

INSTALLATION

DRESDEN 2-3 *

LOCATION 14 MI SW JOLIET

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT FOR YEAR 1978

SUPPLEMENTAL INFORMATION

UNIT NUMBER 2

TYPE BWR

DOCKET NO. 50-237

COOLING WATER SOURCE KANKAKEE RIVER

LICENSEE COMMONWEALTH EDISON

LICENSED POWER (MWT) 2527.0

INITIAL CRITICALITY 06/09/72

UNIT NUMBER 3

TYPE BWR

DOCKET NO. 50-249

COOLING WATER SOURCE KANKAKEE RIVER

LICENSEE COMMONWEALTH EDISON

LICENSED POWER (MWT) 2527.0

INITIAL CRITICALITY 11/16/71

MAXIMUM PERMISSIBLE CONCENTRATIONS (MICROCURIES/ML)

MEASUREMENTS AND APPROXIMATIONS OF TOTAL RADIOACTIVITY

* The said waste report includes unit 1 as well as units 2+3

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Docket # 50-237

Control # 801250475

Date 11-18-80 of Document:

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801250493

INSTALLATION DRESDEN 2-3

LOCATION 14 MI SW JOLIET

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

BATCH RELEASES

QUARTER	QUARTER
1	2

A. LIQUID

1. NUMBER OF BATCH RELEASES-
2. TOTAL TIME PERIOD FOR BATCH RELEASE (MIN)-
3. MAXIMUM TIME PERIOD FOR A BATCH RELEASE (MIN)-
4. AVERAGE TIME PERIOD FOR BATCH RELEASES (MIN)-
5. MINIMUM TIME PERIOD FOR A BATCH RELEASE (MIN)-
6. AVERAGE STREAM FLOW DURING PERIODS OF RELEASE OF EFFLUENT INTO A FLOWING STREAM (LTS/MIN)-

B. GASEOUS

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

B. GASEOUS

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

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INSTALLATION DRESDEN 2-3

LOCATION 14 MI SW JOLIET

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

BATCH RELEASES

QUARTER 3	QUARTER 4
-----------	-----------

A. LIQUID

1. NUMBER OF BATCH RELEASES-
2. TOTAL TIME PERIOD FOR BATCH RELEASE (MIN)-
3. MAXIMUM TIME PERIOD FOR A BATCH RELEASE (MIN)-
4. AVERAGE TIME PERIOD FOR BATCH RELEASES (MIN)-
5. MINIMUM TIME PERIOD FOR A BATCH RELEASE (MIN)-
6. AVERAGE STREAM FLOW DURING PERIODS OF RELEASE OF EFFLUENT INTO A FLOWING STREAM (LTS/MIN)-

B. GASEOUS

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

B. GASEOUS

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

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LTR BTD 11/18/80

INSTALLATION=DRESDEN 2-3

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT 1978

GASEOUS EFFLUENTS-SUMMATION OF ALL RELEASES

	UNIT	QUARTER 1	QUARTER 2	EST. TOTAL ERROR,%
A. FISSION AND ACTIVATION GASES				
1. TOTAL RELEASE	CI	9.69E 03	1.40E 04	
2. AVERAGE RELEASE RATE FOR PERIOD	UCI/SEC			
3. PERCENT OF TECHNICAL SPECIFICATION LIMIT	%			
B. IODINES				
1. TOTAL IODINE-131	CI	1.47E-01	9.18E-02	
2. AVERAGE RELEASE RATE FOR PERIOD	UCI/SEC			
3. PERCENT OF TECHNICAL SPECIFICATION LIMIT	%			
C. PARTICULATES				
1. PARTICULATES WITH HALF-LIVES > 8 DAYS	CI	6.48E-01	4.17E-01	
2. AVERAGE RELEASE RATE FOR PERIOD	UCI/SEC			
3. PERCENT OF TECHNICAL SPECIFICATION LIMIT	%			
4. GROSS ALPHA RADIOACTIVITY	CI			
D. TRITIUM				
1. TOTAL RELEASE	CI	5.80E 01	3.90E 01	
2. AVERAGE RELEASE RATE FOR PERIOD	UCI/SEC	7.5E 00	5.00E 00	
3. PERCENT OF TECHNICAL SPECIFICATION LIMIT	%	N/A	N/A	

