

INSTALLATION ROBINSVICK

LOCATION 20 MI S WILMINGTON NC

EFFLUENT AND WASTE DISPOSAL SEMI-ANNUAL REPORT FOR YEAR 1974  
SUPPLEMENTAL INFORMATION

UNIT NUMBER 1

TYPE RWP

BUCKET NO. 50-325

COOLING WATER SOURCE CAPE FEAR RIVER

LICENSEE CAROLINA POWER & LIGHT

LICENSED POWER (MW) 2436.0

INITIAL CRITICALITY 10/08/76

UNIT NUMBER 2

TYPE RWP

BUCKET NO. 50-324

COOLING WATER SOURCE CAPE FEAR RIVER

LICENSEE CAROLINA POWER & LIGHT

LICENSED POWER (MW) 2436.0

INITIAL CRITICALITY 03/20/75

MAXIMUM PERMISSIBLE CONCENTRATIONS (MICROCURIES/ML) N/A

MEASUREMENTS AND APPROXIMATIONS OF TOTAL RADIOACTIVITY

FISSION AND ACTIVATION GASES

ANALYSIS FOR SPECIFIC RADIONUCLIDES IN REPRESENTATIVE GASE SAMPLES 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 BY GAMMA SPECTROSCOPY

8010150389

N/A=NOT APPLICABLE

N/D=NOT DETECTED

N/R=NOT REPORTED

INSTALLATION BRINSWICK

LOCATION 20 MI S WILMINGTON NC

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT FOR YEAR 1978  
 SUPPLEMENTAL INFORMATION

AVERAGE ENERGY (MEV/DISINTEGRATION)

BETA		GAMMA	
QUARTER	QUARTER	QUARTER	QUARTER
1	2	1	2
	4.35E-01		6.06E-01

BATCH RELEASES

A. LIQUID

	QUARTER	QUARTER
	1	2
1. NUMBER OF BATCH RELEASES-		280
2. TOTAL TIME PERIOD FOR BATCH RELEASE (MIN)-		3.52E 04
3. MAXIMUM TIME PERIOD FOR A BATCH RELEASE (MIN)-		2.02E 03
4. AVERAGE TIME PERIOD FOR BATCH RELEASES (MIN)-		1.26E 02
5. MINIMUM TIME PERIOD FOR A BATCH RELEASE (MIN)-		6.00E 00
6. AVERAGE STREAM FLOW DURING PERIODS OF RELEASE OF EFFLUENT INTO A FLOWING STREAM (LTS/MIN)-		N/A

B. GASEOUS

1. NUMBER OF BATCH RELEASES-	NONE
2. TOTAL TIME PERIOD FOR BATCH RELEASES (MIN)-	
3. MAXIMUM TIME PERIOD FOR A BATCH RELEASE (MIN)-	
4. AVERAGE TIME PERIOD FOR BATCH RELEASES (MIN)-	
5. MINIMUM PERIOD FOR A BATCH RELEASE (MIN)-	

ABNORMAL RELEASES

A. LIQUID

1. NUMBER OF RELEASES	NONE
2. TOTAL ACTIVITY RELEASED (CURIES)	

B. GASEOUS

1. NUMBER OF RELEASES	NONE
2. TOTAL ACTIVITY RELEASED (CURIES)	

N/A=NOT APPLICABLE  
 N/D=NOT DETECTED  
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INSTALLATION BRUNSWICK

LOCATION 20 MI S WILMINGTON NC

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT FOR YEAR 1978

SUPPLEMENTAL INFORMATION

AVERAGE ENERGY (MEV/DISINTEGRATION)

BETA		GAMMA	
QUARTER 3	QUARTER 4	QUARTER 3	QUARTER 4
4.01E-01		5.34E-01	

BATCH RELEASES

A. LIQUID

	QUARTER 3	QUARTER 4
1. NUMBER OF BATCH RELEASES-	305	
2. TOTAL TIME PERIOD FOR BATCH RELEASE (MIN)-	4.77E 04	
3. MAXIMUM TIME PERIOD FOR A BATCH RELEASE (MIN)-	3.53E 03	
4. AVERAGE TIME PERIOD FOR BATCH RELEASES (MIN)-	1.43E 02	
5. MINIMUM TIME PERIOD FOR A BATCH RELEASE (MIN)-	5.00E-01	
6. AVERAGE STREAM FLOW DURING PERIODS OF RELEASE OF EFFLUENT INTO A FLOWING STREAM (LTS/MIN)-	N/A	

