL NOBLE GASES	CURIES	3.82E+01	7.11E+01	2.01E+02	9.82E+01	4.28E+02
2. TOTAL HALOGENS	CURIES	5.31E-04	1.54E-05	3.82E-05	2.65E-04	5.83E-04
3. TOTAL PARTICULATE GROSS BETA-GAMMA	CURIES	1.17E-04	2.35E-05	3.81E-04	9.99E-05	6.32E-04
4. TOTAL TRITIUM	CURIES	2.15E+01	2.02E+01	2.41E+01	1.73E+01	8.31E+01
5. TOTAL PARTICULATE GROSS ALPHA ACTIVITY	CURIES	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6. MAXIMUM NOBLE GAS RELEASE RATE	UCI/SEC	1.60E+02	1.60E+03	1.60E+03	1.60E+03	8.00E+02
7. RADIONUCLIDES RELEASED	CURIES					EC RATIO
H-3		2.15E+01	2.02E+01	2.41E+01	1.73E+01	8.31E+01	3.17E-04
PARTICULATES						
F-18		7.72E-05	1.00E-05	2.83E-06	6.24E-06	9.55E-05	9.35E-10
NA-24		0.00E+00	6.37E-08	3.25E-08	5.23E-08	1.48E-07	2.08E-11
CR-51		0.00E+00	0.00E+00	1.98E-04	8.27E-06	2.07E-04	6.79E-09
MN-54		5.10E-06	2.56E-06	3.76E-06	0.00E+00	1.14E-05	1.12E-08
MN-56		1.12E-06	1.57E-07	1.27E-08	0.00E+00	1.81E-07	8.89E-12
CO-57		0.00E+00	0.00E+00	2.74E-08	2.18E-10	2.76E-08	4.11E-11
CO-58		9.30E-06	7.21E-06	1.27E-04	7.56E-05	2.12E-04	2.08E-07
CO-60		0.00E+00	4.62E-10	2.43E-05	3.83E-06	3.31E-05	6.51E-07
SE-75		7.87E-07	2.18E-07	0.00E+00	0.00E+00	1.01E-06	1.23E-09
RB-82		8.43E-06	1.12E-07	6.04E-06	7.75E-08	3.64E-07	7.15E-11
SR-89		2.25E-05	1.58E-05	8.73E-07	0.00E+00	4.03E-05	4.48E-10
YB-89		0.00E+00	1.25E-07	0.00E+00	0.00E+00	1.25E-07	6.16E-13
Y-91M		0.00E+00	5.32E-10	0.00E+00	0.00E+00	5.32E-10	2.62E-15
ZR-97		0.00E+00	0.00E+00	0.00E+00	6.84E-09	6.84E-09	3.36E-12
NB-97		6.01E-10	0.00E+00	0.00E+00	0.00E+00	8.01E-10	7.87E-15
MO-99		0.00E+00	3.43E-09	0.00E+00	0.00E+00	3.43E-09	1.69E-12
RU-106		0.00E+00	2.06E-06	0.00E+00	0.00E+00	2.06E-06	1.01E-09
SB-124		0.00E+00	2.73E-10	0.00E+00	0.00E+00	2.73E-10	1.22E-12
TE-131M		0.00E+00	4.41E-08	0.00E+00	0.00E+00	4.41E-08	4.32E-11
CS-134		0.00E+00	2.42E-09	3.24E-09	5.76E-09	1.15E-08	5.66E-11
CS-136		1.05E-10	0.00E+00	1.40E-05	0.00E+00	1.40E-05	2.87E-08
CS-137		0.00E+00	9.25E-09	0.00E+00	4.00E-09	1.22E-08	8.01E-11
CS-138		1.93E-07	4.14E-06	9.92E-08	5.72E-06	1.02E-05	1.25E-10
BA-139		3.22E-09	5.54E-01	3.22E-09	0.00E+00	6.19E-08	1.52E-12
CE-141		7.93E-07	0.00E+00	0.00E+00	0.00E+00	7.93E-07	9.80E-10
W-187		0.01E+00	9.62E-10	0.00E+00	0.00E+00	9.62E-10	9.45E-14
SR-126		5.82E-10	4.05E-08	3.64E-09	0.00E+00	4.43E-08	6.30E-11
BR-80M		3.62E-07	2.42E-08	1.29E-07	2.86E-08	5.41E-07	2.66E-11
HALOGENS						
I-131		2.72E-04	2.20E-06	1.28E-05	0.00E+00	2.87E-04	1.43E-08
I-132		6.73E-07	2.77E-06	2.29E-05	4.18E-06	2.66E-05	1.91E-09
I-133		2.58E-04	4.24E-06	2.77E-07	2.63E-06	2.63E-04	2.60E-07
I-134		1.66E-06	3.04E-06	1.40E-07	0.00E+00	3.20E-06	5.24E-11
I-135		4.20E-07	2.49E-06	7.09E-08	0.00E+00	3.48E-06	5.70E-10
GASES						
XE-41		1.86E+01	1.31E+01	9.46E+01	7.36E+01	2.00E+02	1.97E-02
KR-85		2.11E-01	6.30E+00	8.20E+00	0.00E+00	2.11E-01	2.96E-07
KR-85M		1.97E-01	1.86E-01	9.71E-01	7.67E-02	1.39E-01	3.82E-05
KR-87		8.23E-03	5.39E-02	1.95E-02	0.00E+00	5.52E-02	2.91E-06
KR-88		2.56E-01	1.71E-01	8.80E-01	8.80E-03	3.94E-01	4.20E-05
XE-131M		1.21E-01	7.61E-02	1.42E+00	0.00E+00	1.62E+00	7.95E-01
XE-133		7.05E+01	3.43E+01	1.06E+02	1.88E+01	2.09E+02	4.19E-04
XE-133M		3.86E-01	7.20E-01	1.99E+00	2.05E-01	3.53E+00	5.45E-06
XE-135		3.03E+00	3.94E+00	2.51E+02	2.17E+00	1.37E+01	1.64E-04
XE-135M		2.00E-05	7.24E-01	3.23E-04	1.10E+00	1.10E+00	2.31E-05
XE-138		0.00E+00	0.76E-04	0.00E+00	1.09E-05	3.07E-04	1.60E-09

