Duke Power Company
Catawba Nuclear Generation Department
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DUKE POWER

April 29,1996

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

Subject: Catawba Nuclear Station
Docket Nos. 50-413 and 50-414
Annual Radioac' 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 Annual Radioactive Effluent Release Report for the period ending December 31, 1995.

Attachment I - Radiactive Effluent Releases
Attachment II - Supplemental Information
Attachment III - Fuel Cycle Calculation
Attachment IV - Solid Waste Disposal Report
Attachment V - Meteorological Data
Attachment VI - Unplanned Offsite Releases
Attachment VII - ODCM/PCP Manual Changes

Questions or comments concerning this report should be directed to Kay Nicholson at (803) 831-3237.

Sincerely,

W. R. McCollum

KEN/ARERR.95

Attachments

xc: S. D. Ebneter,Regional Administrator (w/o attachments)

P. S. Tam, ONRR

R. J. Freudenberger, SRI (w/o attachments)

IE48
1/1

ATTACHMENT I

Summary of Liquid and Gaseous Effluents Report

UNIT 1

CATAWBA NUCLEAR STATION
UNIT 1
RADIOACTIVE EFFLUENT RELEASES
DATE : 02/15/96

I. LIQUID RELEASES — YEAR : 1995

	UNITS	1ST QTR	2ND QTR	3RD QTR	4TH QTR	TOTAL	
1. GROSS RADIOACTIVITY							
A. TOTAL RELEASE	CURIES	6.95E-02	5.48E-02	5.38E-02	1.32E-01	3.10E-01	
B. AVERAGE CONCENTRATION RELEASED	UCI/ML	3.08E-09	2.28E-09	2.03E-09	6.46E-09	3.31E-09	
C. MAXIMUM CONCENTRATION RELEASED	UCI/ML	2.03E-08	1.16E-08	1.13E-08	1.45E-08	2.89E-08	
2. TRITIUM							
A. TOTAL RELEASE	CURIES	7.09E+01	3.35E+01	5.15E+01	8.89E+01	2.45E+02	
B. AVERAGE CONCENTRATION RELEASED	UCI/ML	3.14E-06	1.39E-06	1.94E-06	4.36E-06	2.62E-06	
3. DISSOLVED NOBLE GASES							
A. TOTAL RELEASE	CURIES	3.12E-03	2.61E-05	1.65E-04	1.84E-05	3.33E-03	
B. AVERAGE CONCENTRATION RELEASED	UCI/ML	1.38E-10	1.09E-12	6.24E-12	9.02E-13	3.56E-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	1.04E+08	6.73E+07	6.03E+07	8.65E+07	3.18E+08	
6. VOLUME OF DILUTION WATER	LITERS	2.26E+10	2.40E+10	2.65E+10	2.04E+10	9.34E+10	
7. RADIONUCLIDES RELEASED	CURIES						EC RATIO
H-3		7.09E+01	3.35E+01	5.15E+01	8.89E+01	2.45E+02	2.62E-03
F-18		3.11E-06	3.14E-05	2.01E-06	3.25E-05	6.91E-05	1.06E-09
NA-24		1.22E-05	1.03E-04	2.73E-05	3.73E-06	1.46E-04	3.13E-08
CR-51		7.04E-03	4.64E-03	2.01E-03	9.90E-03	2.36E-02	5.05E-07
MN-54		6.96E-04	1.35E-03	1.93E-03	4.44E-03	8.42E-03	3.00E-06
FE-59		4.33E-04	2.88E-04	8.64E-05	1.10E-03	1.90E-03	2.04E-06
CO-57		1.21E-04	1.10E-04	1.66E-04	4.49E-04	8.47E-04	1.51E-07
CO-58		2.73E-02	2.66E-02	2.49E-02	7.49E-02	1.54E-01	8.23E-05
CO-60		5.87E-03	9.50E-03	1.10E-02	2.63E-02	5.27E-02	1.88E-04
ZN-65		0.00E+00	1.39E-05	8.43E-06	1.30E-04	1.52E-04	3.26E-07
BR-82		6.17E-06	8.96E-07	2.87E-06	4.45E-06	1.44E-05	3.85E-09
RB-88		0.00E+00	0.00E+00	4.90E-06	1.68E-06	6.58E-06	1.76E-10
SR-92		1.83E-05	5.27E-05	3.89E-06	6.94E-05	1.44E-04	3.86E-08
NB-95		3.99E-04	1.23E-03	1.49E-03	2.40E-03	5.52E-03	1.97E-06
NB-97		1.78E-03	5.31E-04	2.18E-04	4.24E-04	2.95E-03	1.05E-07
NB-97M		0.00E+00	0.00E+00	0.00E+00	9.52E-06	9.52E-06	1.02E-05
ZR-95		2.12E-04	6.51E-04	6.92E-04	1.11E-03	2.67E-03	1.43E-06
ZR-97		1.82E-05	0.00E+00	0.00E+00	0.00E+00	1.82E-05	2.16E-08
MO-99		0.00E+00	0.00E+00	0.00E+00	5.43E-06	5.43E-06	2.91E-09
TC-99M		5.58E-06	0.00E+00	4.47E-06	1.27E-05	2.28E-05	2.44E-10
RU-103		1.45E-06	0.00E+00	0.00E+00	0.00E+00	1.45E-06	5.17E-10
AG-110M		2.81E-04	6.01E-04	7.77E-04	1.22E-03	2.88E-03	5.14E-06
I-131		2.98E-03	3.02E-05	0.00E+00	2.28E-06	3.01E-03	3.22E-05
I-132		0.00E+00	1.83E-05	0.00E+00	0.00E+00	1.83E-05	1.96E-09
I-133		3.62E-06	1.40E-05	4.44E-08	2.61E-06	2.02E-05	3.10E-08
I-135		0.00E+00	1.12E-05	0.00E+00	0.00E+00	1.12E-05	4.01E-09
SB-122		6.40E-04	7.38E-07	0.00E+00	0.00E+00	6.40E-04	6.85E-07
SB-124		4.26E-03	1.84E-03	1.33E-03	1.26E-03	8.70E-03	1.33E-05
SB-125		1.63E-02	6.56E-03	8.64E-03	7.07E-03	3.85E-02	1.37E-05
SN-113		2.69E-05	1.55E-04	2.56E-04	2.51E-04	6.89E-04	2.46E-07
TE-131M		0.00E+00	0.00E+00	0.00E+00	3.47E-06	3.47E-06	4.64E-09
CS-134		1.38E-04	4.04E-05	6.35E-06	8.80E-05	2.72E-04	3.24E-06
CS-136		1.49E-06	0.00E+00	0.00E+00	1.40E-05	1.55E-05	2.76E-08
CS-137		5.76E-04	2.30E-04	1.46E-04	3.90E-04	1.34E-03	1.44E-05
CS-138		3.41E-05	8.56E-05	6.44E-06	0.00E+00	1.26E-04	3.37E-09
BA-133		1.22E-06	0.00E+00	0.00E+00	0.00E+00	1.22E-06	6.55E-10
BA-139		0.00E+00	5.57E-05	0.00E+00	0.00E+00	5.57E-05	2.98E-09
LA-140		1.10E-04	0.00E+00	0.00E+00	8.85E-06	1.19E-04	1.41E-07
W-187		0.00E+00	0.00E+00	0.00E+00	3.77E-05	3.77E-05	1.34E-08
NP-239		0.00E+00	0.00E+00	4.84E-07	0.00E+00	4.84E-07	2.59E-10
SB-126		2.34E-04	0.00E+00	4.49E-07	0.00E+00	2.34E-04	3.58E-07
AR 41		0.00E+00	0.00E+00	0.00E+00	7.74E-07	7.74E-07	8.29E-11
KR-85		6.00E-04	0.00E+00	0.00E+00	0.00E+00	6.00E-04	6.42E-08
KR-88		3.01E-06	0.00E+00	0.00E+00	0.00E+00	3.01E-06	3.22E-10
XE-131M		0.00E+00	0.00E+00	0.00E+00	5.16E-06	5.16E-06	5.52E-10
XE-133		2.52E-03	2.04E-05	2.41E-06	1.22E-05	2.55E-03	2.73E-07
XE-135		2.09E-07	4.69E-06	0.00E+00	2.38E-07	5.13E-06	5.49E-10
XE-135M		0.00E+00	9.85E-07	0.00E+00	0.00E+00	9.85E-07	1.05E-10
XE-138		0.00E+00	0.00E+00	1.63E-04	0.00E+00	1.63E-04	1.74E-08
					TOTAL EC RATIO		2.99E-03

CATAWBA UNIT 1 LIQUID RELEASE 001-090 95 2.26E+10 02/15/96

SKIN	MAXIMUM DOSE-	4.16E-03	MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	SHORE
	CO 58	5.61 %					
	CO 60	68.29 %					
	SB 125	19.81 %					
BONE	MAXIMUM DOSE-	3.48E-02	MREM	CRITICAL AGE-	CHILD	CRITICAL PATHWAY-	FISH
	CS 134	14.22 %					
	CS 137	83.20 %					
LIVER	MAXIMUM DOSE-	4.70E-02	MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	FISH
	CO 60	5.45 %					
	CS 134	20.58 %					
	CS 137	65.27 %					
T. BODY	MAXIMUM DOSE-	3.19E-02	MREM	CRITICAL AGE-	ADULT	CRITICAL PATHWAY-	FISH
	H 3	9.98 %					
	CS 134	24.45 %					
	CS 137	60.42 %					
THYROID	MAXIMUM DOSE-	2.44E-02	MREM	CRITICAL AGE-	CHILD	CRITICAL PATHWAY-	FISH
	H 3	12.99 %					
	I 131	83.95 %					
KIDNEY	MAXIMUM DOSE-	1.96E-02	MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	FISH
	H 3	11.96 %					
	CO 60	12.32 %					
	CS 134	15.75 %					
	CS 137	53.66 %					
LUNG	MAXIMUM DOSE-	1.12E-02	MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	FISH
	H 3	20.96 %					
	CO 60	21.60 %					
	SB 125	6.63 %					
	CS 134	10.64 %					
	CS 137	37.18 %					
GI-LLI	MAXIMUM DOSE-	7.18E-02	MREM	CRITICAL AGE-	ADULT	CRITICAL PATHWAY-	FISH
	CO 58	6.84 %					
	NB 95	80.36 %					