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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
FISSION GASES					
KR-85M	CI	2.10E 02	3.00E 02		
KR-87	CI	4.30E 01	7.30E 02 7.2E02		
KR-88	CI	4.30E 01	4.00E 02		
XE-133	CI	9.40E 01	2.30E 02		
XE-135	CI	3.50E 03	1.40E 03 2.4E03		
XE-135M	CI	9.80E 02	2.00E 02		
XE-138	CI	4.60E 03	9.60E 03		
IODINES					
I-131	CI	1.30E-01	8.20E-02		
I-133	CI	9.60E-01	7.80E-01		
I-135	CI	4.60E 01	1.30E 00		
PARTICULATES					
BA-140	CI	2.56E-01	2.01E-01		
CF-141	CI	2.12E-03			
CE-144	CI	1.02E-03			
CO-58	CI		2.40E-02 2.4E-04		
CO-60	CI	1.12E-02	1.99E-02		
CR-51	CI	1.67E-03			
CS-134	CI		5.50E-02 5.5E-04		
CS-137	CI	2.09E-03	4.46E-03		
I-131	CI	8.18E-02	1.05E-02		
MN-54	CI	9.10E-04	1.97E-03		
NB-95	CI		7.80E-04		
RU-103	CI	3.0E-04	3.00E-02 2.80E-02 2.8E-04		
SR-89	CI	1.95E-01	1.95E-02 7.48E-02		
SR-90	CI	6.40E-04	4.40E-04		
ZR-95	CI		1.05E-03		

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EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT 1978

GAS EFFLUENTS GROUND RELEASE

NUCLIDES RELEASED	UNIT	CONTINUOUS MODE		BATCH MODE	
		QUARTER	QUARTER	QUARTER	QUARTER
		1	2	1	2
FISSION GASES					
XE-133	CI	8.40E 01			
XE-135	CI	1.10E 02	1.10E 02		
IODINES					
I-131	CI	1.65E-02	9.70E-03		
I-133	CI	5.40E-02	6.00E-02		
I-135	CI	5.90E-02	4.20E-02		
PARTICULATES					
AG-110M	CI	5.00E-05	7.00E-05		
BA-140	CI	1.20E-02	5.89E-03		
CE-141	CI	9.60E-04	1.50E-04		
CE-144	CI	1.43E-03	5.10E-04		
CO-58	CI	1.50E-03	1.54E-03		
CO-60	CI	2.80E-02	4.60E-02		
CR-51	CI	1.02E-02	1.20E-02		
CS-134	CI	1.01E-03	1.30E-03		
CS-137	CI	1.47E-03	3.23E-03 3.73 E-03		
FE-59	CI	6.40E-04	4.90E-04		
I-131	CI	1.01E-02	1.43E-02		
LA-140	CI	1.27E-02	5.44E-03		
MN-54	CI	5.05E-03	5.76E-03		
NB-95	CI	9.10E-04	7.20E-04		
RU-103	CI	1.40E-03	7.40E-04		
SR-89	CI	7.06E-03	1.85E-03		
SR-90	CI	9.00E-05	1.90E-04		
ZR-95	CI	9.00E-04	1.60E-04		

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INSTALLATION=DRESDEN 2-3

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT 1978

LIQUID EFFLUENTS

NUCLIDES RELEASED	UNIT	CONTINUOUS MODE		BATCH MODE	
		QUARTER	QUARTER	QUARTER	QUARTER
		1	2	1	2
CS-134	CI	6.04E-03	1.11E-03		
CS-137	CI		1.37E-02		
I-131	CI	4.34E-03			
SR-89	CI	9.77E-02	2.30E-04		
SR-90	CI	2.14E-03	1.48E-03		
CO-58	CI		3.69E-03		
CO-60	CI	2.42E-02	8.67E-02		
CR-51	CI	9.08E-02			
FE-59	CI	3.24E-03			
MN-54	1.93E-03 CI	0.93E-02	1.39E-02		
CE-141	CI	1.14E-02			
NB-95	CI		4.58E-03		
ZR-95	CI		5.42E-03		
CE-144	CI		3.08E-03		
RU-103	CI	5.57E-03	4.00E-03		

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EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT 1978