TOTAL EC RATIO 2.11E-01

CATAWBA UNIT 2 GAS DOSE 001-091 92 RELEASE WEIGHTED MET REPORT SUMMARY 02/24/93
SPECIAL LOCATION
AT 0.50 MILES NNE

NOBLE GAS EXPOSURE:

BETA AIR DOSE = 1.11E-01 MILLIRADS
GAMMA AIR DOSE = 2.05E-01 MILLIRADS

TOTAL BODY DOSE = 1.36E-01 MILLIREM
XE133 5.27%
AR 41 89.63%

TOTAL SKIN DOSE = 2.31E-01 MILLIREM
XE133 8.71%
AR 41 84.55%

CATAWBA UNIT 2 GAS DOSE 001-091 92 RELEASE WEIGHTED MET REPORT SUMMARY 02/24/93
SPECIAL LOCATION
AT 0.50 MILES ENE

IODINE, PARTICULATE, AND TRITIUM EXPOSURE SUMMARY:

MAXIMUM ORGAN - THYROID
CRITICAL AGE - CHILD
CRITICAL PATHWAY - VEGET @ 77.51%

MAXIMUM ORGAN DOSE = 1.14E-01 MILLIREM
H 3 84.13%
I 131 14.89%

CATAWBA UNIT 2 GAS DOSE 092-182 92 RELEASE WEIGHTED MET REPORT SUMMARY 02/24/93
SPECIAL LOCATION
AT 0.50 MILES S

NOBLE GAS EXPOSURE:

BETA AIR DOSE = 9.64E-02 MILLIRADS
GAMMA AIR DOSE = 1.24E-01 MILLIRADS

TOTAL BODY DOSE = 8.10E-02 MILLIREM
XE133 12.53%
XE135 5.49%
AR 41 79.62%

TOTAL SKIN DOSE = 1.48E-01 MILLIREM
XE133 19.36%
XE135 7.99%
AR 41 70.09%

CATAWBA UNIT 2 GAS DOSE 092-182 92 RELEASE WEIGHTED MET REPORT SUMMARY 02/24/93
SPECIAL LOCATION
AT 0.50 MILES S

IODINE, PARTICULATE, AND TRITIUM EXPOSURE SUMMARY:

MAXIMUM ORGAN - THYROID
CRITICAL AGE - CHILD
CRITICAL PATHWAY - VEGET @ 78.18%

MAXIMUM ORGAN DOSE = 8.20E-02 MILLIREM
H 3 99.77%

CATAWBA UNIT 2 GAS DOSE 183-274 92 RELEASE WEIGHTED MET REPORT SUMMARY 02/24/93
SPECIAL LOCATION
AT 0.50 MILES NE

NOBLE GAS EXPOSURE:

BETA AIR DOSE = 6.20E-01 MILLIRADS
GAMMA AIR DOSE = 1.23E+00 MILLIRADS

TOTAL BODY DOSE = 8.14E-01 MILLIREM
XE133 4.66%
AR 41 94.55%

TOTAL SKIN DOSE = 1.36E+00 MILLIREM
XE133 7.88%
AR 41 90.63%

CATAWBA UNIT 2 GAS DOSE 103-274 92 RELEASE WEIGHTED MET REPORT SUMMARY 02/24/93
SPECIAL LOCATION
AT 0.50 MILES ENE

IODINE, PARTICULATE, AND TRITIUM EXPOSURE SUMMARY:

MAXIMUM ORGAN - THYROID
CRITICAL AGE - CHILD
CRITICAL PATHWAY - VEGET @ 77.76%

MAXIMUM ORGAN DOSE = 1.18E-01 MILLIREM
H 3 97.11%

CATAMBA UNIT 2 GAS DOSE 275-366 92 RELEASE WEIGHTED MET REPORT SUMMARY 02/24/93
SPECIAL LOCATION
AT 0.50 MILES NE

NOBLE GAS EXPOSURE:

BETA AIR DOSE = 6.07E-01 MILLIRADS
GAMMA AIR DOSE = 1.62E+00 MILLIRADS

TOTAL BODY DOSE = 1.08E+00 MILLIREM
AR 41 98.36%

TOTAL SKIN DOSE = 1.74E+00 MILLIREM
AR 41 97.59%

CATAWBA UNIT 2 GAS DOSE 275-366 92 RELEASE WEIGHTED MET REPORT SUMMARY 02/24/93
SPECIAL LOCATION
AT 0.50 MILES S

IODINE, PARTICULATE, AND TRITIUM EXPOSURE SUMMARY:

MAXIMUM ORGAN - GI-TRACK
CRITICAL AGE - CHILD
CRITICAL PATHWAY - VEGET @ 77.95%

MAXIMUM ORGAN DOSE = 8.86E-02 MILLIREM
H 3 99.56%

CATAWBA UNIT 2 GAS DOSE 001-366 92 RELEASE WEIGHTED MET REPORT SUMMARY 02/24/93
SPECIAL LOCATION
AT 0.50 MILES NE

NOBLE GAS EXPOSURE:

BETA AIR DOSE = 1.41E+00 MILLIRADS
GAMMA AIR DOSE = 3.14E+00 MILLIRADS

TOTAL BODY DOSE = 2.08E+00 MILLIREM
AR 41 95.70%

TOTAL SKIN DOSE = 3.43E+00 MILLIREM
AR 41 92.97%

CATAWBA UNIT 2 GAS DOSE 001-366 92 RELEASE WEIGHTED MET REPORT SUMMARY 02/24/93
SPECIAL LOCATION
AT 0.50 MILES ENE

IODINE, PARTICULATE, AND TRITIUM EXPOSURE SUMMARY:

MAXIMUM ORGAN - THYROID
CRITICAL AGE - CHILD
CRITICAL PATHWAY - VEGET @ 77.89%

MAXIMUM ORGAN DOSE = 3.40E-01 MILLIREM
H 3 93.81%
I 131 5.62%

SUPPLEMENTAL INFORMATION

CATAWBA NUCLEAR STATION

EFFLUENT AND WASTE DISPOSAL SUPPLEMENTAL INFORMATION

REPORT DATE: 02/24/93

PERIOD COVERED: START DAY = 183 STOP DAY = 366

I. REGULATORY LIMITS

A. NOBLE GASES - AIR DOSE

1. CALENDAR QUARTER - GAMMA DOSE = 5 MRAD
2. CALENDAR QUARTER - BETA DOSE = 10 MRAD
3. CALENDAR YEAR - GAMMA DOSE = 10 MRAD
4. CALENDAR YEAR - BETA DOSE = 20 MRAD

B. LIQUID EFFLUENTS - DOSE

1. CALENDAR QUARTER - TOTAL BODY DOSE = 1.5 MREM
2. CALENDAR QUARTER - ORGAN DOSE = 5 MREM
3. CALENDAR YEAR - TOTAL BODY DOSE = 3 MREM
4. CALENDAR YEAR - ORGAN DOSE = 10 MREM

C. IODINE - 131 AND 133, TRITIUM, PARTICULATES W/T 1/2 > 8 DAYS - ORGAN DOSE

1. CALENDAR QUARTER = 7.5 MREM
2. CALENDAR YEAR = 15 MREM

II. MAXIMUM PERMISSIBLE EFFLUENT CONCENTRATIONS

A. GASEOUS EFFLUENTS - INFORMATION FOUND IN OFFSITE DOSE CALCULATION MANUAL

B. LIQUID EFFLUENTS - INFORMATION FOUND IN 10CFR20, APPENDIX B, TABLE 2, 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. 2.06E+02 = TOTAL NUMBER OF BATCH RELEASES.
2. 5.87E+04 = TOTAL TIME(MIN.) FOR BATCH RELEASES.
3. 5.09E+03 = MAXIMUM TIME(MIN.) FOR A BATCH RELEASE.
4. 2.85E+02 = AVERAGE TIME(MIN.) FOR A BATCH RELEASE.
5. 2.00E+00 = MINIMUM TIME(MIN.) FOR A BATCH RELEASE.
6. 1.00E+04 = AVERAGE DILUTION WATER FLOW DURING RELEASES(GPM).

B. GASEOUS EFFLUENT

1. 1.10E+02 = TOTAL NUMBER OF BATCH RELEASES.
2. 4.84E+05 = TOTAL TIME(MIN.) FOR BATCH RELEASES.
3. 2.11E+04 = MAXIMUM TIME(MIN.) FOR A BATCH RELEASE.
4. 4.40E+03 = AVERAGE TIME(MIN.) FOR A BATCH RELEASE.
5. 6.00E+00 = MINIMUM TIME(MIN.) FOR A BATCH RELEASE.

