

ATTACHMENT I

SUMMARY OF LIQUID AND GASEOUS EFFLUENTS

RELEASED; 1988 FUEL CYCLE CALCULATIONS;

1988 METEOROLOGICAL SURVEY; AND

THE SOLID WASTE REPORT

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LIQUID AND GASEOUS EFFLUENT REPORT

UNIT 1

CATAWBA NUCLEAR STATION
UNIT 1
RADIOACTIVE EFFLUENT RELEASES
DATE: 02/20/89

1. LIQUID RELEASES

	UNITS	1ST QTR	2ND QTR	3RD QTR	4TH QTR	YEAR 1988 TOTAL
1. GROSS RADIOACTIVITY						
A. TOTAL RELEASE	CURIES	1.80E-01	3.41E-02	1.41E-01	1.87E-01	5.42E-01
B. AVERAGE CONCENTRATION RELEASED	UCI/ML	6.65E-09	1.19E-09	4.44E-09	6.73E-09	4.71E-09
C. MAXIMUM CONCENTRATION RELEASED	UCI/ML	5.73E-08	6.04E-09	2.97E-08	3.48E-08	6.96E-08
2. TRITIUM						
A. TOTAL RELEASE	CURIES	5.31E+01	8.97E+01	1.13E+02	9.75E+01	3.53E+02
B. AVERAGE CONCENTRATION RELEASED	UCI/ML	1.96E-06	3.13E-06	3.56E-06	3.51E-06	3.07E-06
3. DISSOLVED NOBLE GASES						
A. TOTAL RELEASE	CURIES	6.58E-02	8.14E-03	1.25E-02	2.53E-02	1.12E-01
B. AVERAGE CONCENTRATION RELEASED	UCI/ML	2.47E-09	2.54E-10	3.95E-10	9.10E-10	9.70E-10
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	3.84E+07	4.96E+07	8.10E+07	7.67E+07	2.46E+08
6. VOLUME OF DILUTION WATER	LITERS	2.71E+10	2.87E+10	3.17E+10	2.78E+10	1.15E+11
7. RADIONUCLIDES RELEASED	CURIES					
BE-7		2.01E-04	1.69E-04	2.80E-05	0.00E+00	3.90E-04
F-18		3.38E-03	9.04E-04	1.47E-04	1.79E-03	6.22E-03
NA-24		1.39E-04	7.27E-05	8.10E-06	1.15E-04	3.34E-04
CR-51		1.91E-02	1.19E-03	3.83E-03	2.84E-02	5.25E-02
MN-54		6.24E-03	1.63E-03	5.66E-03	8.42E-03	2.14E-02
FE-55		4.39E-02	1.42E-02	9.21E-02	3.20E-02	1.82E-01
FE-59		6.38E-03	2.29E-04	5.86E-04	2.98E-03	1.02E-02
CO-57		1.88E-04	2.84E-05	1.39E-04	1.19E-04	4.75E-04
CO-58		5.47E-02	5.41E-03	1.32E-02	4.37E-02	1.17E-01
CO-60		1.14E-02	4.34E-03	1.54E-02	2.29E-02	5.41E-02
ZN-65		1.48E-04	1.49E-05	1.59E-04	8.07E-05	4.02E-04
SE-75		7.77E-05	0.00E+00	0.00E+00	0.00E+00	7.77E-05
BR-82		3.77E-05	0.00E+00	0.00E+00	0.00E+00	3.77E-05
BR-84		3.02E-05	0.00E+00	0.00E+00	0.00E+00	3.02E-05
RB-88		0.00E+00	0.00E+00	0.00E+00	3.22E-05	3.22E-05
SR-89		0.00E+00	0.00E+00	0.00E+00	6.09E-05	6.09E-05
SR-90		0.00E+00	5.34E-06	0.00E+00	8.04E-06	1.34E-05
SR-92		3.87E-06	0.00E+00	2.82E-05	2.34E-05	5.54E-05
Y-91M		9.25E-06	0.00E+00	0.00E+00	0.00E+00	9.25E-06
ZR-95		1.91E-03	2.20E-04	4.79E-04	1.51E-03	4.12E-03
NB-95		2.79E-03	3.45E-04	8.93E-04	2.48E-03	6.51E-03
NB-97		1.50E-04	2.01E-05	3.56E-04	2.86E-04	8.12E-04
NB-97M		6.51E-06	1.14E-05	0.00E+00	0.00E+00	1.80E-05
MO-99		3.58E-05	0.00E+00	0.00E+00	1.77E-05	5.35E-05
TC-99M		2.21E-04	2.36E-05	3.59E-06	8.94E-05	3.37E-04
RU-103		1.74E-05	0.00E+00	0.00E+00	2.70E-04	3.08E-04
RU-106		0.00E+00	0.00E+00	0.00E+00	5.10E-04	5.10E-04
AG-110M		4.01E-05	0.00E+00	1.79E-04	9.66E-05	3.15E-04
I-131		5.13E-03	9.38E-04	8.35E-04	2.88E-03	9.78E-03
I-132		2.93E-05	0.00E+00	4.47E-07	1.25E-04	1.54E-04
I-133		9.53E-04	2.84E-04	2.70E-04	6.00E-04	2.19E-03
I-135		3.99E-05	0.00E+00	0.00E+00	5.38E-05	9.37E-05
SB-122		8.07E-04	1.64E-06	6.23E-06	6.47E-04	1.46E-03
SB-124		5.39E-03	1.04E-04	1.40E-04	1.69E-03	7.32E-03
SB-125		1.12E-02	2.20E-03	2.76E-03	6.77E-03	2.29E-02
SN-113		3.96E-04	1.48E-05	2.55E-04	3.09E-04	9.75E-04
TE-131M		4.69E-06	0.00E+00	0.00E+00	4.87E-05	5.34E-05
CS-134		9.96E-04	5.16E-04	1.18E-03	3.23E-03	5.92E-03
CS-136		0.00E+00	0.00E+00	0.00E+00	4.28E-05	4.28E-05
CS-137		1.67E-03	8.82E-04	2.15E-03	4.54E-03	9.24E-03
CS-138		1.34E-04	0.00E+00	0.00E+00	6.53E-03	6.67E-03
BA-139		1.24E-05	0.00E+00	0.00E+00	7.00E+00	1.24E-05
BA-140		2.88E-06	0.00E+00	0.00E+00	6.00E-05	6.29E-05
LA-140		5.73E-04	1.16E-04	9.32E-05	6.58E-04	1.44E-03
CE-141		0.00E+00	0.00E+00	0.00E+00	8.99E-06	8.99E-06
CE-143		0.00E+00	0.00E+00	2.75E-06	0.00E+00	2.75E-06
W-187		2.97E-05	0.00E+00	0.00E+00	7.54E-06	3.73E-05
BI-214		3.18E-06	1.88E-05	1.89E-05	7.31E-06	4.81E-05
PB-212		3.30E-06	4.50E-06	1.14E-05	0.06E+00	1.92E-05
PB-214		6.75E-06	4.38E-05	2.57E-05	4.83E-05	1.25E-04
TL-208		1.04E-06	1.28E-06	2.24E-06	5.61E-07	5.12E-06
AC-228		1.91E-06	0.00E+00	8.94E-06	0.00E+00	1.08E-05
TH-228		1.27E-03	1.20E-04	1.94E-04	1.28E-02	1.44E-02
NP-239		0.00E+00	0.00E+00	0.00E+00	2.26E-05	2.26E-05
SC-46		8.27E-06	0.00E+00	2.08E-06	0.00E+00	1.03E-05
HF-181		1.31E-05	1.08E-06	0.00E+00	0.00E+00	1.41E-05
SB-126		1.19E-04	0.00E+00	0.00E+00	4.17E-05	1.60E-04
BR-80M		8.66E-05	0.00E+00	0.00E+00	0.00E+00	8.66E-05
AR-41		0.00E+00	0.00E+00	0.00E+00	1.06E-07	1.06E-07
KR-85M		7.37E-06	0.00E+00	5.88E-06	0.00E+00	1.32E-05
KR-88		0.00E+00	0.00E+00	8.82E-06	0.00E+00	8.82E-06
XE-131M		8.05E-05	0.00E+00	0.00E+00	8.11E-05	1.62E-04
XE-133		3.79E-02	5.32E-03	8.51E-03	1.95E-02	7.12E-02
XE-133M		1.36E-03	3.68E-05	1.03E-04	1.08E-04	1.61E-03
XE-135		2.64E-02	2.78E-03	3.87E-03	5.56E-03	3.86E-02
XE-135M		1.46E-05	0.00E+00	0.00E+00	1.98E-06	1.66E-05