B. GASEOUS

1. NUMBER OF BATCH RELEASES-	NONE
2. TOTAL TIME PERIOD FOR BATCH RELEASES (MIN)-	
3. MAXIMUM TIME PERIOD FOR A BATCH RELEASE (MIN)-	
4. AVERAGE TIME PERIOD FOR BATCH RELEASES (MIN)-	
5. MINIMUM PERIOD FOR A BATCH RELEASE (MIN)-	

ABNORMAL RELEASES

A. LIQUID

1. NUMBER OF RELEASES	NONE
2. TOTAL ACTIVITY RELEASED (CURIES)	

B. GASEOUS

1. NUMBER OF RELEASES	NONE
2. TOTAL ACTIVITY RELEASED (CURIES)	

N/A=NOT APPLICABLE

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INSTALLATION=SPRINGSWICK

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT 197A

GASEOUS EFFLUENTS-SUMMATION OF ALL RELEASES

	UNIT	QUARTER 1	QUARTER 2	EST. TOTAL ERROR, %
A. FISSION AND ACTIVATION GASES				
1. TOTAL RELEASE	CI	1.63E 04	2.07E 04	6.79E 00
2. AVERAGE RELEASE RATE FOR PERIOD	UCI/SEC	1.93E 03	2.54E 03	
3. PERCENT OF TECHNICAL SPECIFICATION LIMIT	%	1.10E 01	1.10E 01	
B. IODINES				
1. TOTAL IODINE-131	CI	8.36E-02	7.72E-02	8.00E 00
2. AVERAGE RELEASE RATE FOR PERIOD	UCI/SEC	9.87E-03	9.51E-03	
3. PERCENT OF TECHNICAL SPECIFICATION LIMIT	%	2.09E 00	1.93E 00	
C. PARTICULATES				
1. PARTICULATES WITH HALF-LIVES > 8 DAYS	CI	2.07E-02	1.59E-02	8.00E 00
2. AVERAGE RELEASE RATE FOR PERIOD	UCI/SEC	2.44E-03	1.96E-03	
3. PERCENT OF TECHNICAL SPECIFICATION LIMIT	%	1.39E 01	1.23E 01	
4. GROSS ALPHA RADIOACTIVITY	CI	7.13E-06	7.86E-07	
D. TRITIUM				
1. TOTAL RELEASE	CI	2.03E 00	1.60E 00	1.23E 01
2. AVERAGE RELEASE RATE FOR PERIOD	UCI/SEC	2.40E-01	1.97E-01	
3. PERCENT OF TECHNICAL SPECIFICATION LIMIT	%	4.34E-02	3.47E-02	

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INSTALLATION=BRUNSWICK

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT 1978

GASEOUS EFFLUENTS-SUMMATION OF ALL RELEASES

	UNIT	QUARTER 3	QUARTER 4	EST. TOTAL ERRORS
<b>A. FISSION AND ACTIVATION GASES</b>				
1. TOTAL RELEASE	CI	2.42E 04	3.02E 04	6.79E 00
2. AVERAGE RELEASE RATE FOR PERIOD	UCI/SEC	2.98E 03	3.75E 03	
3. PERCENT OF TECHNICAL SPECIFICATION LIMIT	%	1.16E 01	1.15E 01	
<b>B. IODINES</b>				
1. TOTAL IODINE-131	CI	9.30E-02	4.07E-02	8.00E 00
2. AVERAGE RELEASE RATE FOR PERIOD	UCI/SEC	1.15E-02	5.07E-03	
3. PERCENT OF TECHNICAL SPECIFICATION LIMIT	%	2.33E 00	1.02E 00	
<b>C. PARTICULATES</b>				
1. PARTICULATES WITH HALF-LIVES > 8 DAYS	CI	4.36E-02	3.19E-02	8.00E 00
2. AVERAGE RELEASE RATE FOR PERIOD	UCI/SEC	5.38E-03	3.97E-03	
3. PERCENT OF TECHNICAL SPECIFICATION LIMIT	%	2.67E 01	1.97E 01	
4. GROSS ALPHA RADIOACTIVITY	CI	1.10E-06	6.49E-07	
<b>D. IODIUM</b>				
1. TOTAL RELEASE	CI	3.46E 00	2.94E 00	1.23E 01
2. AVERAGE RELEASE RATE FOR PERIOD	UCI/SEC	4.30E-01	3.66E-01	
3. PERCENT OF TECHNICAL SPECIFICATION LIMIT	%	1.01E-02	9.22E-03	