CATAWBA UNIT 1 LIQUID RELEASE 01-181 95 2.40E+10 02/15/96

SKIN	MAXIMUM DOSE-	5.11E-03 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	SHORE	
	CO 60	86.15 %					
	SB 125	6.20 %					
BONE	MAXIMUM DOSE-	1.44E-02 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	FISH	
	CO 60	25.99 %					
	CS 134	8.03 %					
	CS 137	61.24 %					
LIVER	MAXIMUM DOSE-	2.10E-02 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	FISH	
	H 3	5.02 %					
	CO 60	18.94 %					
	CS 134	12.94 %					
	CS 137	55.85 %					
T. BODY	MAXIMUM DOSE-	1.29E-02 MREM	CRITICAL AGE-	ADULT	CRITICAL PATHWAY-	FISH	
	H 3	11.05 %					
	CO 60	9.12 %					
	CS 134	16.88 %					
	CS 137	56.80 %					
THYROID	MAXIMUM DOSE-	5.60E-03 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	SHORE	
	H 3	18.81 %					
	CO 60	66.81 %					
	SB 125	5.01 %					
KIDNEY	MAXIMUM DOSE-	1.05E-02 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	FISH	
	H 3	10.04 %					
	CO 60	35.65 %					
	CS 134	8.25 %					
	CS 137	38.26 %					
LUNG	MAXIMUM DOSE-	7.31E-03 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	SHORE	
	H 3	14.41 %					
	CO 60	51.17 %					
	CS 137	21.70 %					
GI-LLI	MAXIMUM DOSE-	1.83E-01 MREM	CRITICAL AGE-	ADULT	CRITICAL PATHWAY-	FISH	
	NB 95	92.57 %					

CATAWBA UNIT 1 LIQUID RELEASE 182-273 95 2.65E+10 02/15/96

SKIN	MAXIMUM DOSE-	5.39E-03 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	SHORE	
	CO 60	86.50 %					
	SB 125	7.10 %					
BONE	MAXIMUM DOSE-	9.97E-03 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	FISH	
	CO 60	39.78 %					
	CS 137	51.56 %					
LIVER	MAXIMUM DOSE-	1.45E-02 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	FISH	
	H 3	10.22 %					
	MN 54	5.19 %					
	CO 60	28.98 %					
	CS 137	47.01 %					
T. BODY	MAXIMUM DOSE-	9.82E-03 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	SHORE	
	H 3	15.12 %					
	CO 58	6.08 %					
	CO 60	46.00 %					
	CS 137	24.39 %					
THYROID	MAXIMUM DOSE-	6.09E-03 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	SHORE	
	H 3	24.40 %					
	CO 60	65.15 %					
	SB 125	5.58 %					
KIDNEY	MAXIMUM DOSE-	8.80E-03 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	SHORE	
	H 3	16.87 %					
	CO 60	45.06 %					
	CS 137	26.60 %					
LUNG	MAXIMUM DOSE-	7.04E-03 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	SHORE	
	H 3	21.07 %					
	CO 60	56.28 %					
	CS 137	13.13 %					
GI-LLI	MAXIMUM DOSE-	2.92E-01 MREM	CRITICAL AGE-	ADULT	CRITICAL PATHWAY-	FISH	
	NB 95	93.06 %					

CATAWBA UNIT 1 LIQUID RELEASE 274-365 95 2.04E+10 02/15/96

SKIN	MAXIMUM DOSE-	1.61E-02 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	SHORE	
	CO 60	90.29 %					
BONE	MAXIMUM DOSE-	3.50E-02 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	FISH	
	CO 60	35.32 %					
	CS 134	8.57 %					
	CS 137	50.81 %					
LIVER	MAXIMUM DOSE-	5.29E-02 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	FISH	
	H 3	6.32 %					
	CO 60	24.83 %					
	CS 134	13.32 %					
	CS 137	44.70 %					
T. BODY	MAXIMUM DOSE-	3.32E-02 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	FISH	
	H 3	10.08 %					
	CO 58	7.05 %					
	CO 60	42.49 %					
	CS 134	9.88 %					
	CS 137	25.01 %					
THYROID	MAXIMUM DOSE-	1.71E-02 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	SHORE	
	H 3	19.56 %					
	CO 60	72.41 %					
KIDNEY	MAXIMUM DOSE-	2.88E-02 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	SHORE	
	H 3	11.61 %					
	CO 60	42.97 %					
	CS 134	7.81 %					
	CS 137	28.15 %					
LUNG	MAXIMUM DOSE-	2.12E-02 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	SHORE	
	H 3	15.80 %					
	CO 60	58.48 %					
	CS 137	15.14 %					
GI-LLI	MAXIMUM DOSE-	4.42E-01 MREM	CRITICAL AGE-	ADULT	CRITICAL PATHWAY-	FISH	
	NB 95	89.54 %					

CATAWBA UNIT 1 LIQUID RELEASE 001-365 95 9.34E+10 02/15/96

SKIN	MAXIMUM DOSE-	2.92E-02 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	SHORE
	CO 60	85.64 %				
	SB 125	6.57 %				
BONE	MAXIMUM DOSE-	8.63E-02 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	FISH
	CO 60	24.63 %				
	CS 134	9.29 %				
	CS 137	61.19 %				
LIVER	MAXIMUM DOSE-	1.30E-01 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	FISH
	H 3	6.11 %				
	CO 60	17.43 %				
	CS 134	14.53 %				
	CS 137	54.18 %				
T. BODY	MAXIMUM DOSE-	8.18E-02 MREM	CRITICAL AGE-	ADULT	CRITICAL PATHWAY-	FISH
	H 3	13.16 %				
	CO 60	8.20 %				
	CS 134	18.52 %				
	CS 137	53.83 %				
THYROID	MAXIMUM DOSE-	5.12E-02 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	SHORE
	H 3	15.47 %				
	CO 60	41.53 %				
	I 131	35.84 %				
KIDNEY	MAXIMUM DOSE-	6.47E-02 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	FISH
	H 3	12.25 %				
	CO 60	32.89 %				
	CS 134	9.29 %				
	CS 137	37.21 %				
LUNG	MAXIMUM DOSE-	4.46E-02 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	SHORE
	H 3	17.77 %				
	CO 60	47.72 %				
	CS 134	5.19 %				
	CS 137	21.33 %				
GI-LLI	MAXIMUM DOSE-	8.64E-01 MREM	CRITICAL AGE-	ADULT	CRITICAL PATHWAY-	FISH
	NB 95	90.36 %				

CATAWBA NUCLEAR STATION
UNIT 1
RADIOACTIVE EFFLUENT RELEASES
DATE : 02/15/96

II. AIRBORNE RELEASES

YEAR : 1995

	UNITS	1ST QTR	2ND QTR	3RD QTR	4TH QTR	TOTAL	
1. TOTAL NOBLE GASES	CURIES	6.83E+01	1.14E+01	2.05E+01	1.84E+01	1.19E+02	
2. TOTAL HALOGENS	CURIES	9.61E-05	0.00E+00	0.00E+00	0.00E+00	9.61E-05	
3. TOTAL PARTICULATE GROSS BETA-GAMMA	CURIES	9.40E-05	4.62E-05	6.59E-06	1.78E-03	1.92E-03	
4. TOTAL TRITIUM	CURIES	1.72E+01	1.93E+01	1.37E+01	2.11E+01	7.12E+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+03	1.60E+03	1.60E+03	1.60E+03	8.00E+02	
7. RADIONUCLIDES RELEASED	CURIES						EC RATIO
H-3		1.72E+01	1.93E+01	1.37E+01	2.11E+01	7.12E+01	7.92E-04
PARTICULATES							
MN-54		2.63E-08	0.00E+00	0.00E+00	0.00E+00	2.63E-08	2.93E-11
CO-58		9.38E-05	4.61E-05	6.59E-06	9.42E-04	1.09E-03	1.21E-06
CO-60		1.66E-07	0.00E+00	0.00E+00	8.34E-04	8.34E-04	1.86E-05
CE-144		0.00E+00	7.79E-08	0.00E+00	0.00E+00	7.79E-08	4.33E-09
HALOGENS							
I-131		7.10E-05	0.00E+00	0.00E+00	0.00E+00	7.10E-05	3.95E-07
I-132		2.43E-05	0.00E+00	0.00E+00	0.00E+00	2.43E-05	1.35E-09
I-133		7.51E-07	0.00E+00	0.00E+00	0.00E+00	7.51E-07	8.35E-10
GASES							
AR-41		5.93E-01	7.12E-01	8.95E-01	3.52E-01	2.55E+00	2.84E-04
KR-85		1.34E-01	7.86E-01	1.54E-01	0.00E+00	1.07E+00	1.71E-06
KR-95M		6.01E-02	7.73E-03	8.25E-03	1.58E-03	7.77E-02	8.64E-07
KR-88		4.10E-02	4.50E-03	4.44E-03	3.44E-04	5.03E-02	6.21E-06
XE-131M		1.46E-01	2.99E-03	0.00E+00	3.73E-03	1.52E-01	8.48E-08
XE-133		6.55E+01	9.73E+00	1.92E+01	1.80E+01	1.12E+02	2.50E-04
XE-133M		7.70E-01	2.39E-02	3.32E-02	6.47E-03	8.34E-01	1.55E-06
XE-135		1.05E+00	1.43E-01	1.75E-01	8.69E-02	1.46E+00	2.31E-05
XE-135M		0.00E+00	2.15E-04	0.00E+00	3.38E-04	5.53E-04	1.54E-08
					TOTAL EC RATIO		1.38E-03