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	2.50E-01	1.40E-01	
2. AVERAGE DILUTED CONCENTRATION DURING PERIOD	2.4E-09 UCI/ML	2.70E-09	3.20E-09	4.2E-09
3. PERCENT OF APPLICABLE LIMIT	2.4E00 %	2.70E-09	3.20E-09	4.2E00
B. TRITIUM				
1. TOTAL RELEASE	CI	8.00E 00	1.10E 01	
2. AVERAGE DILUTED CONCENTRATION DURING PERIOD	7.8E-08 UCI/ML	1.00E-07	2.40E-07	3.3E-07
3. PERCENT OF APPLICABLE LIMIT	%	N/A	N/A	
C. DISSOLVED AND ENTRAINED GASES				
1. TOTAL RELEASE	CI	0.00E 00	0.00E 00	
2. AVERAGE DILUTED CONCENTRATION DURING PERIOD	UCI/ML			
3. PERCENT OF APPLICABLE LIMIT	%			
D. GROSS ALPHA RADIOACTIVITY				
1. TOTAL RELEASE	CI	2.20E-04	2.20E-03	
E. VOLUME OF WASTE RELEASED (PRIOR TO DILUTION)				
	LITERS	1.40E 06	2.00E 06	
F. VOLUME OF DILUTION WATER USED DURING PERIOD				
	LITERS	1.00E 11	3.30E 10	

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INSTALLATION= DRESDEN 2-3

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT 1978
(JANUARY-JUNE)

SOLID WASTE AND IRRADIATED FUEL SHIPMENTS

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

1. TYPE OF WASTE	UNIT	6-MONTH PERIOD	EST. TOTAL ERROR, %
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR BOTTOMS, ETC.	M3	4.60E 02	
B. DRY COMPRESSIBLE WASTE, CONTAMINATED EQUIPMENT, ETC.	CI	7.50E 02	
C. IRRADIATED COMPONENTS, CONTROL RODS, ETC.	M3	4.30E 02	
D. OTHER (DESCRIBE)	CI	1.30E 01	

3. SOLID WASTE DISPOSITION-

NUMBER OF SHIPMENTS MODE OF TRANSPORTATION DESTINATION

68	MOTOR FREIGHT	SHEFFIELD IL.
5	MOTOR FREIGHT	BARNWELL S.C.
5	TRUCK	SHEFFIELD IL.
50	TRUCK	BARNWELL S.C.

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LTR DTD 11/18/80

INSTALLATION=DRESDEN 2-3

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT 1978

GASEOUS EFFLUENTS-SUMMATION OF ALL RELEASES

	UNIT	QUARTER 3	QUARTER 4	EST. TOTAL ERROR,%
A. FISSION AND ACTIVATION GASES				
1. TOTAL RELEASE	CI	1.12E 04	5.71E 03	
2. AVERAGE RELEASE RATE FOR PERIOD	UCI/SEC			
3. PERCENT OF TECHNICAL SPECIFICATION LIMIT	%			
B. IODINES				
1. TOTAL IODINE-131	CI	2.33E-01	2.37E-01	
2. AVERAGE RELEASE RATE FOR PERIOD	UCI/SEC			
3. PERCENT OF TECHNICAL SPECIFICATION LIMIT	%			
C. PARTICULATES				
1. PARTICULATES WITH HALF-LIVES > 8 DAYS	CI	7.23E-01	6.30E-01	
2. AVERAGE RELEASE RATE FOR PERIOD	UCI/SEC			
3. PERCENT OF TECHNICAL SPECIFICATION LIMIT	%			
4. GROSS ALPHA RADIOACTIVITY	CI			
D. TRITIUM				
1. TOTAL RELEASE	CI	1.10E 02	1.18E 02	
2. AVERAGE RELEASE RATE FOR PERIOD	UCI/SEC	1.40E 01	1.47E 01	
3. PERCENT OF TECHNICAL SPECIFICATION LIMIT	%	N/A	N/A	

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INSTALLATION=DRESDEN 2-3

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
FISSION GASES					
KR-85M	CI	2.30E 02	2.00E 02		
KR-87	CI	3.40E 02	2.20E 02		
KR-88	CI	6.20E 02	3.10E 02		
XE-133	CI	2.60E 02	1.10E 03		
XE-135	CI	1.90E 03	1.50E 03		
XE-135M	CI	7.80E 02	2.70E 02		
XE-138	CI	6.90E 03	2.00E 03		
IODINES					
I-131	CI	1.90E-01	2.00E-01		
I-133	CI	1.20E 00	1.20E 00		
I-135	CI	2.20E 00	1.70E 00		
PARTICULATES					
BA-140	CI	2.83E-01	1.90E-01		
CF-141	CI	3.48E-03	4.53E-03		
CO-58	CI		7.80E-04		
CO-60	CI	1.80E-02	1.00E-02		
CS-134	CI	1.90E-04	4.60E-04		
CS-137	CI	3.78E-03	3.27E-03		
I-131	CI	6.49E-02	7.16E-02		
MN-54	CI	2.80E-03	1.10E-03		
SR-89	CI	2.05E-01	1.88E-01		
SR-90	CI	1.38E-03	6.30E-04		