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INSTALLATION=ROUNSWICK

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT 1978

GAS EFFLUENTS ELEVATED RELEASE

NUCLIDES RELEASED	UNIT	CONTINUOUS MODE		BATCH MODE	
		QUARTER	QUARTER	QUARTER	QUARTER
		1	2	1	2
<b>FISSION GASES</b>					
AR-41	CI	2.03E-02	2.86E-02		
KR-85	CI	<5.68E-06*	<5.68E-06*		
KR-85M	CI	6.63E-02	7.32E-02		
KR-87	CI	1.28E-03	1.35E-03		
KR-88	CI	9.54E-02	9.70E-02		
UNIDENTIFIED	CI	8.07E-02	1.12E-03		
XE-133	CI	2.80E-03	5.53E-03		
XE-133M	CI	7.74E-01	1.68E-02		
XE-135	CI	2.52E-03	2.73E-03		
XE-135M	CI	1.06E-03	1.38E-03		
XE-138	CI	2.33E-03	3.39E-03		
<b>IODINES</b>					
I-131	CI	8.32E-02	7.66E-02		
I-132	CI	3.89E-02	3.77E-02		
I-133	CI	1.62E-01	6.51E-02		
I-135	CI	1.65E-01	6.90E-02		
<b>PARTICULATES</b>					
BA-LA-140	CI	3.07E-03	1.22E-03		
CE-130	CI	2.44E-04	6.77E-05		
CE-144	CI	<1.32E-13*	<1.32E-13*		
CO-58	CI	2.61E-05	3.03E-05		
CO-60	CI	6.54E-05	5.98E-05		
CR-51	CI	5.52E-05	3.56E-04		
CS-134	CI	<1.37E-14*	2.41E-05		
CS-137	CI	6.95E-05	1.09E-04		
FE-59	CI	6.43E-05	5.21E-06		
I-131	CI	3.76E-05	2.35E-05		
MN-54	CI	1.13E-04	6.47E-05		
SR-80	CI	3.53E-04	<1.23E-13*		
SR-90	CI	9.69E-06	<5.29E-14*		
UNIDENTIFIED	CI	3.29E-04	1.57E-04		
Y-88	CI	<1.14E-14*	<1.14E-14*		
ZN-65	CI	3.55E-06	1.53E-07		
ZR-95	CI	<3.77E-14*	<3.77E-14*		

\*minimum detectable activity ( $\mu\text{Ci/ml}$ )

