INSTALLATION:BRUNSWICK LOCATION:20 MI S WILMINGTON, NC

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1986
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER: 1 TYPE:BWR LICENSEE:CAROLINA POWER &LIGHT
DOCKET NO.:50-325 LICENSED POWER (MWT):2436.00
COMMERCIAL OPERATION:03/18/77 INITIAL CRITICALITY:10/08/76
COOLING WATER SOURCE:CAPE FEAR RIVER
UNIT NUMBER: 2 TYPE:BWR LICENSEE:CAROLINA POWER &LIGHT
DOCKET NO.:50-324 LICENSED POWER (MWT):2436.00
COMMERCIAL OPERATION:11/03/75 INITIAL CRITICALITY:03/20/75
COOLING WATER SOURCE:CAPE FEAR RIVER

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
H-3	7.07E+00
AR-41	4.46E+01
CR-51	1.87E-02
MN-54	1.91E-03
CO-57	2.10E-07
CO-58	4.66E-04
FE-59	1.50E-04
CO-60	4.74E-03
ZN-65	6.37E-05
KR-85M	1.01E+01
KR-87	5.89E+00
KR-88	1.28E+01
SR-89	1.71E-03
SR-90	8.67E-06
NB-95	1.90E-06
AG-110M	4.19E-05
I-131	1.52E-02
I-132	4.33E-02
I-133	6.18E-02
XE-133	2.24E+04
XE-133M	~~1.89E+03~~ 9.67E+02
CS-134	1.22E-04
I-135	5.20E-02
XE-135	2.12E+04
XE-135M	6.69E+01
CS-137	6.97E-04
XE-137	2.81E+02
XE-138	1.34E+02
BA-140	1.99E-03
BA-LA-140	3.04E-04
LA-140	1.39E-03
CE-144	1.68E-05

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
NA-24	1.16E-03
AR-41	2.59E-05
CR-51	2.95E-02
MN-54	1.74E-02
FE-55	2.76E-02

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

INSTALLATION:BRUNSWICK LOCATION:20 MI S WILMINGTON, NC

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1986
AIRBORNE AND LIQUID EFFLUENTS

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
MN-56	7.08E-05
CO-58	1.50E-03
FE-59	2.98E-04
CO-60	3.64E-02
ZN-65	2.39E-05
AS-76	3.38E-04
KR-85	5.16E-04
KR-87	8.88E-06
SR-90	6.99E-05
Y-91M	1.P3E-05
SR-92	6.93E-05
Y-92	1.19E-04
NB-95	4.07E-06
NB-95M	4.54E-06
NB-97	3.51E-04
TC-99M	6.53E-05
RU-103	2.65E-05
TC-104	1.17E-05
RU-105	7.00E-05
AG-110M	1.95E-04
I-131	5.72E-04
I-133	3.78E-04
XE-133	1.35E-02
XE-133M	3.18E-04
CS-134	1.36E-03
XE-135	3.22E-02
XE-135M	1.90E-05
CS-137	8.12E-03
LA-140	1.49E-05
CE-141	3.11E-06
CE-144	1.42E-05
W-187	1.76E-05

TOTAL AIRBORNE TRITIUM RELEASE	7.07E+00
TOTAL LIQUID TRITIUM RELEASE	5.78E+00

VOLUME OF LIQUID WASTE RELEASED (PRIOR TO DILUTION)	LITERS	1.88E+07
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	7.00E+10

N/A=NOT APPLICABLE
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INSTALLATION:BRUNSWICK

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1986
SOLID EFFLUENTS

SOLID WASTE DISPOSITION

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
82	SOLE USE	BARNWELL SC
5	SOLE USE	RICHLAND WA