CATAWBA UNIT 1 GAS DOSE 001-090 95 RELEASE WEIGHTED MET REPORT SUMMARY 02/15/96
SPECIAL LOCATION
AT 0.50 MILES NNE

NOBLE GAS EXPOSURE:

BETA AIR DOSE = 7.01E-02 MILLIRADS
GAMMA AIR DOSE = 3.29E-02 MILLIRADS

TOTAL BODY DOSE = 2.02E-02 MILLIREM
KR 88 5.97%
XE133 57.52%
XE135 17.40%
AR 41 17.70%

TOTAL SKIN DOSE = 5.08E-02 MILLIREM
KR 88 3.26%
XE133 64.40%
XE135 18.28%
AR 41 11.20%

CATAWBA UNIT 1 GAS DOSE 001-090 95 RELEASE WEIGHTED MET REPORT SUMMARY 02/15/96
SPECIAL LOCATION
AT 0.50 MILES ENE

IODINE, PARTICULATE, AND TRITIUM EXPOSURE SUMMARY:

MAXIMUM ORGAN - THYROID
CRITICAL AGE - CHILD
CRITICAL PATHWAY - VEGET @ 77.53%

MAXIMUM ORGAN DOSE = 5.59E-02 MILLIREM
H 3 94.97%

CATAWBA UNIT 1 GAS DOSE 091-181 95 RELEASE WEIGHTED MET REPORT SUMMARY 02/15/96
SPECIAL LOCATION
AT 0.50 MILES NE

NOBLE GAS EXPOSURE:

BETA AIR DOSE = 1.15E-02 MILLIRADS
GAMMA AIR DOSE = 9.78E-03 MILLIRADS

TOTAL BODY DOSE = 6.27E-03 MILLIREM
XE133 26.64%
AR 41 69.48%

TOTAL SKIN DOSE = 1.25E-02 MILLIREM
XE133 37.74%
AR 41 56.15%

CATAWBA UNIT 1 GAS DOSE 091-181 95 RELEASE WEIGHTED MET REPORT SUMMARY 02/15/96
SPECIAL LOCATION
AT 0.50 MILES ENE

IODINE, PARTICULATE, AND TRITIUM EXPOSURE SUMMARY:

MAXIMUM ORGAN - LUNG
CRITICAL AGE - CHILD
CRITICAL PATHWAY - VEGET @ 78.13%

MAXIMUM ORGAN DOSE = 6.91E-02 MILLIREM
H 3 99.90%

CATAWBA UNIT 1 GAS DOSE 182-273 95 RELEASE WEIGHTED MET REPORT SUMMARY 02/15/96
SPECIAL LOCATION
AT 0.50 MILES S

NOBLE GAS EXPOSURE:

BETA AIR DOSE = 1.58E-02 MILLIRADS
GAMMA AIR DOSE = 9.46E-03 MILLIRADS

TOTAL BODY DOSE = 5.90E-03 MILLIREM
XE133 45.97%
AR 41 51.39%

TOTAL SKIN DOSE = 1.30E-02 MILLIREM
XE133 59.02%
AR 41 37.53%

CATAWBA UNIT 1 GAS DOSE 182-273 95 RELEASE WEIGHTED MET REPORT SUMMARY 02/15/96
SPECIAL LOCATION
AT 0.50 MILES S

IODINE, PARTICULATE, AND TRITIUM EXPOSURE SUMMARY:

MAXIMUM ORGAN - GI-TRACK
CRITICAL AGE - CHILD
CRITICAL PATHWAY - VEGET @ 78.21%

MAXIMUM ORGAN DOSE = 3.72E-02 MILLIREM
H 3 99.95%

CATAWBA UNIT 1 GAS DOSE 274-365 95 RELEASE WEIGHTED MET REPORT SUMMARY 02/15/96
SPECIAL LOCATION
AT 0.50 MILES NNE

NOBLE GAS EXPOSURE:

BETA AIR DOSE = 1.74E-02 MILLIRADS
GAMMA AIR DOSE = 7.86E-03 MILLIRADS

TOTAL BODY DOSE = 4.78E-03 MILLIREM
XE133 67.86%
AR 41 31.68%

TOTAL SKIN DOSE = 1.16E-02 MILLIREM
XE133 78.63%
AR 41 20.84%

CATAWBA UNIT 1 GAS DOSE 274-365 95 RELEASE WEIGHTED MET REPORT SUMMARY 02/15/96
SPECIAL LOCATION
AT 0.50 MILES S

IODINE, PARTICULATE, AND TRITIUM EXPOSURE SUMMARY:

MAXIMUM ORGAN - SKIN
CRITICAL AGE - CHILD
CRITICAL PATHWAY - VEGET @ 46.67%

MAXIMUM ORGAN DOSE = 1.20E-01 MILLIREM
H 3 59.67%
CO 60 39.54%

CATAWBA UNIT 1 GAS DOSE 001-365 95 RELEASE WEIGHTED MET REPORT SUMMARY 02/15/96
SPECIAL LOCATION
AT 0.50 MILES NNE

NOBLE GAS EXPOSURE:

BETA AIR DOSE = 1.03E-01 MILLIRADS
GAMMA AIR DOSE = 5.36E-02 MILLIRADS

TOTAL BODY DOSE = 3.32E-02 MILLIREM		TOTAL SKIN DOSE = 7.92E-02 MILLIREM	
XE133	51.76%	XE133	61.19%
XE135	11.24%	XE135	12.50%
AR 41	32.35%	AR 41	21.78%

CATAWBA UNIT 1 GAS DOSE 001-365 95 RELEASE WEIGHTED MET REPORT SUMMARY 02/15/96
SPECIAL LOCATION
AT 0.50 MILES S

IODINE, PARTICULATE, AND TRITIUM EXPOSURE SUMMARY:

MAXIMUM ORGAN - SKIN
CRITICAL AGE - CHILD
CRITICAL PATHWAY - VEGET @ 63.07%

MAXIMUM ORGAN DOSE = 2.51E-01 MILLIREM

H 3	80.64%
CO 60	18.92%

UNIT 2

CATAWBA NUCLEAR STATION
UNIT 2
RADIOACTIVE EFFLUENT RELEASES
DATE : 02/15/96

I. LIQUID RELEASES

YEAR : 1995

	UNITS	1ST QTR	2ND QTR	3RD QTR	4TH QTR	TOTAL
1. GROSS RADIOACTIVITY						
A. TOTAL RELEASE	CURIES	6.95E-02	5.48E-02	5.38E-02	1.32E-01	3.10E-01
B. AVERAGE CONCENTRATION RELEASED	UCI/ML	3.08E-09	2.28E-09	2.03E-09	6.46E-09	3.31E-09
C. MAXIMUM CONCENTRATION RELEASED	UCI/ML	2.03E-08	1.16E-08	1.13E-08	1.45E-08	2.89E-08
2. TRITIUM						
A. TOTAL RELEASE	CURIES	7.09E+01	3.35E+01	5.15E+01	8.89E+01	2.45E+02
B. AVERAGE CONCENTRATION RELEASED	UCI/ML	3.14E-06	1.39E-06	1.94E-06	4.36E-06	2.62E-06
3. DISSOLVED NOBLE GASES						
A. TOTAL RELEASE	CURIES	3.12E-03	2.61E-05	1.65E-04	1.84E-05	3.33E-03
B. AVERAGE CONCENTRATION RELEASED	UCI/ML	1.38E-10	1.09E-12	6.24E-12	9.02E-13	3.56E-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	1.04E+08	6.73E+07	6.03E+07	8.65E+07	3.18E+08
6. VOLUME OF DILUTION WATER	LITERS	2.26E+10	2.40E+10	2.65E+10	2.04E+10	9.34E+10