VI. ABNORMAL RELEASES

A. LIQUID

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

B. GASEOUS

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

SUPPLEMENTAL REPORT PAGE 2

CATAWBA NUCLEAR STATION

Values represented by "0.00E+00" within the body of the semi-annual report are below the minimum detectable limits of the Catawba counting systems. Typical MDA's for the Catawba counting systems are listed below:

ISOTOPE	ENERGY (Kev)	AVERAGE MDA
Xe-133	80	3.50E-08
Ce-144	133	3.00E-07
Kr-88	196	3.60E-08
Xe-135	249	1.15E-08
Kr-87	402	3.15E-08
Cs-137	661	2.50E-08
Mo-99	778	1.45E-07
Mn-54	834	2.65E-08
Zn-65	1115	6.85E-08
Co-60	1332	2.95E-08

SUPPLEMENTAL REPORT PAGE 3

CATAWBA NUCLEAR STATION

The estimated percentage of error for both Liquid and Gaseous effluent release data at Catawba 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%

FUEL CYCLE CALCULATION

MAXIMUM TOTAL BODY	NE 0.50 MILES	4.86E+00	AGE : ADULT	
	CNS.GAS	4.16E+00	85.6 %	
		AR 41	95.7 %	
	CNS.LIQUID	6.67E-01	13.7 %	
	CRITICAL PATH	FISH	95.3 %	
		H 3	5.6 %	
		CS 134	40.3 %	
		CS 137	48.8 %	
	MNS.GAS	1.50E-03	0.0 %	
		KR 88	9.8 %	
		XE133	21.5 %	
		XE135	18.5 %	
		AR 41	48.0 %	
	MNS.LIQUID	3.06E-02	0.6 %	
	CRITICAL PATH	DRINKING	63.1 %	
		H 3	63.3 %	
		CS 134	12.7 %	
		CS 137	20.5 %	

1992 CATAWBA FUEL CYCLE SUMMARY DAYS 001-366 02/24/93 AT 17:53

MAXIMUM ORGAN	ENE 0.50 MILES	1.92E+00	AGE : ADULT	ORGAN : GI-TRACK
	CNS.GAS	4.39E-01	22.8 %	
	CRITICAL PATH	GARDEN	64.0 %	
		H 3	99.4 %	
	CNS.LIQUID	1.40E+00	72.6 %	
	CRITICAL PATH	FISH	97.3 %	
		CO 58	5.0 %	
		NB 95	80.6 %	
	MNS.GAS	1.45E-03	0.0 %	
	CRITICAL PATH	GARDEN	40.9 %	
		H 3	96.9 %	
	MNS.LIQUID	8.45E-02	4.3 %	
	CRITICAL PATH	FISH	73.7 %	
		H 3	22.9 %	
		NB 95	68.9 %	

1992 CATAWBA FUEL CYCLE SUMMARY DAYS 001-366 02/24/93 AT 17:53

MAXIMUM TOTAL BODY NE 0.50 MILES 4.86E+00 AGE : ADULT

MAXIMUM ORGAN ENE 0.50 MILES 1.92E+00 AGE : ADULT ORGAN : GI-TRACK

METEOROLOGICAL SURVEY

CATAWBA METEOROLOGICAL SURVEY TOWER DATA — FOR PERIOD OF 01-01-92 THRU 12-31-92

SUMMARY OF PASQUILL A — WIND OCCURANCES BY SECTOR + SPEED CLASS(PERCENT) — DATE OF REPORT 02-24-93

WIND SECTOR	SECTOR TOTAL	WIND SPEED CLASS 1.0-3.2 .45-1.49	3.3-5.5 1.5-2.49	5.6-7.8 2.5-3.49	7.9-10.0 3.5-4.49	10.1-12.3 4.5-5.49	12.4-14.5 5.5-6.49	14.6-16.7 6.5-7.49	16.8-19.0 7.5-8.49	19.1-21.2 8.5-9.49	>21.2 MPH >=9.5 M/S
360.0 -N- 22.5	000.08	00.02	00.00	00.05	00.01	00.00	00.00	00.00	00.00	00.00	00.00
-NNE- 45.0	000.16	00.00	00.01	00.07	00.05	00.01	00.01	00.01	00.00	00.00	00.00
-NE- 67.5	000.38	00.00	00.02	00.07	00.02	00.14	00.07	00.06	00.00	00.00	00.00
-ENE- 90.0	000.02	00.00	00.00	00.02	00.00	00.00	00.00	00.00	00.00	00.00	00.00
-E- 112.5	000.01	00.01	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00
-ESE- 135.0	000.04	00.01	00.02	00.01	00.00	00.00	00.00	00.00	00.00	00.00	00.00
-SE- 157.5	000.32	00.06	00.10	00.14	00.01	00.01	00.00	00.00	00.00	00.00	00.00
-SSE- 180.0	000.74	00.06	00.28	00.33	00.06	00.01	00.00	00.00	00.00	00.00	00.00
-S- 202.5	000.70	00.09	00.23	00.22	00.07	00.08	00.01	00.00	00.00	00.00	00.00
-SSW- 225.0	000.61	00.02	00.18	00.18	00.15	00.08	00.00	00.00	00.00	00.00	00.00
-SW- 247.5	001.05	00.02	00.17	00.40	00.36	00.09	00.00	00.01	00.00	00.00	00.00
-WSW- 270.0	000.67	00.06	00.19	00.24	00.11	00.07	00.00	00.00	00.00	00.00	00.00
-W- 292.5	000.22	00.00	00.13	00.07	00.01	00.01	00.00	00.00	00.00	00.00	00.00
-WNW- 315.0	000.23	00.00	00.08	00.05	00.03	00.01	00.03	00.03	00.00	00.00	00.00
-NW- 337.5	000.16	00.01	00.07	00.03	00.01	00.00	00.01	00.02	00.01	00.00	00.00
-NNW-	000.03	00.02	00.00	00.00	00.00	00.01	00.00	00.00	00.00	00.00	00.00
CALM	00.01										
TOTAL	005.42	000.38	001.48	001.88	000.89	000.52	000.13	000.13	000.01	000.00	000.00