02/20/89

SKIN	MAXIMUM DOSE-	6.39D-03 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	SHORE
	CO 58	6.15 %				
	CO 60	73.13 %				
	SB 125	7.47 %				
	CS 137	5.09 %				
BONE	MAXIMUM DOSE-	1.12D-01 MREM	CRITICAL AGE-	CHILD	CRITICAL PATHWAY-	FISH
	CS 134	26.93 %				
	CS 137	63.22 %				
LIVER	MAXIMUM DOSE-	1.48D-01 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	FISH
	CS 134	39.95 %				
	CS 137	50.85 %				
T. BODY	MAXIMUM DOSE-	1.01D-01 MREM	CRITICAL AGE-	ADULT	CRITICAL PATHWAY-	FISH
	CS 134	47.07 %				
	CS 137	46.69 %				
THYROID	MAXIMUM DOSE-	3.45D-02 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	FISH
	CO 60	11.53 %				
	I 131	78.40 %				
KIDNEY	MAXIMUM DOSE-	5.31D-02 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	FISH
	CO 60	7.49 %				
	CS 134	35.56 %				
	CS 137	48.63 %				
LUNG	MAXIMUM DOSE-	2.56D-02 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	FISH
	H 3	5.78 %				
	CO 60	15.53 %				
	CS 134	28.42 %				
	CS 137	39.85 %				
GI-LLI	MAXIMUM DOSE-	3.78D-01 MREM	CRITICAL AGE-	ADULT	CRITICAL PATHWAY-	FISH
	NB 95	90.35 %				

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SKIN	MAXIMUM DOSE-	2.09D-03 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	SHORE
	CO 60	80.56 %				
	CS 137	7.77 %				
BONE	MAXIMUM DOSE-	5.23D-02 MREM	CRITICAL AGE-	CHILD	CRITICAL PATHWAY-	FISH
	CS 134	28.35 %				
	CS 137	67.75 %				
LIVER	MAXIMUM DOSE-	7.18D-02 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	FISH
	CS 134	40.32 %				
	CS 137	52.26 %				
T. BODY	MAXIMUM DOSE-	5.09D-02 MREM	CRITICAL AGE-	ADULT	CRITICAL PATHWAY-	FISH
	H 3	6.29 %				
	CS 134	45.75 %				
	CS 137	46.20 %				
THYROID	MAXIMUM DOSE-	8.95D-03 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	FISH
	H 3	26.37 %				
	CO 60	15.99 %				
	I 131	52.13 %				
KIDNEY	MAXIMUM DOSE-	2.63D-02 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	FISH
	H 3	8.96 %				
	CO 60	5.43 %				
	CS 134	35.08 %				
	CS 137	48.83 %				
LUNG	MAXIMUM DOSE-	1.30D-02 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	FISH
	H 3	18.22 %				
	CO 60	11.05 %				
	CS 134	27.48 %				
	CS 137	39.23 %				
GI-LLI	MAXIMUM DOSE-	4.97D-02 MREM	CRITICAL AGE-	ADULT	CRITICAL PATHWAY-	FISH
	H 3	6.45 %				
	NB 95	80.21 %				

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SKIN	MAXIMUM DOSE -	6.31D-03 MREM	CRITICAL AGE -	TEEN	CRITICAL PATHWAY -	SHORE
	CO 60	86.86 %				
	CS 137	5.75 %				
BONE	MAXIMUM DOSE -	1.18D-01 MREM	CRITICAL AGE -	CHILD	CRITICAL PATHWAY -	FISH
	FE 55	5.12 %				
	CS 134	26.16 %				
	CS 137	66.94 %				
LIVER	MAXIMUM DOSE -	1.58D-01 MREM	CRITICAL AGE -	TEEN	CRITICAL PATHWAY -	FISH
	CS 134	38.23 %				
	CS 137	53.05 %				
T. BODY	MAXIMUM DOSE -	1.08D-01 MREM	CRITICAL AGE -	ADULT	CRITICAL PATHWAY -	FISH
	CS 134	45.00 %				
	CS 137	48.66 %				
THYROID	MAXIMUM DOSE -	1.20D-02 MREM	CRITICAL AGE -	TEEN	CRITICAL PATHWAY -	SHORE
	H 3	22.61 %				
	CO 60	38.83 %				
	I 131	31.59 %				
KIDNEY	MAXIMUM DOSE -	5.68D-02 MREM	CRITICAL AGE -	TEEN	CRITICAL PATHWAY -	FISH
	CO 60	8.21 %				
	CS 134	33.96 %				
	CS 137	50.63 %				
LUNG	MAXIMUM DOSE -	2.85D-02 MREM	CRITICAL AGE -	TEEN	CRITICAL PATHWAY -	FISH
	H 3	9.51 %				
	FE 55	7.20 %				
	CO 60	16.33 %				
	CS 134	26.03 %				
	CS 137	39.79 %				
GI-LLI	MAXIMUM DOSE -	1.17D-01 MREM	CRITICAL AGE -	ADULT	CRITICAL PATHWAY -	FISH
	CO 60	5.33 %				
	NB 95	80.75 %				

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SKIN	MAXIMUM DOSE-	1.25D-02 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	SHORE
	CO 60	74.04 %				
	CS 137	6.97 %				
	TH 228	8.69 %				
BONE	MAXIMUM DOSE-	3.46D-01 MREM	CRITICAL AGE-	CHILD	CRITICAL PATHWAY-	FISH
	CS 134	27.96 %				
	CS 137	56.83 %				
	TH 228	15.67 %				
LIVER	MAXIMUM DOSE-	4.10D-01 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	FISH
	CS 134	46.16 %				
	CS 137	49.08 %				
T. BODY	MAXIMUM DOSE-	2.89D-01 MREM	CRITICAL AGE-	ADULT	CRITICAL PATHWAY-	FISH
	CS 134	52.77 %				
	CS 137	43.72 %				
THYROID	MAXIMUM DOSE-	2.86D-02 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	FISH
	H 3	9.36 %				
	CO 60	27.49 %				
	I 131	52.03 %				
KIDNEY	MAXIMUM DOSE-	1.47D-01 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	FISH
	CO 60	5.35 %				
	CS 134	41.10 %				
	CS 137	46.94 %				
LUNG	MAXIMUM DOSE-	6.38D-02 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	FISH
	CO 60	12.31 %				
	CS 134	36.46 %				
	CS 137	42.69 %				
GI-LLI	MAXIMUM DOSE-	3.83D-01 MREM	CRITICAL AGE-	ADULT	CRITICAL PATHWAY-	FISH
	NB 95	77.79 %				
	TH 228	11.35 %				

SKIN MAXIMUM DOSE - 2.72D-02 MREM CRITICAL AGE - TEEN CRITICAL PATHWAY - SHORE
 CO 60 77.58 %
 CS 137 6.32 %

BONE MAXIMUM DOSE - 6.26D-01 MREM CRITICAL AGE - CHILD CRITICAL PATHWAY - FISH
 CS 134 27.35 %
 CS 137 59.99 %
 TH 228 9.42 %

LIVER MAXIMUM DOSE - 7.84D-01 MREM CRITICAL AGE - TEEN CRITICAL PATHWAY - FISH
 CS 134 42.63 %
 CS 137 50.68 %

T. BODY MAXIMUM DOSE - 5.46D-01 MREM CRITICAL AGE - ADULT CRITICAL PATHWAY - FISH
 CS 134 49.29 %
 CS 137 45.67 %

THYROID MAXIMUM DOSE - 8.27D-02 MREM CRITICAL AGE - TEEN CRITICAL PATHWAY - FISH
 H 3 11.34 %
 CO 60 21.69 %
 I 131 59.24 %

KIDNEY MAXIMUM DOSE - 2.82D-01 MREM CRITICAL AGE - TEEN CRITICAL PATHWAY - FISH
 CO 60 6.37 %
 CS 134 37.85 %
 CS 137 48.34 %

LUNG MAXIMUM DOSE - 1.31D-01 MREM CRITICAL AGE - TEEN CRITICAL PATHWAY - FISH
 H 3 7.18 %
 CO 60 13.73 %
 CS 134 31.46 %
 CS 137 41.21 %