ESTIMATE OF MAJOR NUCLIDE COMPOSITION(BY TYPE OF WASTE)		JAN-JUNE	JULY-DEC
A			
CO-58	%	1.20E+00	3.12E+00
CO-60	%	4.38E+01	3.45E+01
CR-51	%	1.09E+00	1.02E+01
CS-137	%	4.01E+00	3.94E+00
FE-55	%	2.95E+01	2.72E+01
MN-54	%	1.56E+01	1.67E+01
NI-63	%	2.82E+00	2.34E+00
B			
CO-60	%	2.90E+01	4.12E+01
CS-137	%	4.68E+00	5.35E+00
FE-55	%	5.50E+01	4.23E+01
MN-54	%	7.55E+00	5.82E+00
NI-63	%		9.98E-01
SR-89	%	2.09E+00	2.80E+00
D			
CO-60	%		2.78E+01
FE-55	%		4.47E+01
PU-241	%		4.65E+00
SR-89	%		1.41E+01
SR-90	%		8.64E+00

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR BOTTOMS, ETC.	M3	3.26E+02
	CI	1.81E+03
B. DRY COMPRESSIBLE WASTE, CONTAMINATED EQUIPMENT, ETC.	M3	5.88E+02
	CI	3.28E+01
C. IRRADIATED COMPONENTS, CONTROL RODS, ETC.	M3	
	CI	
D. OTHER SOLIDIFIED OIL	M3	8.30E+00
	CI	87E-02

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INSTALLATION-BRUNSWICK LOCATION 20 MI S WILMINGTON, NC

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT FOR 1986
SUPPLEMENTAL INFORMATION

UNIT NUMBER 1 TYPE BWR
DOCKET NO. 50-325
COMMERCIAL OPERATION 03/18/77
COOLING WATER SOURCE CAPE FEAR RIVER

LICENSEE CAROLINA POWER &LIGHT
LICENSED POWER (MWT) 2436.
INITIAL CRITICALITY 10/08/76

UNIT NUMBER 2 TYPE BWR
DOCKET NO. 50-324
COMMERCIAL OPERATION 11/03/75
COOLING WATER SOURCE CAPE FEAR RIVER

LICENSEE CAROLINA POWER &LIGHT
LICENSED POWER (MWT) 2436.
INITIAL CRITICALITY 03/20/75

MAXIMUM PERMISSIBLE CONCENTRATIONS(MICROCURIES/ML)

MEASUREMENTS AND APPROXIMATIONS OF TOTAL RADIOACTIVITY

FISSION AND ACTIVATION GASES
ANALYSIS FOR SPECIFIC RADIONUCLIDES IN REPRESENTATIVE GRAB SAMPLES AND PARTICULATE FILTER BY GAMMA SPECTROSCOPY

IODINES
ANALYSIS FOR SPECIFIC RADIONUCLIDES COLLECTED ON CHARCOAL CARTRIDGES BY GAMMA SPECTROSCOPY

PARTICULATES
ANALYSIS FOR SPECIFIC RADIONUCLIDES COLLECTED ON FILTER PAPERS BY GAMMA SPECTROSCOPY

LIQUID EFFLUENTS
ANALYSIS FOR SPECIFIC RADIONUCLIDES BY INDIVIDUAL RELEASES AND COMPOSITE SAMPLE BY GAMMA SPECTROSCOPY

INSTALLATION-BRUNSWICK LOCATION 20 MI S WILMINGTON, NC

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT FOR 1986

SUPPLEMENTAL INFORMATION

AVERAGE ENERGY(MEV/DISINTEGRATION)

	FIRST SIX MONTHS
BETA	
GAMMA	

	FIRST SIX MONTHS
BATCH RELEASES	
A. LIQUID	
1. NUMBER OF BATCH RELEASES-	134
2. TOTAL TIME PERIOD FOR BATCH RELEASES(MIN)-	1.37E 4
3. MAXIMUM TIME PERIOD FOR A BATCH RELEASE(MIN)-	2.09E 2
4. AVERAGE TIME PERIOD FOR BATCH RELEASES(MIN)-	1.02E 2
5. MINIMUM TIME PERIOD FOR A BATCH RELEASE(MIN)-	1.00E 0
6. AVERAGE STREAM FLOW DURING PERIODS OF RELEASE OF EFFLUENT INTO A FLOWING STREAM(LTS/MIN)-	1.66E 6
B. GASEOUS	
1. NUMBER OF BATCH RELEASES-	0
2. TOTAL TIME PERIOD FOR BATCH RELEASES(MIN)-	0.00E 0
3. MAXIMUM TIME PERIOD FOR A BATCH RELEASE(MIN)-	0.00E 0
4. AVERAGE TIME PERIOD FOR BATCH RELEASES(MIN)-	0.00E 0
5. MINIMUM TIME PERIOD FOR A BATCH RELEASE(MIN)-	0.00E 0
ABNORMAL RELEASES	
A. LIQUID	
1. NUMBER OF RELEASES	0
2. TOTAL ACTIVITY RELEASED(CURIES)	0.00E 0
B. GASEOUS	
1. NUMBER OF RELEASES	1
2. TOTAL ACTIVITY RELEASES(CURIES)	1.20E- 5