CATAWBA METEOROLOGICAL SURVEY TOWER DATA FOR PERIOD OF 01-01-92 THRU 12-31-92

SUMMARY OF PASQUILL B WIND OCCURANCES BY SECTOR + SPEED CLASS(PERCENT)

DATE OF REPORT 02-24-93

WIND SECTOR	SECTOR TOTAL	WIND SPEED CLASS 1.0-3.2 .45-1.49	3.3-5.5 1.5-2.49	5.6-7.8 2.5-3.49	7.9-10.0 3.5-4.49	10.1-12.3 4.5-5.49	12.4-14.5 5.5-6.49	14.6-16.7 6.5-7.49	16.8-19.0 7.5-8.49	19.1-21.2 8.5-9.49	>21.2 MPH >=9.5 M/S
360.0 -N-	000.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00
22.5 -NNE-	000.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00
45.0 -NE-	000.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00
67.5 -ENE-	000.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00
90.0 -E-	000.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00
112.5 -ESE-	000.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00
135.0 -SE-	000.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00
157.5 -SSE-	000.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00
180.0 -S-	000.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00
202.5 -SSW-	000.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00
225.0 -SW-	000.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00
247.5 -WSW-	000.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00
270.0 -W-	000.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00
292.5 -WNW-	000.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00
315.0 -NW-	000.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00
337.5 -NNW-	000.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00
CALM	00.00										
TOTAL	000.00	000.00	000.00	000.00	000.00	000.00	000.00	000.00	000.00	000.00	000.00

CATAMBA METEOROLOGICAL SURVEY TOWER DATA FOR PERIOD OF 01-01-92 THRU 12-31-92

SUMMARY OF PASQUILL C WIND OCCURANCES BY SECTOR + SPEED CLASS(PERCENT)

DATE OF REPORT 02-24-93

WIND SECTOR	SECTOR TOTAL	WIND SPEED CLASS 1.0-3.2 .45-1.49	3.3-5.5 1.5-2.49	5.6-7.8 2.5-3.49	7.9-10.0 3.5-4.49	10.1-12.3 4.5-5.49	12.4-14.5 5.5-6.49	14.6-16.7 6.5-7.49	16.8-19.0 7.5-8.49	19.1-21.2 8.5-9.49	>21.2 MPH >=9.5 M/S
360.0 -N- 22.5	000.25	00.00	00.05	00.02	00.07	00.07	00.03	00.01	00.00	00.00	00.00
-NNE- 45.0	000.32	00.02	00.00	00.08	00.10	00.05	00.05	00.02	00.00	00.00	00.00
-NE- 67.5	000.39	00.01	00.01	00.03	00.15	00.10	00.09	00.00	00.00	00.00	00.00
-ENE- 90.0	000.01	00.00	00.01	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00
-E- 112.5	000.05	00.03	00.01	00.01	00.00	00.00	00.00	00.00	00.00	00.00	00.00
-ESE- 135.0	000.05	00.02	00.02	00.01	00.00	00.00	00.00	00.00	00.00	00.00	00.00
-SE- 157.5	000.16	00.03	00.03	00.10	00.00	00.00	00.00	00.00	00.00	00.00	00.00
-SSE- 180.0	000.54	00.13	00.31	00.07	00.03	00.00	00.00	00.00	00.00	00.00	00.00
-S- 202.5	000.44	00.06	00.24	00.10	00.01	00.03	00.00	00.00	00.00	00.00	00.00
-SSW- 225.0	000.72	00.05	00.25	00.32	00.07	00.01	00.02	00.00	00.00	00.00	00.00
-SW- 247.5	001.30	00.02	00.40	00.58	00.24	00.05	00.00	00.01	00.00	00.00	00.00
-WSW- 270.0	000.64	00.01	00.23	00.27	00.09	00.03	00.01	00.00	00.00	00.00	00.00
-W- 292.5	000.32	00.02	00.20	00.05	00.03	00.01	00.01	00.00	00.00	00.00	00.00
-WNW- 315.0	000.34	00.06	00.06	00.10	00.08	00.00	00.02	00.00	00.02	00.00	00.00
-NW- 337.5	000.32	00.01	00.05	00.05	00.09	00.02	00.06	00.01	00.03	00.00	00.00
-NNW-	000.27	00.01	00.01	00.02	00.09	00.02	00.05	00.07	00.00	00.00	00.00
CALM	00.01										
TOTAL	006.12	000.48	001.88	001.81	001.05	000.39	000.34	000.12	000.05	000.00	000.00