7. RADIONUCLIDES RELEASED	CURIES						EC RATIO
H-3		7.09E+01	3.35E+01	5.15E+01	8.89E+01	2.45E+02	2.[illegible]E-03
F-18		3.11E-06	3.14E-05	2.01E-06	3.25E-05	6.91E-05	1.06E-09
NA-24		1.22E-05	1.03E-04	2.73E-05	3.73E-06	1.46E-04	3.13E-08
CR-51		7.04E-03	4.64E-03	2.01E-03	9.90E-03	2.36E-02	5.05E-07
MN-54		6.96E-04	1.35E-03	1.93E-03	4.44E-03	8.42E-03	3.00E-06
FE-59		4.33E-04	2.88E-04	8.64E-05	1.10E-03	1.90E-03	2.04E-06
CO-57		1.21E-04	1.10E-04	1.66E-04	4.49E-04	8.47E-04	1.51E-07
CO-58		2.73E-02	2.66E-02	2.49E-02	7.49E-02	1.54E-01	8.23E-05
CO-60		5.87E-03	9.50E-03	1.10E-02	2.63E-02	5.27E-02	1.88E-04
ZN-65		0.00E+00	1.39E-05	8.43E-06	1.30E-04	1.52E-04	3.26E-07
BR-82		6.17E-06	8.96E-07	2.87E-06	4.45E-06	1.44E-05	3.85E-09
RB-88		0.00E+00	0.00E+00	4.90E-06	1.68E-06	6.58E-06	1.76E-10
SR-92		1.83E-05	5.27E-05	3.89E-06	6.94E-05	1.44E-04	3.86E-08
NB-95		3.99E-04	1.23E-03	1.49E-03	2.40E-03	5.52E-03	1.97E-06
NB-97		1.78E-03	5.31E-04	2.18E-04	4.24E-04	2.95E-03	1.05E-07
NB-97M		0.00E+00	0.00E+00	0.00E+00	9.52E-06	9.52E-06	1.02E-05
ZR-95		2.12E-04	6.51E-04	6.92E-04	1.11E-03	2.67E-03	1.43E-06
ZR-97		1.82E-05	0.00E+00	0.00E+00	0.00E+00	1.82E-05	2.16E-08
MO-99		0.00E+00	0.00E+00	0.00E+00	5.43E-06	5.43E-06	2.91E-09
TC-99M		5.58E-06	0.00E+00	4.47E-06	1.27E-05	2.28E-05	2.44E-10
RU-103		1.45E-06	0.00E+00	0.00E+00	0.00E+00	1.45E-06	5.17E-10
AG-110M		2.81E-04	6.01E-04	7.77E-04	1.22E-03	2.88E-03	5.14E-06
I-131		2.98E-03	3.02E-05	0.00E+00	2.28E-06	3.01E-03	3.22E-05
I-132		0.00E+00	1.83E-05	0.00E+00	0.00E+00	1.83E-05	1.96E-09
I-133		3.62E-06	1.40E-05	4.44E-08	2.61E-06	2.02E-05	3.10E-08
I-135		0.00E+00	1.12E-05	0.00E+00	0.00E+00	1.12E-05	4.01E-09
SB-122		6.40E-04	7.38E-07	0.00E+00	0.00E+00	6.40E-04	6.85E-07
SB-124		4.26E-03	1.84E-03	1.33E-03	1.26E-03	8.70E-03	1.33E-05
SB-125		1.63E-02	6.56E-03	8.64E-03	7.07E-03	3.85E-02	1.37E-05
SN-113		2.69E-05	1.55E-04	2.56E-04	2.51E-04	6.89E-04	2.46E-07
TE-131M		0.00E+00	0.00E+00	0.00E+00	3.47E-06	3.47E-06	4.64E-09
CS-134		1.38E-04	4.04E-05	6.35E-06	8.80E-05	2.72E-04	3.24E-06
CS-136		1.49E-06	0.00E+00	0.00E+00	1.40E-05	1.55E-05	2.76E-08
CS-137		5.76E-04	2.30E-04	1.46E-04	3.90E-04	1.34E-03	1.44E-05
CS-138		3.41E-05	8.56E-05	6.44E-06	0.00E+00	1.26E-04	3.37E-09
BA-133		1.22E-06	0.00E+00	0.00E+00	0.00E+00	1.22E-06	6.55E-10
BA-139		0.00E+00	5.57E-05	0.00E+00	0.00E+00	5.57E-05	2.98E-09
LA-140		1.10E-04	0.00E+00	0.00E+00	8.85E-06	1.19E-04	1.41E-07
W-187		0.00E+00	0.00E+00	0.00E+00	3.77E-05	3.77E-05	1.34E-08
NP-239		0.00E+00	0.00E+00	4.84E-07	0.00E+00	4.84E-07	2.59E-10
SB-126		2.34E-04	0.00E+00	4.49E-07	0.00E+00	2.34E-04	3.58E-07
AR-41		0.00E+00	0.00E+00	0.00E+00	7.74E-07	7.74E-07	8.29E-11
KR-85		6.00E-04	0.00E+00	0.00E+00	0.00E+00	6.00E-04	6.42E-08
KR-88		3.01E-06	0.00E+00	0.00E+00	0.00E+00	3.01E-06	3.22E-10
XE-131M		0.00E+00	0.00E+00	0.00E+00	5.16E-06	5.16E-06	5.52E-10
XE-133		2.52E-03	2.04E-05	2.41E-06	1.22E-05	2.55E-03	2.73E-07
XE-135		2.09E-07	4.69E-06	0.00E+00	2.38E-07	5.13E-06	5.49E-10
XE-135M		0.00E+00	9.85E-07	0.00E+00	0.00E+00	9.85E-07	1.05E-10
XE-138		0.00E+00	0.00E+00	1.63E-04	0.00E+00	1.63E-04	1.74E-08
						TOTAL EC RATIO	2.99E-03

CATAWBA UNIT 2 LIQUID RELEASE 001-090 95 2.26E+10 02/15/96

SKIN MAXIMUM DOSE- 4.16E-03 MREM CRITICAL AGE- TEEN CRITICAL PATHWAY- SHORE

CO 58	5.61 %
CO 60	68.29 %
SB 125	19.81 %

BONE MAXIMUM DOSE- 3.48E-02 MREM CRITICAL AGE- CHILD CRITICAL PATHWAY- FISH

CS 134	14.22 %
CS 137	83.20 %

LIVER MAXIMUM DOSE- 4.70E-02 MREM CRITICAL AGE- TEEN CRITICAL PATHWAY- FISH

CO 60	5.45 %
CS 134	20.58 %
CS 137	65.27 %

T. BODY MAXIMUM DOSE- 3.19E-02 MREM CRITICAL AGE- ADULT CRITICAL PATHWAY- FISH

H 3	9.98 %
CS 134	24.45 %
CS 137	60.42 %

THYROID MAXIMUM DOSE- 2.44E-02 MREM CRITICAL AGE- CHILD CRITICAL PATHWAY- FISH

H 3	12.99 %
I 131	83.95 %

KIDNEY MAXIMUM DOSE- 1.96E-02 MREM CRITICAL AGE- TEEN CRITICAL PATHWAY- FISH

H 3	11.96 %
CO 60	12.32 %
CS 134	15.75 %
CS 137	53.66 %

LUNG MAXIMUM DOSE- 1.12E-02 MREM CRITICAL AGE- TEEN CRITICAL PATHWAY- FISH

H 3	20.96 %
CO 60	21.60 %
SB 125	6.63 %
CS 134	10.64 %
CS 137	37.18 %

GI-LLI MAXIMUM DOSE- 7.18E-02 MREM CRITICAL AGE- ADULT CRITICAL PATHWAY- FISH

CO 58	6.84 %
NB 95	80.36 %

CATAWBA UNIT 2 LIQUID RELEASE 091-181 95 2.40E+10 02/15/96

SKIN MAXIMUM DOSE- 5.11E-03 MREM CRITICAL AGE- TEEN CRITICAL PATHWAY- SHORE

CO 60	86.15 %
SB 125	6.20 %

BONE MAXIMUM DOSE- 1.44E-02 MREM CRITICAL AGE- TEEN CRITICAL PATHWAY- FISH

CO 60	25.99 %
CS 134	8.03 %
CS 137	61.24 %

LIVER MAXIMUM DOSE- 2.10E-02 MREM CRITICAL AGE- TEEN CRITICAL PATHWAY- FISH

H 3	5.02 %
CO 60	18.94 %
CS 134	12.94 %
CS 137	55.85 %

T. BODY MAXIMUM DOSE- 1.29E-02 MREM CRITICAL AGE- ADULT CRITICAL PATHWAY- FISH

H 3	11.05 %
CO 60	9.12 %
CS 134	16.88 %
CS 137	56.80 %

THYROID MAXIMUM DOSE- 5.60E-03 MREM CRITICAL AGE- TEEN CRITICAL PATHWAY- SHORE

H 3	18.81 %
CO 60	66.81 %
SB 125	5.01 %

KIDNEY MAXIMUM DOSE- 1.05E-02 MREM CRITICAL AGE- TEEN CRITICAL PATHWAY- FISH

H 3	10.04 %
CO 60	35.65 %
CS 134	8.25 %
CS 137	38.26 %

LUNG MAXIMUM DOSE- 7.31E-03 MREM CRITICAL AGE- TEEN CRITICAL PATHWAY- SHORE

H 3	14.41 %
CO 60	51.17 %
CS 137	21.70 %

GI-LLI MAXIMUM DOSE- 1.83E-01 MREM CRITICAL AGE- ADULT CRITICAL PATHWAY- FISH

NB 95	92.57 %

CATAWBA UNIT 2 LIQUID RELEASE 182-273 95 2.65E+10 02/15/96

SKIN	MAXIMUM DOSE-	5.39E-03 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	SHORE
	CO 60	86.50 %				
	SB 125	7.10 %				
BONE	MAXIMUM DOSE-	9.97E-03 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	FISH
	CO 60	39.78 %				
	CS 137	51.56 %				
LIVER	MAXIMUM DOSE-	1.45E-02 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	FISH
	H 3	10.22 %				
	MN 54	5.19 %				
	CO 60	28.98 %				
	CS 137	47.01 %				
T. BODY	MAXIMUM DOSE-	9.82E-03 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	SHORE
	H 3	15.12 %				
	CO 58	6.08 %				
	CO 60	46.00 %				
	CS 137	24.39 %				
THYROID	MAXIMUM DOSE-	6.09E-03 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	SHORE
	H 3	24.40 %				
	CO 60	65.15 %				
	SB 125	5.58 %				
KIDNEY	MAXIMUM DOSE-	8.80E-03 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	SHORE
	H 3	16.87 %				
	CO 60	45.06 %				
	CS 137	26.60 %				
LUNG	MAXIMUM DOSE-	7.04E-03 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	SHORE
	H 3	21.07 %				
	CO 60	56.28 %				
	CS 137	13.13 %				
GI-LLI	MAXIMUM DOSE-	2.02E-01 MREM	CRITICAL AGE-	ADULT	CRITICAL PATHWAY-	FISH
	NB 95	93.06 %				