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INSTALLATION-BRUNSWICK

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT 1978

GAS EFFLUENTS ELEVATED RELEASE

NUCLIDES RELEASED	UNIT	CONTINUOUS MODE		BATCH MODE	
		QUARTER 3	QUARTER 4	QUARTER 3	QUARTER 4
<b>FISSIION GASES</b>					
AR-41	CI	1.07E-02	1.25E-02		
KR-85	CI	<4.91E-05*	<4.91E-05*		
KR-85M	CI	1.13E-03	1.70E-03		
KR-87	CI	2.27E-03	3.03E-03		
KR-88	CI	2.07E-03	3.06E-03		
UNIDENTIFIED	CI	1.40E-03	1.71E-03		
XE-133	CI	6.12E-03	7.21E-03		
XE-133M	CI	1.68E-02	2.23E-02		
XE-135	CI	4.84E-03	7.37E-03		
XE-135M	CI	1.51E-03	8.39E-02		
XE-138	CI	2.44E-03	1.62E-03		
<b>100 INFS</b>					
I-131	CI	8.41E-02	3.91E-02		
I-132	CI	1.58E-02	1.56E-02		
I-133	CI	5.34E-02	3.90E-02		
I-135	CI	4.25E-02	3.07E-02		
<b>PARTICULATES</b>					
HA-LA-140	CI	1.23E-03	1.35E-02		
CE-130	CI	8.62E-05	2.90E-03		
CE-144	CI	<6.80E-14*	<6.80E-14*		
CO-60	CI	1.62E-04	7.78E-05		
CO-60	CI	2.03E-04	4.07E-05		
CR-51	CI	9.29E-03	1.50E-04		
CS-134	CI	6.64E-05	1.78E-05		
CS-137	CI	1.44E-04	1.47E-04		
FE-59	CI	5.31E-05	3.70E-05		
I-131	CI	1.16E-04	3.35E-04		
MN-54	CI	3.34E-04	8.41E-05		
RA-106	CI	1.70E-05	<6.50E-14*		
SR-90	CI	7.84E-04	1.24E-04		
SR-90	CI	6.21E-05	3.29E-05		
SR-91	CI	1.07E-04	<1.77E-14*		
UNIDENTIFIED	CI	1.01E-03	1.40E-03		
Y-88	CI	1.01E-06	2.09E-04		
ZN-65	CI	1.68E-05	<2.13E-14*		
ZR-NR-95	CI	<1.76E-14*	<1.76E-14*		

\* explain on previous page

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INSTALLATION=BRINSWICK

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT 1978

GAS EFFLUENTS GROUND RELEASE

NUCLIDES RELEASED	UNIT	CONTINUOUS MODE		HATCH MODE	
		QUARTER	QUARTER	QUARTER	QUARTER
		1	2	1	2
<b>FISSION GASES</b>					
AR-41	CI	<2.51E-08*	<2.51E-08*		
KR-85	CI	<5.68E-06*	<5.68E-06*		
KR-85M	CI	<2.50E-08*	<2.50E-08*		
KR-87	CI	<3.50E-08*	<3.50E-08*		
KR-88	CI	<5.55E-08*	<5.55E-08*		
UNIDENTIFIED	CI	2.34E 02	1.92E 02		
XE-133	CI	1.02E 03	1.39E 03		
XE-133M	CI	4.80E 01	7.75E 01		
XE-135	CI	2.32E 03	1.36E 03		
XE-135M	CI	<2.71E-08*	<2.71E-08*		
XE-138	CI	<5.92E-08*	<5.92E-08*		
<b>IODINES</b>					
I-131	CI	4.00E-04	6.01E-04		
I-132	CI	3.22E-06	<2.87E-14*		
I-133	CI	6.24E-03	2.78E-04		
I-135	CI	8.80E-06	<5.81E-14*		
<b>PARTICULATES</b>					
CD-109	CI	1.49E-06	<5.24E-13*		
CE-139	CI	<1.93E-14*	<1.93E-14*		
CE-144	CI	<1.32E-13*	<1.32E-13*		
CO-57	CI	<1.78E-14*	<1.78E-14*		
CO-58	CI	9.15E-04	5.52E-04		
CO-60	CI	3.38E-03	9.67E-04		
CR-51	CI	6.35E-03	8.89E-03		
CS-134	CI	2.73E-06	7.39E-06		
CS-136	CI	<1.60E-14*	<1.60E-14*		
CS-137	CI	6.17E-05	4.23E-05		
FE-59	CI	8.09E-04	7.23E-04		
I-131	CI	9.81E-05	9.39E-05		
MN-54	CI	2.78E-03	1.39E-03		
SH-124	CI	3.58E-06	<2.70E-14*		
SN-117M	CI	<1.66E-14*	<1.66E-14*		
SR-90	CI	2.10E-05	<1.23E-13*		
SR-90	CI	3.83E-06	<5.29E-14*		
UNIDENTIFIED	CI	1.21E-03	1.02E-03		
Y-90	CI	<1.14E-14*	<1.14E-14*		
ZN-65	CI	6.39E-04	1.43E-04		
ZR-NH-95	CI	9.57E-06	2.07E-06		