CATAMBA METEOROLOGICAL SURVEY TOWER DATA — FOR PERIOD OF 01-01-92 THRU 12-31-92

SUMMARY OF PASQUILL D — WIND OCCURANCES BY SECTOR + SPEED CLASS(PERCENT) — DATE OF REPORT 02-24-93

WIND SECTOR	SECTOR TOTAL	WIND SPEED CLASS 1.0-3.2 .45-1.49	3.3-5.5 1.5-2.49	5.6-7.8 2.5-3.49	7.9-10.0 3.5-4.49	10.1-12.3 4.5-5.49	12.4-14.5 5.5-6.49	14.6-16.7 6.5-7.49	16.8-19.0 7.5-8.49	19.1-21.2 8.5-9.49	>21.2 MPH >=9.5 M/S
360.0 -N- 22.5	003.21	00.25	00.83	01.08	00.72	00.24	00.05	00.03	00.00	00.00	00.01
-NNE- 45.0	005.79	00.11	00.51	01.63	02.11	01.06	00.28	00.07	00.01	00.00	00.01
-NE- 67.5	007.30	00.09	00.61	02.74	02.39	01.23	00.23	00.01	00.00	00.00	00.00
-ENE- 90.0	001.31	00.10	00.24	00.30	00.33	00.26	00.06	00.01	00.01	00.00	00.00
-E- 112.5	000.45	00.19	00.16	00.08	00.02	00.00	00.00	00.00	00.00	00.00	00.00
-ESE- 135.0	000.40	00.23	00.11	00.05	00.01	00.00	00.00	00.00	00.00	00.00	00.00
-SE- 157.5	000.80	00.30	00.23	00.22	00.05	00.00	00.00	00.00	00.00	00.00	00.00
-SSE- 180.0	001.22	00.49	00.42	00.24	00.07	00.00	00.00	00.00	00.00	00.00	00.00
-S- 202.5	001.46	00.33	00.72	00.25	00.06	00.07	00.01	00.00	00.00	00.00	00.00
-SSW- 225.0	002.09	00.36	00.91	00.55	00.20	00.07	00.00	00.00	00.00	00.00	00.00
-SW- 247.5	003.49	00.25	01.71	00.92	00.41	00.13	00.07	00.00	00.00	00.00	00.00
-WSW- 270.0	002.11	00.44	01.15	00.39	00.07	00.03	00.03	00.00	00.00	00.00	00.00
-W- 292.5	001.21	00.42	00.44	00.20	00.10	00.03	00.02	00.00	00.00	00.00	00.00
-WNW- 315.0	001.18	00.25	00.35	00.19	00.23	00.07	00.05	00.03	00.01	00.00	00.00
-NW- 337.5	001.25	00.30	00.33	00.24	00.19	00.08	00.09	00.02	00.00	00.00	00.00
-NNW-	001.89	00.25	00.47	00.35	00.30	00.30	00.10	00.10	00.00	00.02	00.00
CALM	00.30										
TOTAL	035.16	004.36	009.19	009.43	007.26	003.59	000.99	000.27	000.03	000.02	000.02

CATAWBA METEOROLOGICAL SURVEY TOWER DATA — FOR PERIOD OF 01-01-92 THRU 12-31-92

SUMMARY OF PASQUILL E — WIND OCCURANCES BY SECTOR & SPEED CLASS(PERCENT)

DATE OF REPORT 02-24-93

WIND SECTOR	SECTOR TOTAL	WIND SPEED CLASS 1.0-3.2 .45-1.49	3.3-5.5 1.5-2.49	5.6-7.8 2.5-3.49	7.9-10.0 3.5-4.49	10.1-12.3 4.5-5.49	12.4-14.5 5.5-6.49	14.6-16.7 6.5-7.49	16.8-19.0 7.5-8.49	19.1-21.2 8.5-9.49	>21.2 MPH >=9.5 M/S
360.0 -N- 22.5	003.07	00.38	01.23	00.88	00.36	00.20	00.01	00.01	00.00	00.00	00.00
-NNE- 45.0	002.86	00.18	00.63	01.22	00.66	00.17	00.00	00.00	00.00	00.00	00.00
-NE- 67.5	002.09	00.16	00.36	00.76	00.60	00.19	00.02	00.00	00.00	00.00	00.00
-ENE- 90.0	001.02	00.19	00.15	00.22	00.17	00.18	00.06	00.05	00.00	00.00	00.00
-E- 112.5	000.31	00.13	00.09	00.07	00.02	00.00	00.00	00.00	00.00	00.00	00.00
-ESE- 135.0	000.69	00.30	00.27	00.07	00.05	00.00	00.00	00.00	00.00	00.00	00.00
-SE- 157.5	001.67	00.36	00.69	00.44	00.16	00.02	00.00	00.00	00.00	00.00	00.00
-SSE- 180.0	001.69	00.56	00.63	00.35	00.13	00.02	00.00	00.00	00.00	00.00	00.00
-S- 202.5	002.51	00.64	01.25	00.25	00.16	00.13	00.07	00.01	00.00	00.00	00.00
-SSW- 225.0	003.59	00.82	01.86	00.61	00.16	00.08	00.03	00.01	00.00	00.00	00.00
-SW- 247.5	003.98	01.16	01.41	01.02	00.27	00.09	00.02	00.01	00.00	00.00	00.00
-WSW- 270.0	001.65	00.82	00.77	00.16	00.06	00.02	00.02	00.00	00.00	00.00	00.00
-W- 292.5	001.40	00.72	00.52	00.16	00.00	00.00	00.00	00.00	00.00	00.00	00.00
-WNW- 315.0	000.95	00.33	00.24	00.15	00.15	00.05	00.02	00.01	00.00	00.00	00.00
-NW- 337.5	001.15	00.27	00.35	00.27	00.17	00.07	00.02	00.00	00.00	00.00	00.00
-NNW-	002.05	00.42	00.83	00.54	00.17	00.09	00.00	00.00	00.00	00.00	00.00
CALM	00.42										
TOTAL	030.88	007.44	011.30	007.17	003.29	001.31	000.27	000.10	000.00	000.00	000.00