CATAWBA UNIT 2 LIQUID RELEASE 274-365 95 2.04E+10 02/15/96

SKIN	MAXIMUM DOSE-	1.61E-02 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	SHORE	
	CO 60	90.29 %					
BONE	MAXIMUM DOSE-	3.50E-02 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	FISH	
	CO 60	35.32 %					
	CS 134	8.57 %					
	CS 137	50.81 %					
LIVER	MAXIMUM DOSE-	5.29E-02 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	FISH	
	H 3	6.32 %					
	CO 60	24.83 %					
	CS 134	13.32 %					
	CS 137	44.70 %					
T. BODY	MAXIMUM DOSE-	3.32E-02 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	FISH	
	H 3	10.08 %					
	CO 58	7.05 %					
	CO 60	42.49 %					
	CS 134	9.88 %					
	CS 137	25.01 %					
THYROID	MAXIMUM DOSE-	1.71E-02 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	SHORE	
	H 3	19.56 %					
	CO 60	72.41 %					
KIDNEY	MAXIMUM DOSE-	2.88E-02 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	SHORE	
	H 3	11.61 %					
	CO 60	42.97 %					
	CS 134	7.81 %					
	CS 137	28.15 %					
LUNG	MAXIMUM DOSE-	2.12E-02 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	SHORE	
	H 3	15.80 %					
	CO 60	58.48 %					
	CS 137	15.14 %					
GI-LLI	MAXIMUM DOSE-	4.42E-01 MREM	CRITICAL AGE-	ADULT	CRITICAL PATHWAY-	FISH	
	NB 95	89.54 %					

CATAWBA UNIT 2 LIQUID RELEASE 001-365 95 9.34E+10 02/15/96

SKIN MAXIMUM DOSE- 2.92E-02 MREM CRITICAL AGE- TEEN CRITICAL PATHWAY- SHORE

CO	60	85.64 %
SB	125	6.57 %

BONE MAXIMUM DOSE- 8.63E-02 MREM CRITICAL AGE- TEEN CRITICAL PATHWAY- FISH

CO	60	24.63 %
CS	134	9.29 %
CS	137	61.19 %

LIVER MAXIMUM DOSE- 1.30E-01 MREM CRITICAL AGE- TEEN CRITICAL PATHWAY- FISH

H	3	6.11 %
CO	60	17.43 %
CS	134	14.53 %
CS	137	54.18 %

T. BODY MAXIMUM DOSE- 8.18E-02 MREM CRITICAL AGE- ADULT CRITICAL PATHWAY- FISH

H	3	13.14 %
CO	60	8.20 %
CS	134	18.52 %
CS	137	53.83 %

THYROID MAXIMUM DOSE- 5.12E-02 MREM CRITICAL AGE- TEEN CRITICAL PATHWAY- SHORE

H	3	15.47 %
CO	60	41.53 %
I	131	35.84 %

KIDNEY MAXIMUM DOSE- 6.47E-02 MREM CRITICAL AGE- TEEN CRITICAL PATHWAY- FISH

H	3	12.25 %
CO	60	32.89 %
CS	134	9.29 %
CS	137	37.21 %

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

H	3	17.77 %
CO	60	47.72 %
CS	134	5.19 %
CS	137	21.33 %

GI-LLI MAXIMUM DOSE- 8.64E-01 MREM CRITICAL AGE- ADULT CRITICAL PATHWAY- FISH

NB	95	90.36 %

CATAWBA NUCLEAR STATION
UNIT 2
RADIOACTIVE EFFLUENT RELEASES
DATE : 02/15/96

II. AIRBORNE RELEASES

YEAR : 1995

	UNITS	1ST QTR	2ND QTR	3RD QTR	4TH QTR	TOTAL	
1. TOTAL NOBLE GASES	CURIES	6.83E+01	1.14E+01	2.05E+01	1.84E+01	1.19E+02	
2. TOTAL HALOGENS	CURIES	9.61E-05	0.00E+00	0.00E+00	0.00E+00	9.61E-05	
3. TOTAL PARTICULATE GROSS BETA-GAMMA	CURIES	9.40E-05	4.62E-05	6.59E-06	1.78E-03	1.92E-03	
4. TOTAL TRITIUM	CURIES	1.72E+01	1.93E+01	1.37E+01	2.11E+01	7.12E+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+03	1.60E+03	1.60E+03	1.60E+03	8.00E+02	
7. RADIONUCLIDES RELEASED	CURIES						EC RATIO
H-3		1.72E+01	1.93E+01	1.37E+01	2.11E+01	7.12E+01	7.92E-04
PARTICULATES							
MN-54		2.63E-08	0.00E+00	0.00E+00	0.00E+00	2.63E-08	2.93E-11
CO-58		9.38E-05	4.61E-05	6.59E-06	9.42E-04	1.09E-03	1.21E-06
CO-60		1.66E-07	0.00E+00	0.00E+00	8.34E-04	8.34E-04	1.86E-05
CE-144		0.00E+00	7.79E-08	0.00E+00	0.00E+00	7.79E-08	4.33E-09
HALOGENS							
I-131		7.10E-05	0.00E+00	0.00E+00	0.00E+00	7.10E-05	3.95E-07
I-132		2.43E-05	0.00E+00	0.00E+00	0.00E+00	2.43E-05	1.35E-09
I-133		7.51E-07	0.00E+00	0.00E+00	0.00E+00	7.51E-07	8.35E-10
GASES							
AR-41		5.93E-01	7.12E-01	8.95E-01	3.52E-01	2.55E+00	2.84E-04
KR-85		1.34E-01	7.86E-01	1.54E-01	0.00E+00	1.07E+00	1.71E-06
KR-85M		6.01E-02	7.73E-03	8.25E-03	1.58E-03	7.77E-02	8.64E-07
KR-88		4.10E-02	4.50E-03	4.44E-03	3.44E-04	5.03E-02	6.21E-06
XE-131M		1.46E-01	2.99E-03	0.00E+00	3.73E-03	1.52E-01	8.48E-08
XE-133		6.55E+01	9.73E+00	1.92E+01	1.80E+01	1.12E+02	2.50E-04
XE-133M		7.70E-01	2.39E-02	3.32E-02	6.47E-03	8.34E-01	1.55E-06
XE-135		1.05E+00	1.43E-01	1.75E-01	8.69E-02	1.46E+00	2.31E-05
XE-135M		0.00E+00	2.15E-04	0.00E+00	3.38E-04	5.53E-04	1.54E-08
						TOTAL EC RATIO	1.38E-03

CATAWBA UNIT 2 GAS DOSE 001-090 95 RELEASE WEIGHTED MET REPORT SUMMARY 02/15/96
SPECIAL LOCATION
AT 0.50 MILES NNE

NOBLE GAS EXPOSURE:

BETA AIR DOSE = 7.01E-02 MILLIRADS
GAMMA AIR DOSE = 3.29E-02 MILLIRADS

TOTAL BODY DOSE = 2.02E-02 MILLIREM		TOTAL SKIN DOSE = 5.08E-02 MILLIREM	
KR 88	5.97%	KR 88	3.26%
XE133	57.52%	XE133	64.40%
XE135	17.40%	XE135	18.28%
AR 41	17.70%	AR 41	11.20%

CATAWBA UNIT 2 GAS DOSE 001-090 95 RELEASE WEIGHTED MET REPORT SUMMARY 02/15/96
SPECIAL LOCATION
AT 0.50 MILES ENE

IODINE, PARTICULATE, AND TRITIUM EXPOSURE SUMMARY:

MAXIMUM ORGAN - THYROID
CRITICAL AGE - CHILD
CRITICAL PATHWAY - VEGET @ 77.53%

MAXIMUM ORGAN DOSE = 5.59E-02 MILLIREM
H 3 94.97%

CATAWBA UNIT 2 GAS DOSE 091-181 95 RELEASE WEIGHTED MET REPORT SUMMARY 02/15/96
SPECIAL LOCATION
AT 0.50 MILES NE

NOBLE GAS EXPOSURE:

BETA AIR DOSE = 1.15E-02 MILLIRADS
GAMMA AIR DOSE = 9.78E-03 MILLIRADS

TOTAL BODY DOSE = 6.27E-03 MILLIREM
XE133 26.64%
AR 41 69.48%

TOTAL SKIN DOSE = 1.25E-02 MILLIREM
XE133 37.74%
AR 41 56.15%

CATAWBA UNIT 2 GAS DOSE 091-181 95 RELEASE WEIGHTED MET REPORT SUMMARY 02/15/96
SPECIAL LOCATION
AT 0.50 MILES ENE

IODINE, PARTICULATE, AND TRITIUM EXPOSURE SUMMARY:

MAXIMUM ORGAN - LUNG
CRITICAL AGE - CHILD
CRITICAL PATHWAY - VEGET @ 78.13%

MAXIMUM ORGAN DOSE = 6.91E-02 MILLIREM
H 3 99.90%

CATAWBA UNIT 2 GAS DOSE 182-273 95 RELEASE WEIGHTED MET REPORT SUMMARY 02/15/96
SPECIAL LOCATION
AT 0.50 MILES S

NOBLE GAS EXPOSURE:

BETA AIR DOSE = 1.58E-02 MILLIRADS
GAMMA AIR DOSE = 9.46E-03 MILLIRADS

TOTAL BODY DOSE = 5.90E-03 MILLIREM
XE133 45.97%
AR 41 51.39%

TOTAL SKIN DOSE = 1.30E-02 MILLIREM
XE133 59.02%
AR 41 37.53%

CATAWBA UNIT 2 GAS DOSE 182-273 95 RELEASE WEIGHTED MET REPORT SUMMARY 02/15/96
SPECIAL LOCATION
AT 0.50 MILES S

IODINE, PARTICULATE, AND TRITIUM EXPOSURE SUMMARY:

MAXIMUM ORGAN - GI-TRACK
CRITICAL AGE - CHILD
CRITICAL PATHWAY - VEGET @ 78.21%

MAXIMUM ORGAN DOSE = 3.72E-02 MILLIREM
H 3 99.95%

CATAWBA UNIT 2 GAS DOSE 274-365 95 RELEASE WEIGHTED MET REPORT SUMMARY 02/15/96
SPECIAL LOCATION
AT 0.50 MILES NNE

NOBLE GAS EXPOSURE:

BETA AIR DOSE = 1.74E-02 MILLIRADS
GAMMA AIR DOSE = 7.86E-03 MILLIRADS

TOTAL BODY DOSE = 4.78E-03 MILLIREM
XE133 67.86%
AR 41 31.68%

TOTAL SKIN DOSE = 1.16E-02 MILLIREM
XE133 78.63%
AR 41 20.84%

CATAWBA UNIT 2 GAS DOSE 274-365 95 RELEASE WEIGHTED MET REPORT SUMMARY 02/15/96
SPECIAL LOCATION
AT 0.50 MILES S

IODINE, PARTICULATE, AND TRITIUM EXPOSURE SUMMARY:

MAXIMUM ORGAN - SKIN
CRITICAL AGE - CHILD
CRITICAL PATHWAY - VEGET @ 46.67%

MAXIMUM ORGAN DOSE = 1.20E-01 MILLIREM
H 3 59.67%
CO 60 39.54%

CATAWBA UNIT 2 GAS DOSE 001-365 95 RELEASE WEIGHTED MET REPORT SUMMARY 02/15/96
SPECIAL LOCATION
AT 0.50 MILES NNE

NOBLE GAS EXPOSURE:

BETA AIR DOSE = 1.03E-01 MILLIRADS
GAMMA AIR DOSE = 5.36E-02 MILLIRADS

TOTAL BODY DOSE = 3.32E-02 MILLIREM
XE133 51.76%
XE135 11.24%
AR 41 32.35%

TOTAL SKIN DOSE = 7.92E-02 MILLIREM
XE133 61.19%
XE135 12.50%
AR 41 21.78%

CATAWBA UNIT 2 GAS DOSE 001-365 95 RELEASE WEIGHTED MET REPORT SUMMARY 02/15/96
SPECIAL LOCATION
AT 0.50 MILES S

IODINE, PARTICULATE, AND TRITIUM EXPOSURE SUMMARY:

MAXIMUM ORGAN - SKIN
CRITICAL AGE - CHILD
CRITICAL PATHWAY - VEGET @ 63.07%

MAXIMUM ORGAN DOSE = 2.51E-01 MILLIREM
H 3 80.64%
CO 60 18.92%

ATTACHMENT II

Supplemental Information to the Liquid and Gaseous Effluents Report

CATAWBA NUCLEAR STATION
EFFLUENT AND WASTE DISPOSAL SUPPLEMENTAL INFORMATION
REPORT DATE: 02/20/96
PERIOD COVERED: START DAY = 001 STOP DAY = 365

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. 3.90E+02 = TOTAL NUMBER OF BATCH RELEASES
2. 1.93E+04 = TOTAL TIME(MIN.) FOR BATCH RELEASES.
3. 9.60E+01 = MAXIMUM TIME(MIN.) FOR A BATCH RELEASE.
4. 4.94E+01 = AVERAGE TIME(MIN.) FOR A BATCH RELEASE.
5. 3.00E+00 = MINIMUM TIME(MIN.) FOR A BATCH RELEASE.
6. 4.45E+04 = AVERAGE DILUTION WATER FLOW DURING RELEASES(GPM).

B. GASEOUS EFFLUENT
1. 2.21E+02 = TOTAL NUMBER OF BATCH RELEASES.
2. 9.69E+05 = TOTAL TIME(MIN.) FOR BATCH RELEASES.
3. 1.72E+04 = MAXIMUM TIME(MIN.) FOR A BATCH RELEASE.
4. 4.38E+03 = AVERAGE TIME(MIN.) FOR A BATCH RELEASE.
5. 2.20E+01 = 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 1
2. TOTAL ACTIVITY RELEASED(CURIES) 0.59

SUPPLEMENTAL REPORT PAGE 2

CATAWBA NUCLEAR STATION

Values represented by "0.00E+00" within the body of the 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

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 ± 16.1%. This value was derived by taking the square root of the sum of the squares of the following discrete individual estimates of error:

(1) Flow rate determining devices = ± 5%

(2) Counting error = ± 15%

(3) Sample preparation error = ± 3%

ATTACHMENT III

Fuel Cycle Calculations

MAXIMUM TOTAL BODY	NNE 0.50 MILES	2.48E-01	AGE : ADULT	
	CNS.GAS	6.65E-02	26.8 %	
		XE133	51.7 %	
		XE135	11.2 %	
		AR 41	32.3 %	
	CNS.LIQUID	1.64E-01	66.1 %	
	CRITICAL PATH	FISH	87.7 %	
		H 3	12.9 %	
		CS 134	18.4 %	
		CS 137	53.8 %	
	MNS.GAS	5.41E-04	0.2 %	
		KR 88	7.1 %	
		XE133	23.6 %	
		XE135	31.4 %	
		AR 41	36.4 %	
	MNS.LIQUID	1.70E-02	6.8 %	
	CRITICAL PATH	DRINKING	81.6 %	
		H 3	83.3 %	
		CS 137	11.6 %	

1995 CATAWBA FUEL CYCLE SUMMARY DAYS 001-365 02/15/96 AT 16:44

MAXIMUM ORGAN	S 0.50 MILES	2.13E+00	AGE : ADULT	ORGAN : GI-TRACK
	CNS.GAS	3.76E-01	17.6 %	
	CRITICAL PATH	GARDEN	51.5 %	
		H 3	74.0 %	
		CO 60	24.6 %	
	CNS.LIQUID	1.73E+00	81.4 %	
	CRITICAL PATH	FISH	99.0 %	
		NB 95	90.6 %	
	MNS.GAS	1.31E-03	0.0 %	
	CRITICAL PATH	GARDEN	41.9 %	
		H 3	99.5 %	
	MNS.LIQUID	1.73E-02	0.8 %	
	CRITICAL PATH	DRINKING	81.3 %	
		H 3	81.7 %	
		NB 95	13.0 %	

1995 CATAWBA FUEL CYCLE SUMMARY DAYS 001-365 02/15/96 AT 16:44

MAXIMUM TOTAL BODY NNE 0.50 MILES 2.48E-01 AGE : ADULT

MAXIMUM ORGAN S 0.50 MILES 2.13E+00 AGE : ADULT ORGAN : GI-TRACK

ATTACHMENT IV

The Solid Waste Report

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

REPORT PERIOD 1/1/95 THROUGH 12/31/95

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	0	0	N/A	N/A	0	0	0
(B) Dewatered Primary Resins	3	3	1AS,2B	3HIC	446.4	12.64	148.1
(C) Evaporator Concentrates	0	0	N/A	N/A	0	0	0
(D) Dewatered Mechanical Filters	0[a]	0[a]	---	---	7.1	0.20	9.870E-5
(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)	4	4	4AS	4HIC	481.2	13.63	37.65
(C) Dry Active Waste (brokered)	---	---	---	---	809.8	22.93	4.727
(D) Irradiated Components	0	0	N/A	N/A	0	0	0
3. All Solid Waste	7[a]	7[a]	---	---	1744.5	49.40	190.4771

[a]Does not include brokered totals

CATAWBA NUCLEAR STATION - SOLID RADIOACTIVE WASTE

SUMMARY OF PRINCIPAL RADIONUCLIDE COMPOSITION

REPORT PERIOD 1/1/95 THROUGH 12/31/95

Type of Waste	Radionuclide	% Abundance*
1. Waste from Liquid Systems		
(A) Dewatered Secondary Resins	(none shipped this period)	
(B) Dewatered Primary Resins	H-3	0.2
	Mn-54	5.5
	Co-57	0.1
	Co-58	5.0
	Co-60	15.5
	Sb-125	1.5
	Cs-134	3.1
	Cs-137	7.7
	C-14	0.1
	Fe-55	28.9
	Ni-63	32.3
(C) Evaporator Concentrates	(none shipped this period)	
(D) Dewatered Mechanical Filters	Mn-54	14.5
	Co-60	80.9
	Sb-125	4.7
(E) Dewatered Demineralizers	(none shipped this period)	
(F) Solidified Acids, Oils, Sludges	(none shipped this period)	

*Average percent abundance for all shipments during period (unlisted if <0.1%)

CATAWBA NUCLEAR STATION - SOLID RADIOACTIVE WASTE

SUMMARY OF PRINCIPAL RADIONUCLIDE COMPOSITION

REPORT PERIOD 1/1/95 THROUGH 12/31/95

Type of Waste	Radionuclide	% Abundance*
2. Dry Solid Waste		
(A) Dry Active Waste (compacted)	(none shipped this period)	
(B) Dry Active Waste (non-compacted)	H-3	3.4
	Cr-51	9.4
	Mn-54	2.5
	Co-57	0.1
	Co-58	28.3
	Co-60	11.4
	Nb-95	1.1
	Zr-95	0.6
	Cs-134	1.1
	Cs-137	3.4
	Ce-144	0.1
	C-14	0.1
	Fe-55	33.9
	Ni-63	4.5
(C) Dry Active Waste (brokered)	H-3	3.3
	Cr-51	9.7
	Mn-54	2.5
	Co-57	0.1
	Co-58	28.7
	Co-60	11.2
	Nb-95	1.1
	Zr-95	0.6
	Cs-134	1.1
	Cs-137	3.2
	Ce-144	0.1
	C-14	0.1
	Fe-55	33.8
	Ni-63	4.5
(D) Irradiated Components	(none shipped this period)	

*Average percent abundance for all shipments during period (unlisted if <0.1%)

CATAWBA NUCLEAR STATION - SOLID RADIOACTIVE WASTE

SUMMARY OF PRINCIPAL RADIONUCLIDE COMPOSITION

REPORT PERIOD 1/1/95 THROUGH 12/31/95

Type of Waste	Radionuclide	% Abundance*
3. All Solid Waste	H-3	0.9
	Cr-51	2.1
	Mn-54	4.8
	Co-57	0.1
	Co-58	10.2
	Co-60	14.6
	Nb-95	0.3
	Zr-95	0.1
	Sb-125	1.1
	Cs-134	2.7
	Cs-137	6.7
	C-14	0.1
	Fe-55	30.0
	Ni-63	26.2