GI-LLI MAXIMUM DOSE - 9.09D-01 MREM CRITICAL AGE - ADULT CRITICAL PATHWAY - FISH
 NB 95 83.29 %
 TH 228 5.20 %

CATAWBA NUCLEAR STATION
UNIT 1
RADIOACTIVE EFFLUENT RELEASES
DATE : 02/20/89

II. AIRBORNE RELEASES

	UNITS	1ST QTR	2ND QTR	3RD QTR	4TH QTR	TOTAL	YEAR : 1988
1. TOTAL NOBLE GASES	CURIES	2.82E+02	1.32E+02	8.94E+02	2.54E+02	1.56E+03	
2. TOTAL HALOGENS	CURIES	2.60E-04	8.08E-04	3.48E-05	1.15E-04	1.22E-03	
3. TOTAL PARTICULATE GROSS BETA-GAMMA	CURIES	3.24E-05	2.12E-04	8.76E-05	2.96E-03	3.29E-03	
4. TOTAL TRITIUM	CURIES	6.91E+00	6.50E+00	1.14E+01	5.48E+00	3.03E+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						
PARTICULATES							
F-18		4.05E-06	1.97E-04	7.50E-05	2.91E-03	3.18E-03	
NA-24		1.37E-06	4.32E-09	5.29E-09	5.78E-09	1.38E-06	
CR-51		6.34E-07	0.00E+00	0.00E+00	0.00E+00	6.34E-07	
MN-54		1.55E-07	0.00E+00	0.00E+00	2.70E-06	2.85E-06	
MN-56		8.86E-10	0.00E+00	1.08E-08	6.80E-08	7.97E-08	
CO-58		1.70E-06	0.00E+00	0.00E+00	1.35E-05	1.52E-05	
CO-60		1.84E-07	0.00E+00	0.00E+00	6.63E-06	6.81E-06	
BR-82		1.85E-08	1.08E-07	1.38E-07	1.01E-06	1.28E-06	
RB-88		2.35E-05	1.39E-05	1.20E-05	3.02E-05	7.96E-05	
RB-89		1.17E-08	0.00E+00	0.00E+00	4.01E-09	1.57E-08	
SR-90		0.00E+00	3.26E-07	0.00E+00	0.00E+00	3.26E-07	
ZR-95		0.00E+00	0.00E+00	0.00E+00	4.15E-10	4.15E-10	
NB-95		7.63E-08	0.00E+00	0.00E+00	6.58E-10	7.70E-08	
TC-99M		0.00E+00	3.43E-09	0.00E+00	3.55E-10	3.79E-09	
RU-106		0.00E+00	0.00E+00	0.00E+00	3.53E-08	3.53E-08	
AG-108M		2.38E-09	0.00E+00	0.00E+00	0.00E+00	2.38E-09	
TE-131M		1.98E-09	0.00E+00	0.00E+00	8.96E-09	1.09E-08	
CS-134		3.33E-08	0.00E+00	0.00E+00	8.30E-10	3.41E-08	
CS-137		5.60E-08	0.00E+00	6.49E-10	8.24E-10	5.74E-08	
CS-138		4.79E-07	0.00E+00	2.07E-07	4.43E-07	1.13E-06	
BA-139		1.81E-08	0.00E+00	3.41E-09	2.07E-08	4.72E-08	
BA-140		0.00E+00	0.00E+00	0.00E+00	8.32E-10	8.32E-10	
W-187		5.26E-08	0.00E+00	0.00E+00	0.00E+00	5.26E-08	
SB-126		0.00E+00	0.00E+00	0.00E+00	1.04E-08	1.04E-08	
BR-86M		7.42E-08	1.13E-07	2.05E-07	6.65E-07	1.06E-06	
HALOGENS							
I-131		1.11E-04	5.45E-04	1.40E-05	9.15E-05	7.62E-04	
I-132		3.80E-08	0.00E+00	9.16E-07	1.34E-06	2.30E-06	
I-133		1.49E-04	2.63E-04	1.86E-05	1.97E-05	4.50E-04	
I-134		0.00E+00	0.00E+00	5.31E-07	9.06E-07	1.44E-06	
I-135		0.00E+00	0.00E+00	7.00E-07	1.18E-06	1.88E-06	
GASES							
AR-41		5.50E-01	2.07E+00	2.00E+00	1.37E+00	5.99E+00	
KR-85		5.48E-01	9.76E-01	4.65E-01	8.79E-02	2.08E+00	
KR-85M		1.46E-01	3.53E-01	2.11E-01	2.13E-01	9.23E-01	
KR-87		1.89E-02	5.28E-02	3.62E-02	2.27E-02	1.31E-01	
KR-88		1.67E-01	4.12E-01	2.28E-01	2.26E-01	1.03E+00	
XE-131M		3.82E-01	3.97E-01	1.01E+01	1.28E+00	1.22E+01	
XE-133		2.76E+02	1.20E+02	8.66E+02	2.45E+02	1.51E+03	
XE-133M		7.64E-01	1.87E+00	1.11E+01	1.79E+00	1.55E+01	
XE-135		3.81E+00	5.82E+00	4.22E+00	4.19E+00	1.80E+01	
XE-135M		0.00E+00	1.38E-03	2.69E-03	1.62E-03	5.68E-03	
XE-138		1.63E-03	8.86E-04	1.09E-03	0.00E+00	3.60E-03	

CATAHBA UNIT 1 GAS DOSE 001-091 88 RELEASE WEIGHTED NET REPORT SUMMARY 02/20/89
SPECIAL LOCATION
AT 0.50 MILES SSW

NOBLE GAS EXPOSURE:

BETA AIR DOSE = 2.93E-01 MILLIRADS
GAMMA AIR DOSE = 1.07E-01 MILLIRADS

TOTAL BODY DOSE = 6.34E-02 MILLIREM
XE133 87.48%
XE135 5.92%

TOTAL SKIN DOSE = 1.74E-01 MILLIREM
XE133 89.68%
XE135 5.72%

CATAMBA UNIT 1 GAS DOSE 001-091 88 RELEASE WEIGHTED NET REPORT SUMMARY 02/20/89
SPECIAL LOCATION
AT 0.50 MILES S

IODINE, PARTICULATE, AND TRITIUM EXPOSURE SUMMARY:

MAXIMUM ORGAN - THYROID
CRITICAL AGE - CHILD
CRITICAL PATHWAY - VEGET @ 78.85%
MAXIMUM ORGAN DOSE = 2.93E-02 MILLIREM
H 3 75.37%
I 131 25.04%

CATAMBA UNIT 1 GAS DOSE 092-182 88 RELEASE WEIGHTED MET REPORT SUMMARY 02/20/89
 SPECIAL LOCATION
 AT 0.50 MILES NE

NOBLE GAS EXPOSURE:

BETA AIR DOSE = 1.40E-01 MILLIRADS
 GAMMA AIR DOSE = 7.40E-02 MILLIRADS

TOTAL BODY DOSE = 4.60E-02 MILLIREM
 KR 88 7.83%
 XE133 46.36%
 XE135 15.32%
 AR 41 25.64%

TOTAL SKIN DOSE = 1.11E-01 MILLIREM
 KR 88 5.05%
 XE133 56.88%
 XE135 16.84%
 AR 41 17.11%

CATAMBA UNIT 1 GAS DOSE 092-182 88 RELEASE WEIGHTED MET REPORT SUMMARY 02/20/89
SPECIAL LOCATION
AT 1.00 MILES NN

IODINE, PARTICULATE, AND TRITIUM EXPOSURE SUMMARY:

MAXIMUM ORGAN - THYROID
CRITICAL AGE - INFANT
CRITICAL PATHWAY - GOATMILK @ 97.89%
MAXIMUM ORGAN DOSE = 5.17E-02 MILLIREM
H 3 5.99%
I 131 93.49%

CATAMBA UNIT I GAS DOSE 183-274 88 RELEASE WEIGHTED MET REPORT SUMMARY 02/20/89
SPECIAL LOCATION
AT 0.50 MILES N

NOBLE GAS EXPOSURE:

BETA AIR DOSE = 1.11E+00 MILLIRADS
GAMMA AIR DOSE = 3.84E-01 MILLIRADS

TOTAL BODY DOSE = 2.25E-01 MILLIREM
XE133 92.79%

TOTAL SKIN DOSE = 6.39E-01 MILLIREM
XE133 92.34%

CATAWBA UNIT 1 GAS DOSE 183-274 88 RELEASE WEIGHTED MET REPORT SUMMARY 02/20/89
SPECIAL LOCATION
AT 0.50 MILES ENE

IODINE, PARTICULATE, AND TRITIUM EXPOSURE SUMMARY:

MAXIMUM ORGAN - THYROID
CRITICAL AGE - CHILD
CRITICAL PATHWAY - VEGET @ 78.1%
MAXIMUM ORGAN DOSE = 3.84E-02 MILLIREM
H 3 98.07%

CATAMBA UNIT I GAS DOSE 275-366 88 RELEASE WEIGHTED MET REPORT SUMMARY 02/20/89
SPECIAL LOCATION
AT 0.50 MILES NE

NOBLE GAS EXPOSURE:

BETA AIR DOSE = 3.74E-01 MILLIRADS
GAMMA AIR DOSE = 1.46E-01 MILLIRADS

TOTAL BODY DOSE = 8.72E-02 MILLIREM
XE133 79.73%
XE135 6.08%
AR 41 10.78%

TOTAL SKIN DOSE = 2.32E-01 MILLIREM
XE133 84.55%
XE135 6.03%
AR 41 6.51%

CATAMBA UNIT 1 GAS DOSE 275-366 88 RELEASE WEIGHTED NET REPORT SUMMARY 02/20/89
SPECIAL LOCATION
AT 0.50 MILES ENE

IODINE, PARTICULATE, AND TRITIUM EXPOSURE SUMMARY:

MAXIMUM ORGAN - THYROID
CRITICAL AGE - CHILD
CRITICAL PATHWAY - VEGET @ 77.58%
MAXIMUM ORGAN DOSE = 2.89E-02 MILLIREM
H 3 80.36%
I 131 18.32%

CATAMBA UNIT 1 GAS DOSE 001-366 88 RELEASE WEIGHTED NET REPORT SUMMARY 02/20/89
 SPECIAL LOCATION
 AT 0.50 MILES NE

NOBLE GAS EXPOSURE:

BETA AIR DOSE = 1.66E+00 MILLIRADS
 GAMMA AIR DOSE = 6.33E-01 MILLIRADS

TOTAL BODY DOSE = 3.77E-01 MILLIREM
 XE133 81.18%
 XE135 5.57%
 AR 41 9.37%

TOTAL SKIN DOSE = 1.02E+00 MILLIREM
 XE133 84.60%
 XE135 5.42%
 AR 41 5.52%

CATAMBA UNIT 1 GAS DOSE 001-366 88 RELEASE WEIGHTED NET REPORT SUMMARY 02/20/89
SPECIAL LOCATION
AT 0.50 MILES ENE

IODINE, PARTICULATE, AND TRITIUM EXPOSURE SUMMARY:

MAXIMUM ORGAN - THYROID
CRITICAL AGE - CHILD
CRITICAL PATHWAY - VEGET @ 78.44%
MAXIMUM ORGAN DOSE = 1.42E-01 MILLIREM
H 3 70.24%
I 131 28.54%

UNIT 2

CATAWBA NUCLEAR STATION
UNIT 2
RADIOACTIVE EFFLUENT RELEASES
DATE : 02/20/89

I. LIQUID RELEASES

	UNITS	1ST QTR	2ND QTR	3RD QTR	4TH QTR	YEAR : 1988 TOTAL
1. GROSS RADIOACTIVITY						
A. TOTAL RELEASE	CURIES	1.80E-01	3.41E-02	1.41E-01	1.87E-01	5.42E-01
B. AVERAGE CONCENTRATION RELEASED	UCI/ML	6.63E-09	1.19E-09	4.44E-09	6.73E-09	4.71E-09
C. MAXIMUM CONCENTRATION RELEASED	UCI/ML	5.73E-08	6.04E-09	2.97E-08	3.48E-08	6.96E-08
2. TRITIUM						
A. TOTAL RELEASE	CURIES	5.31E+01	8.97E+01	1.13E+02	9.75E+01	3.53E+02
B. AVERAGE CONCENTRATION RELEASED	UCI/ML	1.96E-06	3.13E-06	3.56E-06	3.51E-06	3.97E-06
3. DISSOLVED NOBLE GASES						
A. TOTAL RELEASE	CURIES	6.58E-02	8.14E-03	1.25E-02	2.53E-02	1.12E-01
B. AVERAGE CONCENTRATION RELEASED	UCI/ML	2.43E-09	2.84E-10	3.95E-10	9.10E-10	9.70E-10
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	3.84E+07	4.96E+07	8.10E+07	7.67E+07	2.46E+08
6. VOLUME OF DILUTION WATER	LITERS	2.71E+10	2.87E+10	3.17E+10	2.78E+10	1.15E+11
7. RADIONUCLIDES RELEASED	CURIES					
BE-7		2.01E-04	1.69E-04	2.80E-05	0.00E+00	3.98E-04
F-18		3.38E-03	9.04E-04	1.47E-04	1.79E-03	6.22E-03
NA-24		1.39E-04	7.27E-05	8.10E-06	1.15E-04	3.34E-04
CR-51		1.91E-02	1.19E-03	3.83E-03	2.84E-02	5.25E-02
MN-54		6.24E-03	1.63E-03	5.06E-03	8.42E-03	2.14E-02
FE-55		4.39E-02	1.42E-02	9.21E-02	3.20E-02	1.82E-01
FE-59		6.38E-03	2.29E-04	5.86E-04	2.98E-03	1.02E-02
CO-57		1.88E-04	2.84E-05	1.39E-04	1.19E-04	4.75E-04
CO-58		5.47E-02	5.41E-03	1.32E-02	4.37E-02	1.17E-01
CO-60		1.14E-02	4.34E-03	1.54E-02	2.29E-02	5.41E-02
ZN-65		1.48E-04	1.49E-05	1.59E-04	8.07E-05	4.02E-04
SE-75		7.77E-05	0.00E+00	0.00E+00	0.00E+00	7.77E-05
BR-82		3.77E-05	0.00E+00	0.00E+00	0.00E+00	3.77E-05
BR-84		3.02E-05	0.00E+00	0.00E+00	0.00E+00	3.02E-05
RB-88		0.00E+00	0.00E+00	0.00E+00	3.22E-05	3.22E-05
SR-89		0.00E+00	0.00E+00	0.00E+00	6.09E-05	6.09E-05
SR-90		0.00E+00	5.34E-06	0.00E+00	8.04E-06	1.34E-05
SR-92		3.87E-06	0.00E+00	2.82E-05	2.34E-05	5.54E-05
Y-91M		9.25E-06	0.00E+00	0.00E+00	0.00E+00	9.25E-06
ZR-95		1.91E-03	2.20E-04	4.79E-04	1.51E-03	4.12E-03
NB-95		2.79E-03	3.45E-04	8.93E-04	2.48E-03	6.51E-03
NB-97		1.50E-04	2.01E-05	3.56E-04	2.81E-04	8.12E-04
NB-97M		6.51E-06	1.14E-05	0.00E+00	0.00E+00	1.80E-05
MO-99		3.58E-05	0.00E+00	0.00E+00	1.77E-05	5.35E-05
TC-99M		2.21E-04	2.36E-05	3.59E-06	8.94E-05	3.37E-04
RU-103		1.74E-05	0.00E+00	0.00E+00	2.90E-04	3.08E-04
RU-106		0.00E+00	0.00E+00	0.00E+00	5.10E-04	5.10E-04
AG-110M		4.01E-05	0.00E+00	1.79E-04	9.66E-05	3.15E-04
I-131		5.13E-03	9.38E-04	8.35E-04	2.88E-03	9.78E-03
I-132		2.93E-05	0.00E+00	4.47E-07	1.25E-04	1.54E-04
I-133		9.53E-04	2.84E-04	2.78E-04	6.80E-04	2.19E-03
I-135		3.99E-05	0.00E+00	0.00E+00	5.38E-05	9.37E-05
SB-122		8.07E-04	1.64E-06	6.23E-06	6.47E-04	1.46E-03
SB-124		5.39E-03	1.04E-04	1.40E-04	1.69E-03	7.32E-03
SB-125		1.12E-02	2.20E-03	2.76E-03	6.77E-03	2.29E-02
SN-113		3.96E-04	1.48E-05	2.55E-04	3.09E-04	9.75E-04
TE-131M		4.69E-06	0.00E+00	0.00E+00	4.87E-05	5.34E-05
CS-134		9.96E-04	5.16E-04	1.18E-03	3.23E-03	5.92E-03
CS-136		0.00E+00	0.00E+00	0.00E+00	4.28E-05	4.28E-05
CS-137		1.67E-03	8.82E-04	2.15E-03	4.54E-03	9.24E-03
CS-138		1.34E-04	0.00E+00	0.00E+00	6.53E-03	6.67E-03
BA-139		1.24E-05	0.00E+00	0.00E+00	0.00E+00	1.24E-05
BA-140		2.88E-06	0.00E+00	0.00E+00	6.00E-05	6.29E-05
LA-140		5.73E-04	1.16E-04	9.32E-05	6.58E-04	1.44E-03
CE-141		0.00E+00	0.00E+00	0.00E+00	8.99E-06	8.99E-06
CE-143		0.00E+00	0.00E+00	2.75E-06	0.00E+00	2.75E-06
W-187		2.97E-05	0.00E+00	0.00E+00	7.54E-06	3.73E-05
BI-214		3.18E-06	1.88E-05	1.89E-05	7.31E-06	4.81E-05
PB-212		3.30E-06	4.50E-06	1.14E-05	0.00E+00	1.92E-05
PB-214		6.75E-06	4.38E-05	2.57E-05	4.83E-05	1.25E-04
TL-208		1.04E-06	1.28E-06	2.24E-06	5.61E-07	5.12E-06
AC-228		1.91E-06	0.00E+00	8.94E-06	0.00E+00	1.08E-05
TH-228		1.27E-03	1.20E-04	1.94E-04	1.28E-02	1.44E-02
NP-239		0.00E+00	0.00E+00	0.00E+00	2.26E-05	2.26E-05
SC-46		8.27E-06	0.00E+00	2.08E-06	0.00E+00	1.03E-05
HF-181		1.31E-05	1.08E-06	0.00E+00	0.00E+00	1.41E-05
SB-126		1.19E-04	0.00E+00	0.00E+00	4.17E-05	1.60E-04
BR-89M		8.66E-05	0.00E+00	0.00E+00	0.00E+00	8.66E-05
AR-41		0.00E+00	0.00E+00	0.00E+00	1.06E-07	1.06E-07
KR-85M		7.37E-06	0.00E+00	5.88E-06	0.00E+00	1.32E-05
KR-88		0.00E+00	0.00E+00	8.82E-06	0.00E+00	8.82E-06
XE-131M		8.05E-05	0.00E+00	0.00E+00	8.11E-05	1.62E-04
XE-133		3.79E-02	5.32E-03	8.51E-03	1.95E-02	7.12E-02
XE-133M		1.36E-03	3.68E-05	1.03E-04	1.08E-04	1.61E-03
XE-135		2.64E-02	2.78E-03	3.87E-03	5.56E-03	3.86E-02
XE-135M		1.46E-05	0.00E+00	0.00E+00	1.98E-06	1.66E-05