CATAWBA METEOROLOGICAL SURVEY TOWER DATA — FOR PERIOD OF 01-01-92 THRU 12-31-92

SUMMARY OF PASQUILL F — WIND OCCURANCES BY SECTOR + SPEED CLASS(PERCENT) — DATE OF REPORT 02-24-93

WIND SECTOR	SECTOR TOTAL	WIND SPEED CLASS 1.0-3.2 .45-1 M/S	3.3-5.5 1.5-2.49	5.6-7.8 2.5-3.49	7.9-10.0 3.5-4.49	10.1-12.3 4.5-5.49	12.4-14.5 5.5-6.49	14.6-16.7 6.5-7.49	16.8-19.0 7.5-8.49	19.1-21.2 8.5-9.49	>21.2 MPH >=9.5 M/S
360.0 -N- 22.5	001.00	00.54	00.54	00.10	00.01	00.00	00.01	00.00	00.00	00.00	00.00
-NNE- 45.0	001.31	00.19	00.55	00.50	00.05	00.01	00.01	00.00	00.00	00.00	00.00
-NE- 67.5	000.51	00.14	00.10	00.17	00.05	00.05	00.00	00.00	00.00	00.00	00.00
-ENE- 90.0	000.20	00.08	00.01	00.02	00.06	00.02	00.01	00.00	00.00	00.00	00.00
-E- 112.5	000.13	00.05	00.07	00.01	00.00	00.00	00.00	00.00	00.00	00.00	00.00
-ESE- 135.0	000.23	00.06	00.02	00.07	00.07	00.01	00.00	00.00	00.00	00.00	00.00
-SE- 157.5	000.58	00.14	00.20	00.10	00.14	00.00	00.00	00.00	00.00	00.00	00.00
-SSE- 180.0	000.75	00.31	00.42	00.01	00.01	00.00	00.00	00.00	00.00	00.00	00.00
-S- 202.5	000.82	00.34	00.46	00.01	00.00	00.00	00.01	00.00	00.00	00.00	00.00
-SSW- 225.0	001.17	00.46	00.67	00.02	00.02	00.00	00.00	00.00	00.00	00.00	00.00
-SW- 247.5	001.01	00.51	00.43	00.06	00.01	00.00	00.00	00.00	00.00	00.00	00.00
-WSW- 270.0	000.62	00.43	00.18	00.00	00.00	00.01	00.00	00.00	00.00	00.00	00.00
-W- 292.5	000.56	00.25	00.31	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00
-WNW- 315.0	000.64	00.19	00.38	00.07	00.00	00.00	00.00	00.00	00.00	00.00	00.00
-NW- 337.5	000.66	00.16	00.28	00.20	00.01	00.01	00.00	00.00	00.00	00.00	00.00
-NNW-	000.51	00.14	00.27	00.08	00.02	00.00	00.00	00.00	00.00	00.00	00.00
CALM	00.28										
TOTAL	010.70	003.79	004.89	001.42	000.45	000.11	000.04	000.00	000.00	000.00	000.00

CATAWBA METEOROLOGICAL SURVEY TOWER DATA FOR PERIOD OF 01-01-92 THRU 12-31-92

SUMMARY OF PASQUILL G WIND OCCURANCES BY SECTOR + SPEED CLASS(PERCENT)