*Average percent abundance for all shipments during period (unlisted if <0.1%)

ATTACHMENT V

Meteorological Data

CATAWBA METEOROLOGICAL SURVEY TOWER DATA — FOR PERIOD OF 01-01-95 THRU 12-31-95

SUMMARY OF PASQUILL A — WIND OCCURANCES BY SECTOR + SPEED CLASS(PERCENT) — DATE OF REPORT 02-15-96

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
0.0 -N-	000.84	00.01	00.11	00.25	00.30	00.07	00.07	00.02	00.01	00.00	00.00
22.5 -NNE-	001.34	00.01	00.15	00.39	00.42	00.18	00.17	00.02	00.00	00.00	00.00
45.0 -NE-	000.58	00.00	00.07	00.10	00.13	00.17	00.09	00.02	00.00	00.00	00.00
67.5 -ENE-	000.32	00.01	00.11	00.06	00.02	00.10	00.02	00.00	00.00	00.00	00.00
90.0 -E-	000.30	00.02	00.14	00.09	00.02	00.03	00.00	00.00	00.00	00.00	00.00
112.5 -ESE-	000.21	00.01	00.09	00.06	00.05	00.00	00.00	00.00	00.00	00.00	00.00
135.0 -SE-	001.02	00.05	00.33	00.40	00.17	00.06	00.01	00.00	00.00	00.00	00.00
157.5 -SSE-	001.62	00.02	00.61	00.84	00.13	00.00	00.01	00.01	00.00	00.00	00.00
180.0 -S-	001.15	00.07	00.61	00.31	00.03	00.05	00.02	00.01	00.05	00.00	00.00
202.5 -SSW-	001.49	00.09	00.46	00.48	00.32	00.09	00.05	00.00	00.00	00.00	00.00
225.0 -SW-	001.41	00.07	00.37	00.54	00.34	00.07	00.01	00.01	00.00	00.00	00.00
247.5 -WSW-	000.88	00.05	00.34	00.34	00.13	00.01	00.01	00.00	00.00	00.00	00.00
270.0 -W-	000.55	00.08	00.23	00.16	00.07	00.00	00.01	00.00	00.00	00.00	00.00
292.5 -WNW-	000.30	00.02	00.14	00.08	00.05	00.00	00.01	00.00	00.00	00.00	00.00
315.0 -NW-	000.23	00.03	00.11	00.02	00.01	00.02	00.00	00.03	00.01	00.00	00.00
337.5 -NNW-	000.47	00.01	00.13	00.08	00.08	00.05	00.09	00.01	00.00	00.01	00.01
CALM	00.00										
TOTAL	012.71	000.55	004.00	004.20	002.27	000.90	000.57	000.13	000.07	000.01	000.01

CATAWBA METEOROLOGICAL SURVEY TOWER DATA FOR PERIOD OF 01-01-95 THRU 12-31-95

SUMMARY OF PASQUILL B WIND OCCURANCES BY SECTOR + SPEED CLASS(PERCENT) DATE OF REPORT 02-15-96

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

CATAWBA METEOROLOGICAL SURVEY TOWER DATA — FOR PERIOD OF 01-01-95 THRU 12-31-95

SUMMARY OF PASQUILL C — WIND OCCURANCES BY SECTOR + SPEED CLASS(PERCENT) — DATE OF REPORT 02-15-96

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-	000.83	00.01	00.19	00.19	00.29	00.07	00.07	00.01	00.00	00.00	00.00
22.5 -NNE-	000.94	00.00	00.10	00.27	00.30	00.25	00.01	00.01	00.00	00.00	00.00
45.0 -NE-	000.78	00.01	00.06	00.11	00.29	00.27	00.03	00.01	00.00	00.00	00.00
67.5 -ENE-	000.14	00.01	00.07	00.02	00.01	00.03	00.00	00.00	00.00	00.00	00.00
90.0 -E-	000.15	00.02	00.09	00.02	00.02	00.00	00.00	00.00	00.00	00.00	00.00
112.5 -ESE-	000.10	00.02	00.05	00.02	00.01	00.00	00.00	00.00	00.00	00.00	00.00
135.0 -SE-	000.32	00.02	00.10	00.13	00.07	00.00	00.00	00.00	00.00	00.00	00.00
157.5 -SSE-	000.36	00.02	00.24	00.09	00.01	00.00	00.00	00.00	00.00	00.00	00.00
180.0 -S-	000.50	00.06	00.22	00.14	00.05	00.03	00.00	00.00	00.00	00.00	00.00
202.5 -SSW-	000.83	00.03	00.31	00.35	00.11	00.02	00.00	00.01	00.00	00.00	00.00
225.0 -SW-	001.04	00.03	00.26	00.39	00.23	00.10	00.01	00.02	00.00	00.00	00.00
247.5 -WSW-	000.67	00.07	00.18	00.22	00.13	00.07	00.00	00.00	00.00	00.00	00.00
270.0 -W-	000.56	00.05	00.22	00.23	00.03	00.03	00.00	00.00	00.00	00.00	00.00
292.5 -WNW-	000.40	00.05	00.03	00.11	00.13	00.06	00.01	00.00	00.01	00.00	00.00
315.0 -NW-	000.49	00.01	00.08	00.13	00.15	00.07	00.02	00.02	00.00	00.00	00.01
337.5 -NNW-	000.47	00.01	00.11	00.07	00.10	00.07	00.03	00.05	00.01	00.02	00.00
CALM	00.00										
TOTAL	008.58	000.42	002.31	002.49	001.93	001.07	000.18	000.13	000.02	000.02	000.01

CATAMBA METEOROLOGICAL SURVEY TOWER DATA — FOR PERIOD OF 01-01-95 THRU 12-31-95

SUMMARY OF PASQUILL D — WIND OCCURANCES BY SECTOR + SPEED CLASS(PERCENT) — DATE OF REPORT 02-15-96

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-	002.99	00.06	00.66	01.14	00.72	00.30	00.08	00.02	00.01	00.00	00.00
22.5 -NNE-	004.16	00.03	00.42	01.16	01.64	00.65	00.17	00.09	00.00	00.00	00.00
45.0 -NE-	004.98	00.09	00.19	01.23	02.31	00.96	00.17	00.03	00.00	00.00	00.00
67.5 -ENE-	001.46	00.09	00.29	00.32	00.30	00.24	00.14	00.08	00.00	00.00	00.00
90.0 -E-	000.62	00.09	00.27	00.18	00.07	00.00	00.01	00.00	00.00	00.00	00.00
112.5 -ESE-	000.52	00.15	00.25	00.11	00.01	00.00	00.00	00.00	00.00	00.00	00.00
135.0 -SE-	001.01	00.18	00.35	00.31	00.10	00.06	00.01	00.00	00.00	00.00	00.00
157.5 -SSE-	001.19	00.31	00.59	00.19	00.02	00.02	00.06	00.00	00.00	00.00	00.00
180.0 -S-	001.72	00.26	00.95	00.40	00.09	00.02	00.00	00.00	00.00	00.00	00.00
202.5 -SSW-	002.48	00.23	01.10	00.82	00.22	00.10	00.00	00.01	00.00	00.00	00.00
225.0 -SW-	002.69	00.31	00.97	00.90	00.25	00.19	00.06	00.01	00.00	00.00	00.00
247.5 -WSW-	001.58	00.31	00.64	00.46	00.11	00.06	00.00	00.00	00.00	00.00	00.00
270.0 -W-	001.43	00.29	00.72	00.31	00.07	00.02	00.02	00.00	00.00	00.00	00.00
292.5 -WNW-	000.94	00.16	00.38	00.24	00.10	00.02	00.01	00.03	00.00	00.00	00.00
315.0 -NW-	001.20	00.16	00.42	00.26	00.23	00.02	00.07	00.03	00.00	00.01	00.00
337.5 -NNW-	001.59	00.07	00.54	00.32	00.30	00.22	00.08	00.03	00.02	00.01	00.00
CALM	00.02										
TOTAL	030.56	002.79	008.74	008.35	006.54	002.88	000.88	000.33	000.03	000.02	000.00

CATAWBA METEOROLOGICAL SURVEY TOWER DATA — FOR PERIOD OF 01-01-95 THRU 12-31-95

SUMMARY OF PASQUILL E — WIND OCCURANCES BY SECTOR + SPEED CLASS(PERCENT) — DATE OF REPORT 02-15-96

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-	002.54	00.22	00.78	01.10	00.35	00.06	00.03	00.00	00.00	00.00	00.00
22.5 -NNE-	002.18	00.09	00.42	00.98	00.57	00.10	00.01	00.01	00.00	00.00	00.00
45.0 -NE-	001.26	00.08	00.16	00.53	00.40	00.09	00.00	00.00	00.00	00.00	00.00
67.5 -ENE-	000.72	00.10	00.10	00.17	00.13	00.05	00.07	00.09	00.01	00.00	00.00
90.0 -E-	000.43	00.15	00.11	00.07	00.07	00.02	00.01	00.00	00.00	00.00	00.00
112.5 -ESE-	000.60	00.14	00.13	00.22	00.05	00.06	00.00	00.00	00.00	00.00	00.00
135.0 -SE-	001.81	00.35	00.57	00.46	00.25	00.13	00.05	00.00	00.00	00.00	00.00
157.5 -SSE-	001.67	00.50	00.79	00.18	00.16	00.03	00.01	00.00	00.00	00.00	00.00
180.0 -S-	002.19	00.59	00.94	00.50	00.11	00.05	00.00	00.00	00.00	00.00	00.00
202.5 -SSW-	003.12	00.62	01.42	00.71	00.23	00.14	00.00	00.00	00.00	00.00	00.00
225.0 -SW-	003.18	00.72	01.42	00.64	00.32	00.08	00.00	00.00	00.00	00.00	00.00
247.5 -WSW-	001.63	00.62	00.80	00.18	00.03	00.00	00.00	00.00	00.00	00.00	00.00
270.0 -W-	001.33	00.59	00.66	00.07	00.01	00.00	00.00	00.00	00.00	00.00	00.00
292.5 -WNW-	001.27	00.22	00.67	00.25	00.11	00.02	00.00	00.00	00.00	00.00	00.00
315.0 -NW-	001.11	00.15	00.43	00.27	00.19	00.07	00.00	00.00	00.00	00.00	00.00
337.5 -NNW-	001.99	00.21	00.62	00.72	00.31	00.10	00.02	00.00	00.01	00.00	00.00
CALM	00.15										
TOTAL	027.03	005.35	010.02	007.05	003.29	001.00	000.20	000.10	000.02	000.00	000.00