02/20/89

SKIN	MAXIMUM DOSE-	6.39D-03 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	SHORE
	CO 58	6.15 %				
	CO 60	73.13 %				
	SB 125	7.47 %				
	CS 137	5.09 %				
BONE	MAXIMUM DOSE-	1.12D-01 MREM	CRITICAL AGE-	CHILD	CRITICAL PATHWAY-	FISH
	CS 134	26.93 %				
	CS 137	63.22 %				
LIVER	MAXIMUM DOSE-	1.48D-01 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	FISH
	CS 134	39.95 %				
	CS 137	50.85 %				
T. BODY	MAXIMUM DOSE-	1.01D-01 MREM	CRITICAL AGE-	ADULT	CRITICAL PATHWAY-	FISH
	CS 134	47.07 %				
	CS 137	46.69 %				
THYROID	MAXIMUM DOSE-	3.45D-02 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	FISH
	CO 60	11.53 %				
	I 131	78.40 %				
KIDNEY	MAXIMUM DOSE-	5.31D-02 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	FISH
	CO 60	7.49 %				
	CS 134	35.56 %				
	CS 137	48.63 %				
LUNG	MAXIMUM DOSE-	2.56D-02 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	FISH
	H 3	5.78 %				
	CO 60	15.53 %				
	CS 134	28.42 %				
	CS 137	39.85 %				
CI-LLI	MAXIMUM DOSE-	3.78D-01 MREM	CRITICAL AGE-	ADULT	CRITICAL PATHWAY-	FISH
	NB 95	90.35 %				

02/20/89

SKIN	MAXIMUM DOSE-	2.09D-03 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	SHORE
	CO 60	80.56 %				
	CS 137	7.77 %				
BONE	MAXIMUM DOSE-	5.23D-02 MREM	CRITICAL AGE-	CHILD	CRITICAL PATHWAY-	FISH
	CS 134	28.35 %				
	CS 137	67.75 %				
LIVER	MAXIMUM DOSE-	7.18D-02 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	FISH
	CS 134	40.32 %				
	CS 137	52.26 %				
T. BODY	MAXIMUM DOSE-	5.09D-02 MREM	CRITICAL AGE-	ADULT	CRITICAL PATHWAY-	FISH
	H 3	6.29 %				
	CS 134	45.75 %				
	CS 137	46.20 %				
THYROID	MAXIMUM DOSE-	8.95D-03 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	FISH
	H 3	26.37 %				
	CO 60	15.99 %				
	I 131	52.13 %				
KIDNEY	MAXIMUM DOSE-	2.63D-02 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	FISH
	H 3	8.96 %				
	CO 60	5.43 %				
	CS 134	35.08 %				
	CS 137	48.83 %				
LUNG	MAXIMUM DOSE-	1.30D-02 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	FISH
	H 3	18.22 %				
	CO 60	11.05 %				
	CS 134	27.48 %				
	CS 137	39.23 %				
GI-LLI	MAXIMUM DOSE-	4.97D-02 MREM	CRITICAL AGE-	ADULT	CRITICAL PATHWAY-	FISH
	H 3	6.45 %				
	NB 95	80.21 %				

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SKIN	MAXIMUM DOSE-	6.31D-03 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	SHORE
	CO 60	86.86 %				
	CS 137	5.75 %				
BONE	MAXIMUM DOSE-	1.18D-01 MREM	CRITICAL AGE-	CHILD	CRITICAL PATHWAY-	FISH
	FE 55	5.12 %				
	CS 134	26.16 %				
	CS 137	66.94 %				
LIVER	MAXIMUM DOSE-	1.58D-01 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	FISH
	CS 134	38.23 %				
	CS 137	53.05 %				
T. BODY	MAXIMUM DOSE-	1.08D-01 MREM	CRITICAL AGE-	ADULT	CRITICAL PATHWAY-	FISH
	CS 134	45.00 %				
	CS 137	48.66 %				
THYROID	MAXIMUM DOSE-	1.20D-02 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	SHORE
	H 3	22.61 %				
	CO 60	38.83 %				
	I 131	31.59 %				
KIDNEY	MAXIMUM DOSE-	5.68D-02 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	FISH
	CO 60	8.21 %				
	CS 134	33.96 %				
	CS 137	50.63 %				
LUNG	MAXIMUM DOSE-	2.85D-02 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	FISH
	H 3	6.51 %				
	FE 55	7.20 %				
	CO 60	16.33 %				
	CS 134	26.03 %				
	CS 137	39.79 %				
GI-LLI	MAXIMUM DOSE-	1.17D-01 MREM	CRITICAL AGE-	ADULT	CRITICAL PATHWAY-	FISH
	CO 60	5.33 %				
	NB 95	80.75 %				

SKIN	MAXIMUM DOSE-	1.25D-02 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	SHORE
	CO 60	74.04 %				
	CS 137	6.97 %				
	TH 228	8.69 %				
BONE	MAXIMUM DOSE-	3.46D-01 MREM	CRITICAL AGE-	CHILD	CRITICAL PATHWAY-	FISH
	CS 134	27.96 %				
	CS 137	54.83 %				
	TH 228	15.67 %				
LIVER	MAXIMUM DOSE-	4.10D-01 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	FISH
	CS 134	46.16 %				
	CS 137	49.08 %				
T. BODY	MAXIMUM DOSE-	2.89D-01 MREM	CRITICAL AGE-	ADULT	CRITICAL PATHWAY-	FISH
	CS 134	52.77 %				
	CS 137	43.72 %				
THYROID	MAXIMUM DOSE-	2.86D-02 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	FISH
	H 3	9.36 %				
	CO 60	27.49 %				
	I 131	52.03 %				
KIDNEY	MAXIMUM DOSE-	1.47D-01 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	FISH
	CO 60	5.35 %				
	CS 134	41.10 %				
	CS 137	46.94 %				
LUNG	MAXIMUM DOSE-	6.38D-02 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	FISH
	CO 60	12.31 %				
	CS 134	36.46 %				
	CS 137	42.69 %				
GI-LLI	MAXIMUM DOSE-	3.83D-01 MREM	CRITICAL AGE-	ADULT	CRITICAL PATHWAY-	FISH
	Nu 9	7.79 %				
	TH	11.35 %				

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SKIN	MAXIMUM DOSE-	2.72D-02 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	SHORE
	CO 60	77.58 %				
	CS 137	6.32 %				
BONE	MAXIMUM DOSE-	6.26D-01 MREM	CRITICAL AGE-	CHILD	CRITICAL PATHWAY-	FISH
	CS 134	27.35 %				
	CS 137	59.99 %				
	TH 228	9.42 %				
LIVER	MAXIMUM DOSE-	7.84D-01 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	FISH
	CS 134	42.63 %				
	CS 137	50.68 %				
T. BODY	MAXIMUM DOSE-	5.46D-01 MREM	CRITICAL AGE-	ADULT	CRITICAL PATHWAY-	FISH
	CS 134	49.29 %				
	CS 137	45.67 %				
THYROID	MAXIMUM DOSE-	8.27D-02 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	FISH
	H 3	11.34 %				
	CO 60	21.69 %				
	I 131	59.24 %				
KIDNEY	MAXIMUM DOSE-	2.82D-01 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	FISH
	CO 60	6.37 %				
	CS 134	37.85 %				
	CS 137	48.34 %				
LUNG	MAXIMUM DOSE-	1.31D-01 MREM	CRITICAL AGE-	TEEN	CRITICAL PATHWAY-	FISH
	H 3	7.18 %				
	CO 60	13.73 %				
	CS 134	31.46 %				
	CS 137	41.21 %				
GI-LLI	MAXIMUM DOSE-	9.09D-01 MREM	CRITICAL AGE-	ADULT	CRITICAL PATHWAY-	FISH
	NB 95	83.29 %				
	TH 228	5.20 %				