N/D=NOT DETECTABLE N/A=NOT APPLICABLE

INSTALLATION-BRUNSWICK LOCATION 20 MI S WILMINGTON, NC

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT FOR 1986

SUPPLEMENTAL INFORMATION

AVERAGE ENERGY(MEV/DISINTEGRATION)

	SECOND SIX MONTHS
BETA	
GAMMA	

	SECOND SIX MONTHS
BATCH RELEASES	
A. LIQUID	
1. NUMBER OF BATCH RELEASES-	148
2. TOTAL TIME PERIOD FOR BATCH RELEASES(MIN)-	1.76E 4
3. MAXIMUM TIME PERIOD FOR A BATCH RELEASE(MIN)-	1.62E 2
4. AVERAGE TIME PERIOD FOR BATCH RELEASES(MIN)-	1.19E 2
5. MINIMUM TIME PERIOD FOR A BATCH RELEASE(MIN)-	1.30E 1
6. AVERAGE STREAM FLOW DURING PERIODS OF RELEASE OF EFFLUENT INTO A FLOWING STREAM(LTS/MIN)-	2.83E 6
B. GASEOUS	
1. NUMBER OF BATCH RELEASES-	0
2. TOTAL TIME PERIOD FOR BATCH RELEASES(MIN)-	0.00E 0
3. MAXIMUM TIME PERIOD FOR A BATCH RELEASE(MIN)-	0.00E 0
4. AVERAGE TIME PERIOD FOR BATCH RELEASES(MIN)-	0.00E 0
5. MINIMUM TIME PERIOD FOR A BATCH RELEASE(MIN)-	0.00E 0
ABNORMAL RELEASES	
A. LIQUID	
1. NUMBER OF RELEASES	0
2. TOTAL ACTIVITY RELEASED(CURIES)	0.00E 0
B. GASEOUS	
1. NUMBER OF RELEASES	0
2. TOTAL ACTIVITY RELEASES(CURIES)	0.00E 0

N/D-NOT DETECTABLE N/A-NOT APPLICABLE

INSTALLATION=BRUNSWICK

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR 1986
GASEOUS EFFLUENTS - SUMMATION OF ALL RELEASES

	UNIT	QUARTER 1	QUARTER 2	EST TOTAL ERROR %
A.FISSION AND ACTIVATION GASES				
1. TOTAL RELEASE	CI	6.70E 3	1.39E 4	4.00E 1
2. AVERAGE RELEASE RATE FOR PERIOD	UCI/SEC	8.67E 2	1.77E 3	
3. PERCENT OF TECHNICAL SPECIFICATION LIMIT	%	1.51E- 1	2.18E- 1	
B. IODINES				
1. TOTAL IODINE-131	CI	8.03E- 5	3.97E- 4	4.00E 1
2. AVERAGE RELEASE RATE FOR PERIOD	UCI/SEC	1.03E- 5	5.05E- 5	
3. PERCENT OF TECHNICAL SPECIFICATION LIMIT	%			
C. PARTICULATES				
1. PARTICULATES WITH HALF-LIVES >8 DAYS	CI	2.92E- 3	4.51E- 3	
2. AVERAGE RELEASE RATE FOR PERIOD	UCI/SEC	3.75E- 4	5.73E- 4	
3. PERCENT OF TECHNICAL SPECIFICATION LIMIT	%			
4. GROSS ALPHA RADIOACTIVITY	CI	5.56E- 5	6.52E- 5	
D. TRITIUM				
1. TOTAL RELEASE	CI	1.44E 0	1.51E 0	
2. AVERAGE RELEASE RATE FOR PERIOD	UCI/SEC	1.85E- 1	1.92E- 1	
3. PERCENT OF TECHNICAL SPECIFICATION LIMIT	%			