\* minimum detectable activity (2001/ml)

N/A=NOT APPLICABLE  
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INSTALLATION-BRINSWICK

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT 1978

GAS EFFLUENTS GROUND RELEASE

NUCLEIDES RELEASED	UNIT	CONTINUOUS MODE		HATCH MODE	
		QUARTER	QUARTER	QUARTER	QUARTER
		3	4	3	4
<b>FISSIION GASES</b>					
AR-41	CI	<1.03E-07*	<1.03E-07*		
KR-85	CI	<4.91E-05*	<4.91E-05*		
KR-85M	CI	<1.77E-08*	<1.77E-08*		
KR-87	CI	<5.16E-08*	<5.16E-08*		
KR-88	CI	<3.96E-08*	<3.96E-08*		
UNIDENTIFIED	CI	1.40E 02	2.07E 02		
XE-133	CI	1.88E 03	2.90E 03		
XE-133M	CI	3.68E 01	3.69E 01		
XE-135	CI	1.40E 02	1.13E 02		
XE-135M	CI	<1.67E-07*	<1.67E-07*		
<b>IODINES</b>					
I-131	CI	7.68E-03	1.11E-03		
I-132	CI	<1.16E-14*	<1.16E-14*		
I-133	CI	6.36E-04	4.88E-04		
I-135	CI	<2.82E-14*	<2.82E-14*		
<b>PARTICULATES</b>					
BA-134-140	CI	1.55E-06	<6.16E-14*		
CU-109	CI	5.20E-04	2.34E-06		
CE-139	CI	<7.63E-15*	7.71E-05		
CE-144	CI	2.42E-04	<6.80E-14*		
CO-57	CI	1.97E-06	<9.35E-15*		
CO-58	CI	5.62E-04	4.16E-04		
CO-60	CI	2.07E-03	1.05E-03		
CR-51	CI	1.56E-02	7.46E-03		
CS-134	CI	2.07E-03	1.63E-04		
CS-136	CI	<1.02E-14*	<1.02E-14*		
CS-137	CI	2.98E-03	3.01E-04		
FE-59	CI	4.63E-04	2.38E-04		
I-131	CI	1.12E-03	1.81E-04		
MN-54	CI	1.80E-03	1.36E-03		
SH-124	CI	<2.54E-14*	5.47E-06		
SN-117M	CI	<6.61E-15*	<6.61E-15*		
SR-89	CI	1.98E-05	6.24E-05		
SR-90	CI	7.53E-06	1.38E-05		
UNIDENTIFIED	CI	2.22E-03	9.68E-04		
Y-88	CI	<9.32E-15*	8.19E-04		
ZN-65	CI	3.08E-04	1.06E-04		
ZR-NR-95	CI	<1.76E-14*	9.25E-06		