CATAWBA NUCLEAR STATION
UNIT 2
RADIOACTIVE EFFLUENT RELEASES
DATE : 02/20/89

11. AIRBORNE RELEASES						YEAR : 1988
	UNITS	1ST QTR	2ND QTR	3RD QTR	4TH QTR	TOTAL
1. TOTAL NOBLE GASES	CURIES	2.82E+02	1.32E+02	8.94E+02	2.54E+02	1.56E+03
2. TOTAL HALOGENS	CURIES	2.60E-04	8.08E-04	3.48E-05	1.15E-04	1.22E-03
3. TOTAL PARTICULATE GROSS BETA-GAMMA	CURIES	3.24E-05	2.12E-04	8.76E-05	2.96E-03	3.29E-03
4. TOTAL TRITIUM	CURIES	6.91E+00	6.50E+00	1.14E+01	5.48E+00	3.03E+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					
PARTICULATES						
F-18		4.05E-06	1.97E-04	7.50E-05	2.91E-03	3.18E-03
NA-24		1.37E-06	4.32E-09	5.29E-09	5.78E-09	1.38E-06
CR-51		6.34E-07	0.00E+00	0.00E+00	0.00E+00	6.34E-07
MN-54		1.55E-07	0.00E+00	0.00E+00	2.70E-06	2.85E-06
MN-56		8.86E-10	0.00E+00	1.08E-08	6.80E-08	7.97E-08
CO-58		1.70E-06	0.00E+00	0.00E+00	1.35E-05	1.52E-05
CO-60		1.84E-07	0.00E+00	0.00E+00	6.63E-06	6.81E-06
BR-82		1.85E-08	1.08E-07	1.38E-07	1.01E-06	1.28E-06
RB-88		2.35E-05	1.39E-05	1.20E-05	3.02E-05	7.96E-05
RB-89		1.17E-08	0.00E+00	0.00E+00	4.01E-09	1.57E-08
SR-90		0.00E+00	3.26E-07	0.00E+00	0.00E+00	3.26E-07
ZR-95		0.00E+00	0.00E+00	0.00E+00	4.15E-10	4.15E-10
NB-95		7.63E-08	0.00E+00	0.00E+00	6.58E-10	7.70E-08
TC-99M		0.00E+00	3.43E-09	0.00E+00	3.55E-10	3.79E-09
RU-106		0.00E+00	0.00E+00	0.00E+00	3.53E-08	3.53E-08
AG-108M		2.38E-09	0.00E+00	0.00E+00	0.00E+00	2.38E-09
TE-131M		1.98E-09	0.00E+00	0.00E+00	8.96E-09	1.09E-08
CS-134		3.33E-08	0.00E+00	0.00E+00	8.30E-10	3.41E-08
CS-137		5.60E-08	0.00E+00	6.49E-10	8.24E-10	5.74E-08
CS-138		4.79E-07	0.00E+00	2.07E-07	4.43E-07	1.13E-06
BA-139		1.81E-08	0.00E+00	8.41E-09	2.07E-08	4.72E-08
BA-140		0.00E+00	0.00E+00	0.00E+00	8.32E-10	8.32E-10
W-187		5.26E-08	0.00E+00	0.00E+00	0.00E+00	5.26E-08
SB-126		0.00E+00	0.00E+00	0.00E+00	1.04E-08	1.04E-08
BR-80M		7.42E-08	1.13E-07	2.05E-07	6.65E-07	1.06E-06
HALOGENS						
I-131		1.11E-04	5.45E-04	1.40E-05	9.15E-05	7.62E-04
I-132		3.80E-08	0.00E+00	9.16E-07	1.34E-06	2.30E-06
I-133		1.49E-04	2.63E-04	1.86E-05	1.97E-05	4.50E-04
I-134		0.00E+00	0.00E+00	5.31E-07	9.06E-07	1.44E-06
I-135		0.00E+00	0.00E+00	7.00E-07	1.18E-06	1.88E-06
GASES						
AR-41		5.50E-01	2.07E+00	2.00E+00	1.57E+00	5.99E+00
KR-85		5.48E-01	9.76E-01	4.65E-01	8.99E-02	2.08E+00
KR-85M		1.46E-01	3.53E-01	2.11E-01	2.13E-01	9.23E-01
KR-87		1.89E-02	5.28E-02	3.62E-02	2.27E-02	1.31E-01
KR-88		1.67E-01	4.12E-01	2.28E-01	2.26E-01	1.03E+00
XE-131M		3.82E-01	3.97E-01	1.01E+01	1.28E+00	1.22E+01
XE-133		2.76E+02	1.20E+02	8.66E+02	2.45E+02	1.51E+03
XE-133M		7.64E-01	1.87E+00	1.11E+01	1.79E+00	1.55E+01
XE-135		3.81E+00	5.82E+00	4.22E+00	4.19E+00	1.80E+01
XE-135M		0.00E+00	1.38E-03	2.69E-03	1.62E-03	5.68E-03
XE-138		1.63E-03	8.86E-04	1.09E-03	0.00E+00	3.60E-03

CATAMBA UNIT 2 GAS DOSE 001-091 88 RELEASE WEIGHTED MET REPORT SUMMARY 02/20/89
SPECIAL LOCATION
AT 0.50 MILES SSW

NOBLE GAS EXPOSURE:

BETA AIR DOSE = 2.93E-01 MILLIRADS
GAMMA AIR DOSE = 1.07E-01 MILLIRADS

TOTAL BODY DOSE = 6.34E-02 MILLIREM
XE133 87.48%
XE135 5.92%

TOTAL SKIN DOSE = 1.74E-01 MILLIREM
XE133 89.68%
XE135 5.72%

CATAMBA UNIT 2 GAS DOSE 001-091 88 RELEASE WEIGHTED NET REPORT SUMMARY 02/20/89
SPECIAL LOCATION
AT 0.50 MILES S

IODINE, PARTICULATE, AND TRITIUM EXPOSURE SUMMARY:

MAXIMUM ORGAN - THYROID
CRITICAL AGE - CHILD
CRITICAL PATHWAY - VEGET @ 78.85%
MAXIMUM ORGAN DOSE = 2.93E-02 MILLIREM
H 3 75.37%
I 131 23.04%

CATAMBA UNIT 2 GAS DOSE 092-182 88 RELEASE WEIGHTED NET REPORT SUMMARY 02/20/89
SPECIAL LOCATION
AT 0.50 MILES NE

NOBLE GAS EXPOSURE:

BETA AIR DOSE = 1.40E-01 MILLIRADS
GAMMA AIR DOSE = 7.40E-02 MILLIRADS

TOTAL BODY DOSE = 4.60E-02 MILLIREM
KR 88 8.83%
XE133 48.36%
XE135 15.32%
AR 41 25.64%

TOTAL SKIN DOSE = 1.11E-01 MILLIREM
KR 88 5.05%
XE133 56.88%
XE135 16.84%
AR 41 17.11%

CATAMBA UNIT 2 GAS DOSE 092-182 88 RELEASE WEIGHTED NET REPORT SUMMARY 02/20/89
SPECIAL LOCATION
AT 1.00 MILES NW

IODINE, PARTICULATE, AND TRITIUM EXPOSURE SUMMARY:

MAXIMUM ORGAN - THYROID
CRITICAL AGE - INFANT
CRITICAL PATHWAY - GOATMILK @ 97.89%
MAXIMUM ORGAN DOSE = 5.17E-02 MILLIREM
H 3 5.99%
I 131 93.49%

CATAWBA UNIT 2 GAS DOSE 183-274 88 RELEASE WEIGHTED NET REPORT SUMMARY 02/20/89
SPECIAL LOCATION
AT 0.50 MILES N

NOBLE GAS EXPOSURE:

BETA AIR DOSE = 1.11E+00 MILLIRADS
GAMMA AIR DOSE = 3.84E-01 MILLIRADS

TOTAL BODY DOSE = 2.25E-01 MILLIREM
XE133 92.7%

TOTAL SKIN DOSE = 6.39E-01 MILLIREM
XE133 92.34%

CATAMBA UNIT 2 GAS DOSE 183-274 88 RELEASE WEIGHTED NET REPORT SUMMARY 02/20/89
SPECIAL LOCATION
AT 0.50 MILES ENE

IODINE, PARTICULATE, AND TRITIUM EXPOSURE SUMMARY:

MAXIMUM ORGAN - THYROID
CRITICAL AGE - CHILD
CRITICAL PATHWAY - VEGET @ 78.19%
MAXIMUM ORGAN DOSE = 3.84E-02 MILLIREM
H 3 98.07%

CATAMBA UNIT 2 GAS DOSE 275-366 88 RELEASE WEIGHTED MET REPORT SUMMARY 02/20/89
SPECIAL LOCATION
AT 0.50 MILES NE

NOBLE GAS EXPOSURE:

BETA AIR DOSE = 3.74E-01 MILLIRADS
GAMMA AIR DOSE = 1.46E-01 MILLIRADS

TOTAL BODY DOSE = 8.72E-02 MILLIREM
XE133 79.73%
XE135 6.08%
AR 41 10.78%

TOTAL SKIN DOSE = 2.32E-01 MILLIREM
XE133 84.55%
XE135 6.03%
AR 41 6.51%

CATAWBA UNIT 2 GAS DOSE 275-366 88 RELEASE WEIGHTED MET REPORT SUMMARY 02/20/89
SPECIAL LOCATION
AT 0.50 MILES ENE

IODINE, PARTICULATE, AND TRITIUM EXPOSURE SUMMARY:

MAXIMUM ORGAN - THYROID
CRITICAL AGE - CHILD
CRITICAL PATHWAY - VEGET @ 77.58%
MAXIMUM ORGAN DOSE = 2.89E-02 MILLIREM
H 3 80.36%
I 131 18.32%

CATAMBA UNIT 2 GAS DOSE 001-366 88 RELEASE WEIGHTED MEY REPORT SUMMARY 02/20/89
SPECIAL LOCATION
AT 0.50 MILES NE

NOBLE GAS EXPOSURE:

BETA AIR DOSE = 1.66E+00 MILLIRADS
GAMMA AIR DOSE = 6.33E-01 MILLIRADS

TOTAL BODY DOSE = 3.77E-01 MILLIREM
XE133 81.18%
XE135 5.57%
AR 41 9.37%

TOTAL SKIN DOSE = 1.02E+00 MILLIREM
XE133 84.60%
XE135 5.42%
AR 41 5.52%

CATAMBA UNIT 2 GAS DOSE 001-366 88 RELEASE WEIGHTED MET REPORT SUMMARY 02/20/89
SPECIAL LOCATION
AT 0.50 MILES ENE

IODINE, PARTICULATE, AND TRITIUM EXPOSURE SUMMARY:

MAXIMUM ORGAN - THYROID
CRITICAL AGE - CHILD
CRITICAL PATHWAY - VEGET @ 78.44%
MAXIMUM ORGAN DOSE = 1.42E-01 MILLIREM
H 3 70.24%
I 131 28.54%