N/D=NOT DETECTABLE

N/A=NOT APPLICABLE

INSTALLATION-BRUNSWICK

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR 1986
GASEOUS EFFLUENTS - SUMMATION OF ALL RELEASES

	UNIT	QUARTER 3	QUARTER 4	EST TOTAL ERROR %
A.FISSION AND ACTIVATION GASES				
1. TOTAL RELEASE	CI	1.34E 4	1.11E 4	1.15E 2
2. AVERAGE RELEASE RATE FOR PERIOD	UCI/SEC	1.68E 3	1.40E 3	
3. PERCENT OF TECHNICAL SPECIFICATION LIMIT	%	5.19E- 1	3.76E- 1	
B. IODINES				
1. TOTAL IODINE-131	CI	* 8.89E- 3	5.24E- 3	7.00E 1
2. AVERAGE RELEASE RATE FOR PERIOD	UCI/SEC	1.12E- 3	6.59E- 4	
3. PERCENT OF TECHNICAL SPECIFICATION LIMIT	%			
C. PARTICULATES				
1. PARTICULATES WITH HALF-LIVES >8 DAYS	CI	9.36E- 3	1.55E- 2	7.00E 1
2. AVERAGE RELEASE RATE FOR PERIOD	UCI/SEC	1.18E- 3	1.95E- 3	
3. PERCENT OF TECHNICAL SPECIFICATION LIMIT	%			
4. GROSS ALPHA RADIOACTIVITY	CI	7.96E- 5	7.20E- 5	
D. TRITIUM				
1. TOTAL RELEASE	CI	1.99E 0	2.13E 0	7.00E 1
2. AVERAGE RELEASE RATE FOR PERIOD	UCI/SEC	2.50E- 1	2.68E- 1	
3. PERCENT OF TECHNICAL SPECIFICATION LIMIT	%			

N/D-NOT DETECTABLE

N/A-NOT APPLICABLE

INSTALLATION-BRUNSWICK

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR 1986
GASEOUS EFFLUENTS-ELEVATED RELEASE

		CONTINUOUS MODE		BATCH MODE	
NUCLIDES RELEASED	UNIT	QUARTER 1	QUARTER 2	QUARTER 1	QUARTER 2
FISSION GASES					
H-3	CI	9.10E-2	2.03E-1		
AR-41	CI	2.43E-2	1.24E-1		
KR-85M	CI	1.31E-1	1.17E-0		
KR-87	CI	6.29E-1	1.46E-0		
KR-88	CI	4.18E-1	4.27E-1		
XE-135	CI	6.15E-1	2.09E-0		
XE-135M	CI	2.82E-0	7.39E-0		
XE-137	CI	1.79E-1	7.08E-1		
XE-138	CI	8.37E-0	3.47E-1		
IODINES					
I-131	CI	7.04E-4	3.20E-4		
I-132	CI	N/D	9.79E-4		
I-133	CI	1.12E-4	2.27E-3		
I-135	CI	N/D	2.59E-3		
PARTICULATES					
CR-51	CI	5.09E-5	1.76E-4		
MN-54	CI	3.58E-5	3.97E-5		
CO-58	CI	1.43E-5	2.14E-7		
CO-60	CI	2.68E-4	2.22E-4		
SR-89	CI	1.21E-5	9.29E-5		
SR-90	CI	2.19E-7	7.64E-7		
CS-134	CI	8.69E-6	2.67E-5		
CS-137	CI	5.53E-5	1.56E-4		
BA-140	CI	N/D	7.71E-5		
LA-140	CI	N/D	3.80E-5		

INSTALLATION=BRUNSWICK

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR 1986
GASEOUS EFFLUENTS-ELEVATED RELEASE