\* explained on previous page

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

## INSTALLATION=BRUNSWICK

## EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT 1978

## LIQUID EFFLUENTS

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NUCLIDES RELEASED	UNIT	CONTINUOUS MODE		BATCH MODE	
		QUARTER	QUARTER	QUARTER	QUARTER
		1	2	1	2
CO-57	CI			<3.49E-08*	<3.49E-08*
I-132	CI			<3.38E-08*	<3.38E-08*
I-133	CI			1.84E-04	6.75E-04
SB-122	CI			3.20E-04	2.01E-03
SB-124	CI			2.06E-04	1.45E-04
SR-85	CI			4.25E-07	5.83E-05
Y-91M	CI			8.83E-05	4.77E-05
BA-139	CI			<1.41E-07*	<1.41E-07*
CE-139	CI			<3.88E-08*	<3.88E-08*
IN-113M	CI			<4.26E-08*	5.19E-06
SN-113	CI			<2.77E-08*	3.38E-06
SN-117M	CI			<3.71E-08*	9.18E-07
TE-132	CI			2.87E-05	<5.17E-08*
W-187	CI			3.44E-04	2.64E-05
CS-134	CI			2.56E-02	3.14E-02
CS-137	CI			7.35E-02	7.88E-02
I-131	CI			1.57E-04	1.05E-02
SR-89	CI			1.68E-04	<1.64E-07*
SH-90	CI			9.58E-05	<1.25E-08*
CO-58	CI			1.91E-02	2.97E-02
CU-60	CI			5.23E-02	6.85E-02
CR-51	CI			7.02E-02	1.05E-01
FE-59	CI			1.88E-02	2.97E-02
MN-54	CI			6.99E-02	9.28E-02
ZN-65	CI			1.04E-02	8.35E-03
BA-LA-140	CI			<1.17E-07*	1.88E-05
CE-141	CI			1.12E-08	<5.81E-08*
MO-99	CI			5.54E-04	3.13E-04
TC-99M	CI			7.20E-04	1.43E-03
ZR-NR-95	CI			2.88E-03	2.19E-03
AR-41	CI			9.32E-06	2.88E-04
KR-85	CI			1.05E-04	<1.02E-05*
KR-85M	CI			<3.71E-08*	<3.71E-08*
XE-133	CI			1.82E-03	1.10E-03
XE-135	CI			8.36E-04	8.59E-04
AG-110M	CI			5.19E-04	<2.65E-08*
AS-76	CI			2.08E-03	3.84E-03
CU-64	CI			1.09E-02	<3.70E-08*
F-19	CI			4.90E-03	2.87E-02

N/A=NOT APPLICABLE

N/D=NOT DETECTED

N/R=NOT REPORTED

INSTALLATION BRUNSWICK

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT 1978

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LIQUID EFFLUENTS

NUCLIDES RELEASED	UNIT	CONTINUOUS MODE		HATCH MODE	
		QUARTER	QUARTER	QUARTER	QUARTER
		1	2	1	2
HN-57	CI			1.74E-03	<2.79E-08*
NA-24	CI			2.63E-02	3.66E-01
NB-97	CI			6.33E-04	<2.65E-08*
NI-65	CI			<6.33E-08*	1.16E-05
NP-239	CI			4.85E-04	<3.43E-07*
SR-92	CI			1.12E-04	<3.71E-08*
UNIDENTIFIED	CI			3.57E-02	7.66E-02

Y = maximum detectable activity  
 N/A=NOT APPLICABLE  
 N/D=NOT DETECTED  
 N/R=NOT REPORTED

INSTALLATION-BRUNSWICK

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT 1978

LIQUID EFFLUENTS

NUCLIDES RELEASED	UNIT	CONTINUOUS MODE		BATCH MODE	
		QUARTER	QUARTER	QUARTER	QUARTER
		3	4	3	4
CO-57	CI			<6.29E-09*	<6.29E-09*
I-132	CI			<9.74E-09*	<9.74E-09*
I-133	CI			1.77E-03	2.90E-06
I-134	CI			<2.11E-08*	5.45E-05
SH-122	CI			1.45E-03	1.05E-03
SH-124	CI			4.62E-05	2.40E-04
CE-144	CI			<5.24E-08*	<5.24E-08*
CS-138	CI			<2.05E-08*	<2.05E-08*
SH-45	CI			<2.37E-07*	<2.37E-07*
TE-129M	CI			<3.65E-07*	<3.65E-07*
Y-91H	CI			2.27E-05	2.22E-03
IN-113M	CI			<2.81E-08*	<2.81E-08*
NH-97M	CI			<2.35E-08*	<2.35E-08*
SH-113	CI			<1.83E-08*	<1.83E-08*
SH-117M	CI			<7.22E-09*	<7.22E-09*
ZR-97	CI			<2.24E-08*	<2.24E-08*
HA-139	CI			9.15E-05	<6.39E-08*
CE-139	CI			1.95E-05	<6.35E-09*
SR-91	CI			9.23E-05	7.83E-04
TC-101	CI			<1.69E-08*	<1.69E-08*
TE-132	CI			<1.72E-08*	<1.72E-08*
CS-134	CI			1.96E-02	1.16E-02
CS-137	CI			3.87E-02	1.99E-02
I-131	CI			1.90E-02	1.73E-03
SH-89	CI			9.38E-04	1.34E-03
SH-98	CI			5.20E-05	2.92E-04
CO-58	CI			3.89E-02	4.91E-02
CO-60	CI			8.52E-02	1.70E-01
CR-51	CI			3.37E-01	4.38E-01
FE-59	CI			4.12E-02	6.40E-02
MI-54	CI			1.30E-01	2.46E-01
ZR-65	CI			1.20E-02	2.07E-02
HA-LA-140	CI			<5.92E-08*	<5.92E-08*
CE-141	CI			<2.25E-08*	<2.25E-08*
MO-99	CI			2.60E-04	5.74E-05
TC-65M	CI			4.81E-03	5.45E-04
ZR-NR-95	CI			1.16E-03	7.11E-04
AR-41	CI			2.80E-03	3.55E-03
XE-131M	CI			3.58E-03	<9.49E-7*
XE-133	CI			2.04E-02	3.75E-03