CATAMBA METEOROLOGICAL SURVEY TOWER DATA FOR PERIOD OF 01-01-95 THRU 12-31-95

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

DATE OF REPORT 02-15-96

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-	001.62	00.26	01.03	00.30	00.03	00.00	00.00	00.00	00.00	00.00	00.00
22.5 -NNE-	001.19	00.09	00.65	00.39	00.06	00.00	00.00	00.00	00.00	00.00	00.00
45.0 -NE-	000.39	00.03	00.16	00.19	00.01	00.00	00.00	00.00	00.00	00.00	00.00
67.5 -ENE-	000.15	00.06	00.03	00.03	00.02	00.00	00.01	00.00	00.00	00.00	00.00
90.0 -E-	000.09	00.07	00.01	00.01	00.00	00.00	00.00	00.00	00.00	00.00	00.00
112.5 -ESE-	000.21	00.08	00.02	00.03	00.03	00.05	00.00	00.00	00.00	00.00	00.00
135.0 -SE-	000.79	00.27	00.32	00.07	00.08	00.02	00.03	00.00	00.00	00.00	00.00
157.5 -SSE-	000.57	00.24	00.29	00.02	00.02	00.00	00.00	00.00	00.00	00.00	00.00
180.0 -S-	000.92	00.26	00.62	00.03	00.01	00.00	00.00	00.00	00.00	00.00	00.00
202.5 -SSW-	001.04	00.34	00.68	00.02	00.00	00.00	00.00	00.00	00.00	00.00	00.00
225.0 -SW-	000.96	00.47	00.46	00.02	00.01	00.00	00.00	00.00	00.00	00.00	00.00
247.5 -WSW-	000.72	00.42	00.29	00.01	00.00	00.00	00.00	00.00	00.00	00.00	00.00
270.0 -W-	000.55	00.37	00.17	00.01	00.00	00.00	00.00	00.00	00.00	00.00	00.00
292.5 -WNW-	000.54	00.18	00.29	00.07	00.00	00.00	00.00	00.00	00.00	00.00	00.00
315.0 -NW-	000.61	00.17	00.38	00.05	00.01	00.00	00.00	00.00	00.00	00.00	00.00
337.5 -NNW-	000.86	00.23	00.45	00.18	00.00	00.00	00.00	00.00	00.00	00.00	00.00
CALM	00.09										
TOTAL	011.21	003.54	005.85	001.43	000.28	000.07	000.04	000.00	000.00	000.00	000.00

CATAWBA METEOROLOGICAL SURVEY TOWER DATA FOR PERIOD OF 01-01-95 THRU 12-31-95

SUMMARY OF PASQUILL G WIND OCCURANCES BY SECTOR + SPEED CLASS(PERCENT) DATE OF REPORT 02-15-96

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	000.62	00.22	00.37	00.03	00.00	00.00	00.00	00.00	00.00	00.00	00.00
-NNE- 45.0	001.04	00.33	00.56	00.14	00.01	00.00	00.00	00.00	00.00	00.00	00.00
-NE- 67.5	000.76	00.18	00.33	00.23	00.02	00.00	00.00	00.00	00.00	00.00	00.00
-ENE- 90.0	000.10	00.06	00.03	00.00	00.01	00.00	00.00	00.00	00.00	00.00	00.00
-E- 112.5	000.15	00.08	00.07	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00
-ESE- 135.0	000.16	00.09	00.07	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00
-SE- 157.5	000.56	00.31	00.23	00.00	00.00	00.02	00.00	00.00	00.00	00.00	00.00
-SSE- 180.0	000.83	00.42	00.41	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00
-S- 202.5	000.76	00.40	00.35	00.00	00.01	00.00	00.00	00.00	00.00	00.00	00.00
-SSW- 225.0	000.88	00.61	00.27	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00
-SW- 247.5	000.78	00.55	00.23	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00
-WSW- 270.0	000.53	00.39	00.14	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00
-W- 292.5	000.72	00.43	00.29	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00
-WNW- 315.0	000.56	00.16	00.33	00.07	00.00	00.00	00.00	00.00	00.00	00.00	00.00
-NW- 337.5	000.32	00.09	00.17	00.06	00.00	00.00	00.00	00.00	00.00	00.00	00.00
-NNW-	000.53	00.25	00.23	00.05	00.00	00.00	00.00	00.00	00.00	00.00	00.00
CALM	00.19										
TOTAL	009.30	004.57	004.08	000.58	000.05	000.02	000.00	000.00	000.00	000.00	000.00

ATTACHMENT VI

Abnormal Releases

2/19/96

To: Caryl Ingram

From: Charley Wray (CNS-RP)

Subject: 1995 "Abnormal Effluent Releases"

Occurred: 06/26/95 10:15 (Refer to PIP 0-C95-0974)
During 1995 there was one recorded Abnormal Release at Catawba. The event involved a leak in the WG System. A low pressure alarm was noted by OPS. After contacting Radwaste all inputs to the WG system were isolated and SWGDT-B was placed in service. Leak hunting began. Later it was decided to bring the system back up in the Compressor B SWGDT-B mode to ensure the loop would hold system pressure. During this action, a leak on Compressor A was discovered and appeared to be originating from one of several possible leaky isolation valves or gas trap vent valves. The leak was isolated on the compressor A skid by closing a manual drain valve (1WG-29). RP generated a GWR (after the event) to calculated activity and dose information (GWR# 0183).

Radiological consequences: Release from WGDT-B was calculated to be 0.16 Ci (0.7% for Site Instantaneous Release) and Release from S/DWGDT-B was calculated to be 0.43 Ci (0.8% for Site Instantaneous Release).

Skin Dose was estimated to be 6.32E-04 mrem
Total Body Dose was estimated to be 9.43E-06 mrem

The Dose values were estimated using the GASPAR program for Catawba Gas Dose at Special Location (Worst Case Location at 0.5 miles NNE).

Conclusion: Chemistry personnel determined that a tagout problem had caused the mispositioning of the valve. Chemistry management reviewed the event and other tagging events with Chemistry staff personnel and documented on TSR-10.

ATTACHMENT VII

Revisions To

Offsite Dose Calculation (ODCM) Manual

and

Process Control Program (PCP) Manual

Duke Power Company
P.O. Box 1006
Charlotte, NC 28201-1006

M. S. Tuckman
Senior Vice President
Nuclear Generation
(704)382-2200 Office
(704)382-4360 Fax

DUKE POWER

January 5, 1995

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

Subject: Oconee Nuclear Station, Units 1, 2, and 3
Docket Nos. 50-269, 50-270, 50-287
McGuire Nuclear Station, Units 1 and 2
Docket Nos. 50-369, 50-370
Catawba Nuclear Station, Units 1 and 2
Docket Nos. 50-413, 50-414
Offsite Dose Calculation Manual (ODCM) Revisions

I am enclosing revisions made to the Duke Power Company Offsite Dose Calculations Manual effective January 1, 1995. The original of this letter submits a complete copy of the entire ODCM as required by Oconee Technical Specification 6.1.2.1.L.1 and McGuire Technical Specification 6.14.2.c. The following sections are affected by this revision.

Revision 38	Generic Section
Revision 35	Oconee Nuclear Station
Revision 36	McGuire Nuclear Station
Revision 37	Catawba Nuclear Station

By copy of this letter, I am transmitting the revised pages to be inserted in Control Copy Number 33 (assigned to ONRR) and Control Copy Number 34 (assigned to Region II) along with an approval letter for each section. For these copies, please insert revision pages affected according to the insertion instructions found on the approval letters. The approval letter for the Generic Manual along with the justification for Revision 38 should be placed in front of the entire manual. Each station approval letter (including justifications) should be placed in the front of the respective station manual sections.

If you have any questions, please contact L. B. Jones at (704) 382-4753.

Very truly yours,

M. S. Tuckman

Attachment (Original only - entire copy of updated ODCM)

Duke Power Company
P.O. Box 1006
Charlotte, NC 28201-1006

M. S. Tuckman
Senior Vice President
Nuclear Generation
(704)382-2200 Office
(704)382-4360 Fax

DUKE POWER

March 13, 1995

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

Subject: Catawba Nuclear Station, Docket No. 50-413, 50-414
Process Control Program Manual

Please find attached 6 copies of Revision 8 to the Duke Power Company Catawba Nuclear Station Process Control Program Manual. These copies are provided for manual numbers 26, 27, 28, 29, 30, and 31.

By copy of this letter, Revision 8 of the CNS PCP is also being provided to Region II for manual number 22.

If you have any questions, please contact L. B. Jones at (704) 382-4753.

Very truly yours,

M. S. Tuckman

M. S. Tuckman

Attachment

xc: Mr. S. D. Ebneter, Administrator
U. S. Nuclear Regulatory Commission
Region II
Atlanta, GA 30323

w/o Attachment

Mr. R. E. Martin, Project Manager, ONRR