NUCLIDES RELEASED	UNIT	CONTINUOUS MODE QUARTER 3	CONTINUOUS MODE QUARTER 4	BATCH MODE QUARTER 3	BATCH MODE QUARTER 4
FISSION GASES					
H-3	CI	7.06E- 1	3.70E- 1		
AR-41	CI	1.89E 1	1.33E 1		
KR-85M	CI	5.35E 0	2.67E 0		
KR-87	CI	4.51E- 1	3.35E 0		
KR-88	CI	3.06E 0	5.34E 0		
XE-133	CI	3.96E 0	9.94E 0		
XE-135	CI	5.63E 0	4.36E 1		
XE-135M	CI	1.64E 1	3.78E 1		
XE-137	CI	9.26E 1	9.96E 1		
XE-138	CI	4.16E 1	4.91E 1		
IODINES					
I-131	CI	5.57E- 3	3.26E- 3		
I-132	CI	8.11E- 3	6.07E- 3		
I-133	CI	1.80E- 2	1.17E- 2		
I-135	CI	1.06E- 2	7.60E- 3		
PARTICULATES					
CR-51	CI	1.41E- 4	3.92E- 4		
MN-54	CI	3.36E- 5	3.60E- 5		
CO-58	CI	5.90E- 6	1.17E- 5		
CO-60	CI	5.93E- 5	5.10E- 5		
SR-89	CI	5.17E- 4	9.56E- 4		
SR-90	CI	1.96E- 6	3.67E- 6		
CS-137	CI	1.27E- 5	2.61E- 5		
BA-140	CI	6.80E- 4	1.23E- 3		
LA-140	CI	4.83E- 4	8.71E- 4		

INSTALLATION-BRUNSWICK

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR 1986
GASEOUS EFFLUENTS-GROUND RELEASE

		CONTINUOUS MODE		BATCH MODE	
NUCLIDES RELEASED	UNIT	QUARTER 1	QUARTER 2	QUARTER 1	QUARTER 2
FISSION GASES					
H-3	CI	1.35E Ø	1.31E Ø		
KR-85M	CI	4.45E- 1	2.28E- 1		
KR-88	CI	2.11E Ø	1.ØØE Ø		
XE-133	CI	4.89E 3	1.Ø9E 4		
XE-133M	CI	2.42E 2	6.22E 2		
XE-135	CI	1.54E 3	2.29E 3		
XE-135M	CI	1.97E Ø	1.Ø1E Ø		
IODINES					
I-131	CI	9.93E- 6	7.73E- 5		
I-133	CI	2.4ØE- 5	4.6ØE- 4		
PARTICULATES					
CR-51	CI	7.61E- 4	1.Ø2E- 3		
MN-54	CI	2.84E- 4	6.48E- 4		
CO-57	CI	2.1ØE- 7	N/D		
CO-58	CI	3.45E- 5	4.33E- 5		
FE-59	CI	1.36E- 5	5.2ØE- 5		
CO-6Ø	CI	1.17E- 3	1.58E- 3		
SR-89	CI	3.29E- 6	1.87E- 5		
SR-9Ø	CI	4.36E- 7	7.41E- 7		
NB-95	CI	N/D	1.9ØE- 6		
CS-134	CI	2.63E- 5	6.Ø4E- 5		
CS-137	CI	1.65E- 4	2.54E- 4		
CE-144	CI	1.68E- 5	N/D		

INSTALLATION-BRUNSWICK

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR 1986
GASEOUS EFFLUENTS-GROUND RELEASE