H/A=NOT APPROPRIATE

H/D=NOT DETECTED

H/R=NOT REPORTED

INSTALLATION-BRINSWICK

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT 1978

LIQUID EFFLUENTS

NUCLEIDES RELEASED	UNIT	CONTINUOUS MODE		BATCH MODE	
		QUARTER	QUARTER	QUARTER	QUARTER
		3	4	3	4
XE-133 <sup>M</sup>	CI			3.29E-03	<1.78E-7*
XE-135	CI			7.83E-03	4.37E-03
AG-110 <sup>M</sup>	CI			1.20E-05	1.79E-03
AS-76	CI			9.67E-03	2.58E-04
CU-64	CI			1.25E-02	8.68E-03
F-18	CI			6.06E-03	6.71E-03
MN-54	CI			6.78E-04	3.76E-05
NA-24	CI			1.30E-01	1.21E-02
NH-97	CI			1.81E-05	3.56E-03
NJ-165	CI			<3.16E-08*	<3.16E-08*
NP-239	CI			<1.46E-07*	<1.46E-07*
SH-85	CI			<2.37E-07*	<2.37E-07*
SH-92	CI			3.49E-05	1.93E-03
UNIDENTIFIED	CI			8.10E-02	9.65E-02

*Amount detected above activity*  
 N/A=NOT APPLICABLE  
 N/D=NOT DETECTED  
 N/R=NOT REPORTED

INSTALLATION-BRINSWICK

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT 1978

LIQUID EFFLUENTS-SUMMATION OF ALL RELEASES

	UNIT	QUARTER 1	QUARTER 2	EST. TOTAL ERROR, %
<b>A. FISSION AND ACTIVATION PRODUCTS</b>				
1. TOTAL RELEASE (NOT INCLUDING TRITIUM, GASES, ALPHA)	CI	4.28E-01	9.19E-01	9.10E 00
2. AVERAGE DILUTED CONCENTRATION DURING PERIOD	UCI/ML	1.68E-08	2.13E-08	
3. PERCENT OF APPLICABLE LIMIT	%	2.14E 00	4.60E 00	
<b>B. TRITIUM</b>				
1. TOTAL RELEASE	CI	1.10E 00	6.70E 00	1.23E 01
2. AVERAGE DILUTED CONCENTRATION DURING PERIOD	UCI/ML	4.32E-08	1.55E-07	
3. PERCENT OF APPLICABLE LIMIT	%	1.44E-03	5.17E-03	
<b>C. DISSOLVED AND ENTRAINED GASES</b>				
1. TOTAL RELEASE	CI	2.77E-03	2.17E-03	9.10E 00
2. AVERAGE DILUTED CONCENTRATION DURING PERIOD	UCI/ML	1.09E-10	5.02E-11	
3. PERCENT OF APPLICABLE LIMIT	%	3.62E-03	1.67E-03	
<b>D. GROSS ALPHA RADIOACTIVITY</b>				
1. TOTAL RELEASE	CI	3.87E-05	3.23E-05	1.12E 01
<b>E. VOLUME OF WASTE RELEASED (PRIOR TO DILUTION)</b>				
	LITERS	7.67E 06	6.88E 06	5.66E 00
<b>F. VOLUME OF DILUTION WATER USED DURING PERIOD</b>				
	LITERS	2.55E 10	4.32E 10	1.10E 01