DATE OF REPORT 02-24-93

WIND SECTOR	SECTOR TOTAL	WIND SPEED CLASS 1.0-3.2 .45-1.49	3.3-5.5 1.5-2.49	5.6-7.8 2.5-3.49	7.9-10.0 3.5-4.49	10.1-12.3 4.5-5.49	12.4-14.5 5.5-6.49	14.6-16.7 6.5-7.49	16.8-19.0 7.5-8.49	19.1-21.2 8.5-9.49	>21.2 MPH >=9.5 M/S
360.0 -N-	001.12	00.47	00.61	00.03	00.00	00.01	00.00	00.00	00.00	00.00	00.00
22.5 -NNE-	000.82	00.48	00.34	00.19	00.01	00.00	00.00	00.00	00.00	00.00	00.00
45.0 -NE-	000.38	00.13	00.16	00.07	00.02	00.00	00.00	00.00	00.00	00.00	00.00
67.5 -ENE-	000.18	00.08	00.07	00.02	00.01	00.00	00.00	00.00	00.00	00.00	00.00
90.0 -E-	000.11	00.10	00.01	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00
112.5 -ESE-	000.09	00.08	00.00	00.00	00.00	00.01	00.00	00.00	00.00	00.00	00.00
135.0 -SE-	000.38	00.25	00.13	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00
157.5 -SSE-	000.60	00.34	00.25	00.00	00.00	00.01	00.00	00.00	00.00	00.00	00.00
180.0 -S-	000.79	00.40	00.39	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00
202.5 -SSW-	001.38	01.00	00.38	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00
225.0 -SW-	001.33	01.01	00.32	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00
247.5 -WSW-	000.80	00.63	00.17	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00
270.0 -W-	000.65	00.33	00.31	00.01	00.00	00.00	00.00	00.00	00.00	00.00	00.00
292.5 -WNW-	000.46	00.23	00.22	00.01	00.00	00.00	00.00	00.00	00.00	00.00	00.00
315.0 -NW-	000.50	00.30	00.19	00.01	00.00	00.00	00.00	00.00	00.00	00.00	00.00
337.5 -NNW-	000.53	00.30	00.23	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00
CALM	00.41										
TOTAL	010.12	005.93	003.78	000.34	000.04	000.03	000.00	000.00	000.00	000.00	000.00

ATTACHMENT II

The Solid Waste Report

CATAWBA NUCLEAR STATION - SOLID RADIOACTIVE WASTE SHIPPED TO A DISPOSAL FACILITY

REPORT PERIOD 7/1/92 THROUGH 12/31/92

Type of Waste Shipped	Number of Shipments	Number of Containers	Waste Class	Container Type	Burial Volume (ft^3)	Burial Volume (m^3)	Total Activity (Curies)
1. Waste from Liquid Systems							
(A) Dewatered Secondary Resins	2	7	7AU	7STC	1451.8	41.11	1.373E-2
(B) Dewatered Primary Resins	3	3	1AS,2B	HIC	446.4	12.64	176.7
(C) Evaporator Concentrates	0	0	N/A	N/A	0	0	0
(D) Dewatered Mechanical Filters	4	4	B	HIC	146.0	4.13	118.4
(E) Dewatered Demineralizers	0	0	N/A	N/A	0	0	0
(F) Solidified (Cement) Acids, Oils, Sludges	0	0	N/A	N/A	0	0	0
2. Dry Solid Waste							
(A) Dry Active Waste (compacted)	0	0	N/A	N/A	0	0	0
(B) Dry Active Waste (non-compacted)	1	1	AS	HIC	120.3	3.41	3.926
(C) Dry Active Waste (brokered)	---	---	---	---	707.7	20.04	3.712
(D) Irradiated Components	0	0	N/A	N/A	0	0	0
Total	10[a]	15[a]	---	---	2872.2	81.34	302.7517

[a]Does not include brokered totals

CATAWBA NUCLEAR STATION - SOLID RADIOACTIVE WASTE

SUMMARY OF PRINCIPAL RADIONUCLIDE COMPOSITION

REPORT PERIOD 7/1/92 THROUGH 12/31/92

Type of Waste	Radionuclide	% Abundance*
1. Waste from Liquid Systems		
(A) Dewatered Secondary Resins	Sb-125	1.0
	Cs-134	42.9
	Cs-137	54.4
(B) Dewatered Primary Resins	Mn-54	4.5
	Co-58	3.2
	Co-60	12.0
	Sb-125	2.2
	Cs-134	3.7
	Cs-137	6.1
	Fe-55	58.2
	Ni-63	9.1
(C) Evaporator Concentrates	(none shipped this period)	
(D) Dewatered Mechanical Filters	Mn-54	4.0
	Co-58	16.8
	Co-60	11.3
	Fe-55	56.6
	Ni-63	10.0
(E) Dewatered Demineralizers	(none shipped this period)	
(F) Solidified Acids, Oils, Sludges	(none shipped this period)	

*Average percent abundance for all shipments during period (not listed if <1%)

CATAWBA NUCLEAR STATION - SOLID RADIOACTIVE WASTE

SUMMARY OF PRINCIPAL RADIONUCLIDE COMPOSITION

REPORT PERIOD 7/1/92 THROUGH 12/31/92

Type of Waste	Radionuclide	% Abundance*
2. Dry Solid Waste		
(A) Dry Active Waste (compacted)	(none shipped this period)	
(B) Dry Active Waste (non-compacted)	Mn-54	3.0
	Co-58	8.6
	Co-60	14.0
	Cs-134	1.4
	Cs-137	1.9
	C-14	1.5
	Fe-55	62.7
	Ni-63	6.3
(C) Dry Active Waste (brokered)	H-3	1.4
	Mn-54	3.0
	Co-58	9.6
	Co-60	13.7
	Cs-134	1.4
	Cs-137	1.9
	C-14	1.5
	Fe-55	61.0
	Ni-63	6.1
(D) Irradiated Components	(none shipped this period)	

*Average percent abundance for all shipments during period (not listed if <1%)