NUCLIDES RELEASED	UNIT	CONTINUOUS MODE QUARTER 3	CONTINUOUS MODE QUARTER 4	BATCH MODE QUARTER 3	BATCH MODE QUARTER 4
FISSION GASES					
H-3	CI	1.28E 0	1.76E 0		
KR-85M	CI	7.59E- 2	N/D		
KR-88	CI	3.60E- 1	N/D		
XE-133	CI	2.34E 3	4.23E 3		
XE-133M	CI	~~1.03E 3~~	~~N/D~~ 1.03E 2		
XE-135	CI	1.07E 4	6.60E 3		
XE-135M	CI	3.36E- 1	N/D		
IODINES					
I-131	CI	3.32E- 3	1.98E- 3		
I-132	CI	1.67E- 2	1.14E- 2		
I-133	CI	1.79E- 2	1.13E- 2		
I-135	CI	2.02E- 2	1.39E- 2		
PARTICULATES					
CR-51	CI	6.02E- 3	1.01E- 2		
MN-54	CI	3.58E- 4	4.77E- 4		
CO-58	CI	1.24E- 4	2.32E- 4		
FE-59	CI	N/D	8.44E- 5		
CO-60	CI	5.54E- 4	8.38E- 4		
ZN-65	CI	N/D	6.37E- 5		
SR-89	CI	6.97E- 5	4.38E- 5		
SR-90	CI	6.39E- 7	2.36E- 7		
AG-110M	CI	4.19E- 5	N/D		
CS-137	CI	7.88E- 6	1.96E- 5		
BA-LA-140	CI	2.47E- 4	5.70E- 5		

INSTALLATION=BRUNSWICK

EFFLUENT AND WASTE DISPOSAL REPORT FOR 1986
LIQUID EFFLUENTS - SUMMATION OF ALL RELEASES

	UNIT	QUARTER 1	QUARTER 2	EST TOTAL ERROR %
A. FISSION AND ACTIVATION PRODUCTS				
1. TOTAL RELEASE (NOT INCLUDING TRITIUM, GASES,ALPHA)	CI	3.39E- 2	4.89E- 2	3.5ØE 1
2. AVERAGE DILUTED CONCENTRATION DURING PERIOD	UCI/ML	4.81E- 9	3.13E- 9	
3. PERCENT OF APPLICABLE LIMIT	%	1.28E- 1	8.6ØE- 2	
B. TRITIUM				
1. TOTAL RELEASE	CI	1.36E Ø	1.27E Ø	3.5ØE 1
2. AVERAGE DILUTED CONCENTRATION DURING PERIOD	UCI/ML	1.93E- 7	8.14E- 8	
3. PERCENT OF APPLICABLE LIMIT	%	6.43E- 3	2.71E- 3	
C. DISSOLVED AND ENTRAINED GASES				
1. TOTAL RELEASE	CI	7.42E- 4	1.45E- 3	3.5ØE 1
2. AVERAGE DILUTED CONCENTRATION DURING PERIOD	UCI/ML	1.Ø5E-1Ø	9.29E-11	
3. PERCENT OF APPLICABLE LIMIT	%	5.25E- 4	4.65E- 5	
D. GROSS ALPHA RADIOACTIVITY				
1. TOTAL RELEASE	CI	7.83E- 4	3.79E- 4	1.5ØE 1
E. VOLUME OF WASTE RELEASED(PRIOR TO DILUTION)	LITERS	3.99E 6	4.28E 6	1.25E 1
F. VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	7.Ø5E 9	1.56E 1Ø	1.3ØE 1

N/D=NOT DETECTABLE

N/A=NOT APPLICABLE

INSTALLATION=BRUNSWICK

EFFLUENT AND WASTE DISPOSAL REPORT FOR 1986
LIQUID EFFLUENTS - SUMMATION OF ALL RELEASES

	UNIT	QUARTER 3	QUARTER 4	EST TOTAL ERROR %
A. FISSION AND ACTIVATION PRODUCTS				
1. TOTAL RELEASE (NOT INCLUDING TRITIUM, GASES,ALPHA)	CI	1.81E- 2	2.50E- 2	3.50E 1
2. AVERAGE DILUTED CONCENTRATION DUPING PERIOD	UCI/ML	9.10E-10	9.12E-10	
3. PERCENT OF APPLICABLE LIMIT	%	2.00E- 2	2.50E- 2	
B. TRITIUM				
1. TOTAL RELEASE	CI	7.51E- 1	2.40E 0	4.00E 1
2. AVERAGE DILUTED CONCENTRATION DURING PERIOD	UCI/ML	3.77E- 8	8.76E- 8	
3. PERCENT OF APPLICABLE LIMIT	%	1.25E- 3	2.92E- 3	
C. DISSOLVED AND ENTRAINED GASES				
1. TOTAL RELEASE	CI	5.10E- 3	3.92E- 2	3.50E 1
2. AVERAGE DILUTED CONCENTRATION DUPING PERIOD	UCI/ML	2.56E-10	1.43E- 9	
3. PERCENT OF APPLICABLE LIMIT	%	1.28E- 4	7.15E- 4	
D. GROSS ALPHA RADIOACTIVITY				
1. TOTAL RELEASE	CI	1.54E- 3	0.00E 0	4.00E 1
E. VOLUME OF WASTE RELEASED(PRIOR TO DILUTION)	LITERS	3.71E 6	6.80E 6	1.25E 1
F. VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	1.99E 10	2.74E 10	1.30E 1