N/A=NOT APPLICABLE

N/D=NOT DETECTED

N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT 197A

LIQUID EFFLUENTS-SUMMATION OF ALL RELEASES

UNIT	QUARTER 3	QUARTER 4	EST. TOTAL FY00P.S.
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A. FISSION AND ACTIVATION PRODUCTS

1. TOTAL RELEASE (INCLUDING TRITIUM)

GASCS (ALPHA)	CI	9.72E-01	1.14E 00	9.10E 00
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2. AVERAGE DILUTED CONCENTRATION

DURING PERIOD	UCI/ML	1.94E-04	1.84E-04
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3. PERCENT OF APPLICABLE LIMIT

	%	4.86E 00	5.80E 00
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B. TRITIUM

1. TOTAL RELEASE

	CI	2.79E 00	3.54E 00	1.23E 01
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2. AVERAGE DILUTED CONCENTRATION

DURING PERIOD	UCI/ML	5.67E-04	5.68E-04
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3. PERCENT OF APPLICABLE LIMIT

	%	1.89E-03	1.89E-03
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C. DISINTEGRATED AND FRACTIONATED GASES

1. TOTAL RELEASE

	CI	3.79E-02	1.17E-02	9.10E 00
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2. AVERAGE DILUTED CONCENTRATION

DURING PERIOD	UCI/ML	7.70E-10	1.84E-10
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3. PERCENT OF APPLICABLE LIMIT

	%	2.57E-04	6.27E-03
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D. GROSS ALPHA RADIOACTIVITY

1. TOTAL RELEASE

	CI	1.73E-05	6.45E-05	1.12E 01
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E. VOLUME OF WASTE RELEASED (PRIOR TO DILUTION)

	LITERS	6.66E 06	8.01E 06	5.66E 00
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F. VOLUME OF DILUTION WATER USED DURING PERIOD

	LITERS	4.92E 10	6.23E 10	1.10E 01
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INSTALLATION= BODDUSWICK

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT 1978  
 JULY-DECEMBER

SOLID WASTE AND IRRADIATED FUEL SHIPMENTS

A. SOLID WASTE SHIPPED OFFSITE FOR HORTIAL OR DISPOSAL (NOT IRRADIATED FUEL)  
 1. TYPE OF WASTE UNIT 6-MONTH PERIOD EST. TOTAL TONS

1. TYPE OF WASTE	UNIT	6-MONTH PERIOD	EST. TOTAL TONS
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR BOTTOMS, ETC.	M3	7.51E 02	1.50E 01
B. DRY COMPRESSIBLE WASTE, CONTAMINATED EQUIPMENT, ETC.	M3	4.74E 02	2.00E 01
C. IRRADIATED COMPONENTS, CONTROL RODS, ETC.	CT	1.20E 01	1.50E 01
D. OTHER (DESCRIBE)	CT	NONE	0.00E 00

2. ESTIMATE OF MAJOR NUCLEIDE COMPOSITION (BY TYPE OF WASTE)

A + B	%	6.23E 01
CP-81	%	1.58E 01
MN-54	%	1.08E 01
CO-60	%	4.07E 00
FF-59	%	3.85E 00
CO-58	%	1.41E 00
ZN-65	%	6.79E 01
CS-134	%	4.80E 01
CS-137	%	2.51E 01
I-131	%	1.79E 01
NR-95	%	6.96E 02
ZP-95	%	4.48E 02
SR-124	%	2.38E 02
SR-92	%	3.04E 01
ZP-95	%	3.04E 01
NR-95	%	1.78E 01
CO-60	%	9.53E 00
ZN-65	%	7.85E 00
NR-95	%	3.03E 00
CO-58	%	2.08E 00

3. SOLID WASTE DISPOSITION-  
 NUMBER OF SHIPMENTS MODE OF TRANSPORTATION DESTINATION

169	TRUCK	HARWELL S.C.
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