1988 METEROLOGICAL SURVEY

CATAMBA METEOROLOGICAL SURVEY TOWER DATA									
SUMMARY OF PASQUILL A									
FOR PERIOD OF 01-01-88 THRU 12-31-88									
WIND OCCURRENCES BY SECTOR + SPEED CLASS (PERCENT)									
DATE OF REPORT 02-20-89									
WIND SECTOR	1.0-3.2	3.3-5.5	5.6-7.8	7.9-10.0	10.1-12.3	12.4-14.5	14.6-16.7	16.8-19.0	19.1-21.2
SECTOR	1.0-3.2	3.3-5.5	5.6-7.8	7.9-10.0	10.1-12.3	12.4-14.5	14.6-16.7	16.8-19.0	19.1-21.2
TOTAL	1.0-3.2	3.3-5.5	5.6-7.8	7.9-10.0	10.1-12.3	12.4-14.5	14.6-16.7	16.8-19.0	19.1-21.2
360.0	00.05	00.15	00.10	00.19	00.15	00.02	00.03	00.01	00.01
-N-	00.01	00.14	00.19	00.26	00.35	00.13	00.03	00.03	00.00
-NNE-	00.02	00.09	00.24	00.30	00.17	00.06	00.03	00.00	00.00
-NE-	00.01	00.10	00.08	00.02	00.02	00.00	00.00	00.00	00.00
-ENE-	00.03	00.11	00.10	00.03	00.00	00.01	00.00	00.00	00.00
-E-	00.00	00.09	00.08	00.01	00.00	00.00	00.00	00.00	00.00
-ESE-	00.07	00.28	00.19	00.01	00.00	00.00	00.00	00.00	00.00
-SE-	00.09	00.90	00.32	00.09	00.01	00.00	00.00	00.00	00.00
-SSE-	00.09	00.79	00.41	00.09	00.02	00.00	00.00	00.00	00.00
-S-	00.06	00.52	00.43	00.50	00.11	00.00	00.00	00.00	00.00
-SSW-	00.06	00.38	00.39	00.34	00.09	00.06	00.02	00.00	00.00
-SW-	00.00	00.19	00.28	00.17	00.05	00.00	00.00	00.00	00.00
-WSW-	00.02	00.18	00.22	00.17	00.02	00.01	00.00	00.00	00.00
-W-	00.00	00.03	00.13	00.13	00.07	00.06	00.00	00.00	00.00
-WNW-	00.00	00.03	00.02	00.08	00.15	00.06	00.00	00.00	00.00
-NW-	00.02	00.05	00.17	00.10	00.03	00.05	00.05	00.03	00.00
-NNW-	00.53	00.03	00.35	002.49	001.24	000.46	000.16	000.07	000.01
CALM	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00
TOTAL	012.34	004.03	003.35	002.49	001.24	000.46	000.16	000.07	000.01

CATAMBA METEOROLOGICAL SURVEY TOWER DATA									
FOR PERIOD OF 01-01-88 THRU 12-31-88									
WIND OCCURRENCES BY SECTOR + SPEED CLASS(PERCENT)									
DATE OF REPORT 02-20-89									
WIND SPEED CLASS									
SECTOR	1.0-3.2	3.3-5.5	5.6-7.8	7.9-10.0	10.1-12.3	12.4-14.5	14.6-16.7	16.8-19.0	19.1-21.2
OF PASQUILL D	.45-1.49	1.5-2.49	2.5-3.49	3.5-4.49	4.5-5.49	5.5-6.49	6.5-7.49	7.5-8.49	8.5-9.49
360.0	00.11	00.61	00.69	00.44	00.27	00.05	00.01	00.00	00.00
-N-	00.09	00.49	01.00	00.87	00.59	00.11	00.14	00.00	00.00
22.5	00.10	00.35	01.91	02.61	00.97	00.09	00.01	00.00	00.00
-NNE-	00.06	00.23	00.32	00.54	00.26	00.10	00.05	00.01	00.00
45.0	00.14	00.24	00.22	00.07	00.00	00.01	00.02	00.00	00.00
-NE-	00.13	00.19	00.08	00.01	00.00	00.00	00.00	00.00	00.00
67.5	00.27	00.32	00.17	00.03	00.00	00.00	00.00	00.00	00.00
-ENE-	00.19	00.38	00.25	00.07	00.01	00.00	00.00	00.00	00.00
90.0	00.26	00.71	00.63	00.17	00.05	00.00	00.00	00.00	00.00
-E-	00.33	00.87	00.87	00.36	00.18	00.05	00.02	00.02	00.00
112.5	00.38	01.25	00.80	00.43	00.26	00.22	00.03	00.01	00.00
-ESE-	00.39	00.82	00.34	00.15	00.06	00.01	00.02	00.00	00.00
135.0	00.34	00.36	00.10	00.08	00.01	00.00	00.00	00.00	00.00
-SE-	00.23	00.26	00.17	00.14	00.07	00.00	00.00	00.01	00.00
157.5	00.26	00.33	00.15	00.14	00.13	00.05	00.02	00.01	00.00
-SSE-	00.18	00.43	00.25	00.16	00.11	00.08	00.03	00.00	00.00
180.0	00.46	007.84	007.95	006.27	002.97	000.77	000.36	000.21	000.01
-S-	003.46	007.84	007.95	006.27	002.97	000.77	000.36	000.21	000.01
202.5	003.46	007.84	007.95	006.27	002.97	000.77	000.36	000.21	000.01
-SSW-	003.46	007.84	007.95	006.27	002.97	000.77	000.36	000.21	000.01
225.0	003.46	007.84	007.95	006.27	002.97	000.77	000.36	000.21	000.01
-SW-	003.46	007.84	007.95	006.27	002.97	000.77	000.36	000.21	000.01
247.5	003.46	007.84	007.95	006.27	002.97	000.77	000.36	000.21	000.01
-WSW-	003.46	007.84	007.95	006.27	002.97	000.77	000.36	000.21	000.01
270.0	003.46	007.84	007.95	006.27	002.97	000.77	000.36	000.21	000.01
-W-	003.46	007.84	007.95	006.27	002.97	000.77	000.36	000.21	000.01
292.5	003.46	007.84	007.95	006.27	002.97	000.77	000.36	000.21	000.01
-WNW-	003.46	007.84	007.95	006.27	002.97	000.77	000.36	000.21	000.01
315.0	003.46	007.84	007.95	006.27	002.97	000.77	000.36	000.21	000.01
-NW-	003.46	007.84	007.95	006.27	002.97	000.77	000.36	000.21	000.01
337.5	003.46	007.84	007.95	006.27	002.97	000.77	000.36	000.21	000.01
-NNW-	003.46	007.84	007.95	006.27	002.97	000.77	000.36	000.21	000.01
CALM	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00
TOTAL	029.84	007.84	007.95	006.27	002.97	000.77	000.36	000.21	000.01

CATAMBA METEOROLOGICAL SURVEY TOWER DATA									
SUMMARY OF PASQUILL F									
FOR PERIOD OF 01-01-88 TO 02-20-89									
WIND OCCURRENCES BY SECTOR + SPEED CLASS (PERCENT)									
WIND SECTOR	1.0-3.2	3.3-5.5	5.6-7.9	7.9-10.0	10.1-12.3	12.4-14.5	14.6-16.7	16.8-19.0	19.1-21.2
SECTOR TOTAL	1.0-3.2	3.3-5.5	5.6-7.9	7.9-10.0	10.1-12.3	12.4-14.5	14.6-16.7	16.8-19.0	19.1-21.2
360.0	00.26	00.74	00.16	00.03	00.00	00.00	00.00	00.00	00.00
-N-	00.17	00.60	00.54	00.10	00.00	00.00	00.00	00.00	00.00
-NNE-	00.06	00.16	00.17	00.01	00.00	00.00	00.00	00.00	00.00
-NE-	00.05	00.03	00.02	00.01	00.01	00.02	00.00	00.00	00.00
-ENE-	00.02	00.03	00.00	00.01	00.00	00.00	00.00	00.00	00.00
-E-	00.03	00.03	00.00	00.00	00.00	00.00	00.00	00.00	00.00
-ESE-	00.18	00.13	00.15	00.03	00.01	00.00	00.00	00.00	00.00
-SE-	00.22	00.34	00.00	00.01	00.00	00.00	00.00	00.00	00.00
-SSE-	00.38	00.51	00.01	00.01	00.00	00.00	00.00	00.00	00.00
-S-	00.46	00.91	00.02	00.00	00.00	00.00	00.00	00.00	00.00
-SSW-	00.60	00.64	00.01	00.02	00.00	00.00	00.00	00.00	00.00
-SW-	00.46	00.28	00.02	00.00	00.00	00.00	00.00	00.00	00.00
-WSW-	00.39	00.31	00.01	00.00	00.00	00.00	00.00	00.00	00.00
-W-	00.26	00.32	00.02	00.01	00.00	00.00	00.00	00.00	00.00
-WNW-	00.25	00.23	00.09	00.01	00.00	00.00	00.00	00.00	00.00
-NNW-	00.20	00.44	00.10	00.00	00.00	00.00	00.00	00.00	00.00
-NW-	00.05								
CALM	003.97	005.70	001.32	000.26	000.02	000.02	000.00	000.00	000.00
TOTAL	011.29								