N/D=NOT DETECTABLE

N/A=NOT APPLICABLE

NSTALLATION-BRUNSWICK

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT FOR 1986
LIQUID EFFLUENTS

UCLIDES RELEASED	UNIT	CONTINUOUS MODE QUARTER 1	CONTINUOUS MODE QUARTER 2	BATCH MODE QUARTER 1	BATCH MODE QUARTER 2
A-24	CI			1.15E- 3	N/D
R-51	CI			3.78E- 3	8.47E- 3
N-54	CI			4.88E- 3	6.75E- 3
E-55	CI			1.14E- 2	1.07E- 2
O-58	CI			6.27E- 4	4.15E- 4
E-59	CI			1.42E- 4	3.49E- 5
O-60	CI			9.90E- 3	1.82E- 2
N-65	CI			1.63E- 5	7.60E- 6
S-76	CI			2.28E- 5	5.32E- 5
R-90	CI			1.30E- 5	4.75E- 6
R-92	CI			5.17E- 6	1.47E- 5
B-95	CI			4.07E- 6	N/D
B-95M	CI			N/D	4.54E- 6
B-97	CI			1.94E- 4	1.28E- 4
C-99M	CI			5.99E- 5	N/D
U-103	CI			2.65E- 5	N/D
-131	CI			N/D	2.37E- 5
-133	CI			4.89E- 5	2.99E- 5
E-133	CI			9.57E- 5	2.20E- 4
S-134	CI			2.74E- 4	6.40E- 4
E-135	CI			6.46E- 4	1.23E- 3
S-137	CI			1.38E- 3	3.42E- 3
E-141	CI			3.11E- 6	N/D
E-144	CI			1.42E- 5	N/D

/D-NOT DETECTABLE

N/A-NOT APPLICABLE

INSTALLATION-BRUNSWICK

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT FOR 1986
LIQUID EFFLUENTS

		CONTINUOUS MODE		BATCH MODE	
NUCLIDES RELEASED	UNIT	QUARTER 3	QUARTER 4	QUARTER 3	QUARTER 4
NA-24	CI			N/D	5.38E- 6
AR-41	CI			2.59E- 5	N/D
CR-51	CI			9.95E- 4	1.63E- 2
MN-54	CI			4.27E- 3	1.46E- 3
FE-55	CI			4.08E- 3	1.45E- 3
MN-56	CI			N/D	7.08E- 5
CO-58	CI			3.10E- 4	1.51E- 4
FE-59	CI			6.16E- 5	5.98E- 5
CO-60	CI			5.18E- 3	3.13E- 3
AS-76	CI			6.44E- 6	2.56E- 4
KR-85	CI			5.16E- 4	N/D
KR-87	CI			N/D	8.88E- 6
SR-90	CI			2.86E- 5	2.27E- 5
Y-91M	CI			1.83E- 5	N/D
SR-92	CI			N/D	4.94E- 5
Y-92	CI			7.04E- 5	4.90E- 5
NB-97	CI			N/D	2.91E- 5
TC-99M	CI			1.10E- 6	4.32E- 6
TC-104	CI			N/D	1.17E- 5
RU-105	CI			N/D	7.00E- 5
AG-110M	CI			K/D	1.95E- 4
I-131	CI			2.09E- 4	4.39E- 4
I-133	CI			1.40E- 4	1.59E- 4
XE-133	CI			5.62E- 4	1.26E- 2
XE-133M	CI			N/D	3.18E- 4
CS-134	CI			3.65E- 4	8.46E- 5
XE-135	CI			3.98E- 3	2.63E- 2
XE-135M	CI			1.40E- 5	5.00E- 6
CS-137	CI			2.33E- 3	9.86E- 4
LA-140	CI			N/D	1.49E- 5
W-187	CI			N/D	1.76E- 5

N/D=NOT DETECTABLE

N/A=NOT APPLICABLE

INSTALLATION=BRUNSWICK

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT FOR 1986
SOLID WASTE AND IRRADIATED FUEL SHIPMENTS

FIRST SIX MONTHS

1.SOLID WASTE SHIPPED OFFSITE FOR BURIAL OR DISPOSAL(NOT IRRADIATED

	UNIT	6-MONTH PERIOD	EST. TOTAL ERROR,%
1.TYPE OF WASTE			
A.SPENT RESINS, FILTER SLUDGES, EVAPORATOR	M3	1.62E 2	
BOTTOMS, ETC.	CI	6.49E 2	1.00E 1
B.DRY COMPRESSIBLE WASTE, CONTAMINATED	M3	3.95E 2	
EQUIPMENT, ETC.	CI	2.10E 1	1.00E 1
C.IRRADIATED COMPONENTS, CONTROL	M3		
RODS, ETC.	CI		
D.OTHER(DESCRIBE)	M3		
	CI		
2.ESTIMATE OF MAJOR NUCLIDE COMPOSITION(BY TYPE OF WASTE)			
A. CO-58	%	1.20E Ø	
CO-60	%	4.38E 1	
CR-51	%	1.09E Ø	
CS-137	%	4.01E Ø	
FE-55	%	2.95E 1	
MN-54	%	1.56E 1	
NI-63	%	2.82E Ø	
B. CO-60	%	2.90E 1	
CS-137	%	4.68E Ø	
FE-55	%	5.50E 1	
MN-54	%	7.55E Ø	
SR-89	%	2.09E Ø	

3.SOLID WASTE DISPOSITION

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
44	SOLE USE	BARNWELL

N/D=NOT DETECTABLE

N/A=NOT APPLICABLE

INSTALLATION=BRUNSWICK

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT FOR 1986
SOLID WASTE AND IRRADIATED FUEL SHIPMENTS

SECOND SIX MONTHS

A.SOLID WASTE SHIPPED OFFSITE FOR BURIAL OR DISPOSAL(NOT IRRADIATED

	UNIT	6-MONTH PERIOD	EST. TOTAL ERROR,%
1.TYPE OF WASTE			
A.SPENT RESINS, FILTER SLUDGES, EVAPORATOR	M3	1.64E 2	
BOTTOMS, ETC.	CI	1.16E 3	1.00E 1
B.DRY COMPRESSIBLE WASTE, CONTAMINATED	M3	1.93E 2	
EQUIPMENT, ETC.	CI	1.18E 1	1.00E 1
C.IRRADIATED COMPONENTS, CONTROL	M3		
RODS, ETC.	CI		
D.OTHER(DESCRIBE)	M3	8.30E 0	
SOLIDIFIED OIL	CI	5.87E- 2	1.00E 1
2.ESTIMATE OF MAJOR NUCLIDE COMPOSITION(BY TYPE OF WASTE)			
A. CO-58	%	3.12E 0	
CO-60	%	3.45E 1	
CR-51	%	1.02E 1	
CS-137	%	3.94E 0	
FE-55	%	2.72E 1	
MN-54	%	1.67E 1	
NI-63	%	2.34E 0	
B. CO-60	%	4.12E 1	
CS-137	%	5.35E 0	
FE-55	%	4.23E 1	
MN-54	%	5.82E 0	
NI-63	%	9.98E- 1	
SR-89	%	2.80E 0	
D. CO-60	%	2.78E 1	
FE-55	%	4.47E 1	
PU-241	%	4.65E 0	
SR-89	%	1.41E 1	
SR-90	%	8.64E 0	

3.SOLID WASTE DISPOSITION

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
38	SOLE USE	BARNWELL SC
5	SOLE USE	RICHLAND WA

N/D=NOT DETECTABLE

N/A=NOT APPLICABLE