1988 FUEL CYCLE CALCULATIONS

1988 CATANBA FUEL CYCLE SUMMARY DAYS 001-366 02/28/89 AT 10:44

MAXIMUM TOTAL FUEL WE 0.50 MILES 2.05E+00 AGE : ADULT

MAXIMUM ORGAN ERE 0.50 MILES 3.38E+00 AGE : ADULT ORGAN : GI-TRAX

SOLID WASTE REPORT

CATAWBA - SUMMARY OF MAJOR RADIONUCLIDE COMPOSITION

<u>Types of Wastes</u>	<u>Radionuclide</u>	<u>% Abundance*</u>
1. Wastes from Liquid Systems		
A. Dewatered Secondary Resins	Co-58	4.0
	Co-60	1.1
	Cs-134	4.5
	Cs-137	7.9
	Mn-54	2.4
	I-131	58.8
	I-133	6.3
	Ba-140	3.1
	La-140	3.5
	Tc-99m	6.1
B. Dewatered Primary Resins	Co-58	15.0
	Co-60	14.7
	Cs-134	5.9
	Cs-137	11.1
	Mn-54	24.0
	Fe-55	19.2
	Ni-63	9.7
C. Evaporator Concentrates	(none shipped this period)	
D. Dewatered Mechanical Filters	H-3	3.8
	Cr-51	10.5
	Mn-54	5.9
	Co-58	23.3
	Fe-59	2.0
	Co-60	21.1
	Nb-95	2.1
	Fe-55	28.2
	Ni-63	3.1
E. Dewatered Demineralizers	(none shipped this period)	
F. Solidified Acids, Oils, Sludges	(none shipped this period)	
2. Solid Dry Waste		
A. Dry Active Waste (compacted)	(none shipped this period)	
B. Dry Active Waste (non-compacted)	(none shipped this period)	
C. Dry Active Waste (brokered)	Co-58	24.3
	Co-60	24.7
	Mn-54	9.2
	Cr-51	18.1
	Nb-95	10.5
	Zr-95	4.7
	Fe-55	7.0
	Ni-63	1.0
D. Irradiated Components	(none shipped this period)	

*Average % abundance for all shipments

CATAMBA NUCLEAR STATION
SOLID RADIOACTIVE WASTE SHIPPED TO A DISPOSAL FACILITY

REPORT PERIOD 7/1/88 THROUGH 12/31/88

I	TYPES OF WASTE SHIPPED	NUMBER OF SHIPMENTS	NUMBER OF CONTAINERS	WASTE CLASS	CONT. TYPE	BURIAL VOLUME		TOTAL ACT. Ci	EST. TOTAL ERROR %
						(ft ³)	(m ³)		
1	WASTE FROM LIQUID SYSTEMS								
	(A) Dewatered Secondary Resins	1	4	AU	STC	824.4	23.34	0.01	10
	(B) Dewatered Bead Resins	1	1	AS	HIC	205.8	5.83	593.00	10
	(C) Evaporator Concentrates	0	0	N/A	N/A	0	0	0	N/A
	(D) Dewatered Mechanical Filters	2*	2*	AS	HIC	76.1	2.15	10.88	15
	(E) Dewatered Demineralizers	0	0	N/A	N/A	0	0	0	N/A
2	(F) Solidified Oils, Acids, Sludges	0	0	N/A	N/A	0	0	0	N/A
	DRY SOLID WASTE								
	(A) Dry Active Waste (compacted)	0	0	N/A	N/A	0	0	0	N/A
	(B) Dry Active Waste (non-compac)	2*	2*	AS	HIC	164.5	4.66	0	N/A
	(C) Dry Active Waste (brokered)	---	---	AU	STC	2163.2	61.25	2.57	15
	(D) Irradiated Components	0	0	N/A	N/A	0	0	0	N/A
	TOTALS	4**	7**	---	---	3434.0	97.23	606.46	--

* denotes multiple waste stream shipments

** does not include brokered totals

SUPPLEMENTAL INFORMATION

CATAWBA NUCLEAR STATION
EFFLUENT AND WASTE DISPOSAL SUPPLEMENTAL INFORMATION

REPORT DATE: 02/20/89

PERIOD COVERED: START DAY = 001 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 CONCENTRATIONS

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

B. LIQUID EFFLUENTS - INFORMATION FOUND IN 10CFR20, APPENDIX B, TABLE II, COLUMN 2

III. AVERAGE ENERGY - NOT APPLICABLE

IV. MEASUREMENTS AND APPROXIMATIONS OF TOTAL RADIOACTIVITY

INFORMATION FOUND IN OFFSITE DOSE CALCULATION MANUAL

V. BATCH RELEASES

A. LIQUID EFFLUENT

1. $6.73E+02$ = TOTAL NUMBER OF BATCH RELEASES
2. $4.77E+04$ = TOTAL TIME(MIN.) FOR BATCH RELEASES.
3. $1.07E+04$ = MAXIMUM TIME(MIN.) FOR A BATCH RELEASE.
4. $7.09E+01$ = AVERAGE TIME(MIN.) FOR A BATCH RELEASE.
5. $2.50E+01$ = MINIMUM TIME(MIN.) FOR A BATCH RELEASE.
6. $4.08E+04$ = AVERAGE DILUTION WATER FLOW DURING RELEASES(GPM).

B. GASEOUS EFFLUENT

1. $3.70E+02$ = TOTAL NUMBER OF BATCH RELEASES.
2. $9.28E+05$ = TOTAL TIME(MIN.) FOR BATCH RELEASES.
3. $2.14E+04$ = MAXIMUM TIME(MIN.) FOR A BATCH RELEASE.
4. $2.51E+03$ = AVERAGE TIME(MIN.) FOR A BATCH RELEASE.
5. $2.00E+00$ = MINIMUM TIME(MIN.) FOR A BATCH RELEASE.

VI. ABNORMAL RELEASES

A. LIQUID

1. NUMBER OF RELEASES 1
2. TOTAL ACTIVITY RELEASED(CURIES) 0.35 Curies

B. GASEOUS

1. NUMBER OF RELEASES 1
2. TOTAL ACTIVITY RELEASED(CURIES) 7.46 Curies

ATTACHMENT II

SUMMARY OF INOPERABLE

EFFLUENT MONITORS

Equipment: EMF50, Noble Gas Activity Monitor

Out of Service for more than 30 days:

. July 1, 1988 to September 8, 1988

Why inoperability was not corrected within the time specified:

The EMF was taken out of service awaiting completion of NSM CN-50334 which is to modify waste gas system to assure the ability of controlling waste gas releases and obtaining a representative sample. Required samples were taken during this period of inoperability.

Equipment: 1EMF34, Unit 1 Steam Generator Blowdown Monitor

Out of Service for more than 30 days:

. October 19, 1988 to present

Why inoperability was not corrected within the time specified:

The EMF was taken out of service due to loss of sample flow problems. Required samples were taken during this period of inoperability.

Equipment: 1EMF31, Unit 1 Turbine Building Sump Monitor

Out of Service for more than 30 days:

. October 31, 1988 to February 24, 1989

Why inoperability was not corrected within the time specified:

The EMF was taken out of service awaiting completion of NSM CN-10412 which is to install a strainer in the 1EMF31 flushline and reorient flushline interface with the RL system.

Equipment: 2EMF34, Unit 2 Steam Generator Blowdown Monitor

Out of Service for more than 30 days:

. November 2, 1988 to present

Why inoperability was not corrected within the time specified:

The EMF was taken out of service due to loss of sample flow problems. Required samples were taken during this period of inoperability.

DUKE POWER COMPANY

P.O. BOX 33189

CHARLOTTE, N.C. 28242

HAL B. TUCKER

VICE PRESIDENT
NUCLEAR PRODUCTION

TELEPHONE
(704) 373-4531

March 1, 1989

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

Subject: Catawba Nuclear Station, Units 1 and 2
Docket Nos. 50-413 and 50-414
Semi-Annual Radioactive Release Report

Gentlemen:

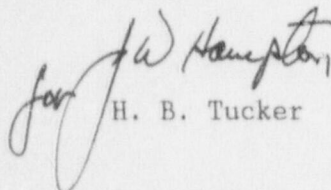
Pursuant to Catawba Nuclear Station Technical Specification 6.9.1.7, please find enclosed the Catawba Semi-Annual Radiological Environmental Operating Report for the period from July 1988 to December 1988.

Attachment I contains information regarding radioactive effluent releases, 1988 fuel cycle calculations, 1988 meteorological report, and the solid radioactive waste report. Attachment II contains information regarding the inoperability of certain effluent monitors during the report period.

Please note that no revisions were made to the Catawba Site Specific Process Control Program during the second half of 1988. However, a revision to the Duke Power Company Corporate Process Control Program was transmitted to the NRC per my November 8, 1988 letter to the Document Control Desk.

Additionally, changes to the Catawba Nuclear Station Offsite Dose Calculation Manual were transmitted to the NRC per my July 19, 1988 letter to the Document Control Desk.

Very truly yours,


H. B. Tucker

JGT/2/SARRR

Attachments

TEA 8
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U. S. Nuclear Regulatory Commission
March 1, 1989
Page 2

xc: Mr. S. D. Ebnetter
Regional Administrator, Region II
U. S. Nuclear Regulatory Commission
101 Marietta St., NW, Suite 2900
Atlanta, Georgia 30323

Mr. W. T. Orders
NRC Resident Inspector
Catawba Nuclear Station