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EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT 1978

GAS EFFLUENTS GROUND RELEASE

NUCLIDES RELEASED	UNIT	CONTINUOUS MODE		BATCH MODE	
		QUARTER	QUARTER	QUARTER	QUARTER
		3	4	3	4
FISSION GASES					
XE-133	CI	1.30E 01	5.10E 01		
XE-135M	CI	1.90E 02	6.10E 01		
IODINES					
I-131	CI	4.30E-02	3.80E-02 3.5E-02		
I-133	CI	1.19E-01	1.44E-01		
I-135	CI	2.60E-01	3.40E-01		
PARTICULATES					
AG-110M	CI	3.99E-03	8.00E-05		
BA-140	CI	1.20E-02	2.09E-02		
CE-141	CI	5.60E-04	1.63E-03		
CE-144	CI		2.30E-04		
CO-58	CI	2.42E-03	4.05E-03		
CO-60	CI	2.68E-02	2.39E-02		
CR-51	CI	2.99E-02	0.03E-02 3.0E-02		
CS-134	CI	3.94E-03	1.78E-03		
CS-136	CI	5.80E-04	1.38E-03		
CS-137	CI	7.38E-03	3.33E-03		
FE-59	CI	6.40E-04	1.64E-03		
I-131	CI	3.12E-02	3.44E-02		
LA-140	CI	1.26E-02	2.32E-02		
MN-54	CI	4.13E-03	3.77E-03		
NB-95	CI	1.90E-04	9.10E-04		
RU-103	CI	2.20E-04	1.24E-03		
SB-124	CI		1.60E-04		
SR-89	CI	3.48E-03	5.77E-03		
SR-90	CI	4.20E-04	4.80E-04		
ZN-65	CI	4.60E-04	5.60E-04		
ZR-95	CI	2.50E-04	7.90E-04		

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EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT 1978

LIQUID EFFLUENTS

NUCLIDES RELEASED	UNIT	CONTINUOUS MODE		BATCH MODE	
		QUARTER 3	QUARTER 4	QUARTER 3	QUARTER 4
CS-134	CI	1.30E-03	4.40E-04		
CS-137	CI	2.70E-03	1.00E-03		
SR-89	CI	8.40E-04			
SR-90	CI	5.00E-05			
CO-58	CI		1.30E-04		
CO-60	CI	9.90E-04	1.40E-03		
MN-54	CI	3.00E-04	2.40E-04		

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EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT 1978

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	6.20E-03	3.20E-03	
2. AVERAGE DILUTED CONCENTRATION DURING PERIOD	UCI/ML	1.20E-11	7.40E-12 8.4E-12	
3. PERCENT OF APPLICABLE LIMIT	1.2E-02 %	1.30E-02	1.00E-02 8.4E-03	
B. TRITIUM				
1. TOTAL RELEASE	CI	1.40E-01	4.10E-02	
2. AVERAGE DILUTED CONCENTRATION DURING PERIOD	2.7E-10 UCI/ML	2.70E-01	9.10E-10 1.1E-10	
3. PERCENT OF APPLICABLE LIMIT	%	N/A	N/A	
C. DISSOLVED AND ENTRAINED GASES				
1. TOTAL RELEASE	CI	0.00E 00	0.00E 00	
2. AVERAGE DILUTED CONCENTRATION DURING PERIOD	UCI/ML			
3. PERCENT OF APPLICABLE LIMIT	%			
D. GROSS ALPHA RADIOACTIVITY				
1. TOTAL RELEASE	CI	2.10E-06	1.00E-06	
E. VOLUME OF WASTE RELEASED (PRIOR TO DILUTION)				
	LITERS	3.30E 05	3.00E 05	
F. VOLUME OF DILUTION WATER USED DURING PERIOD				
	LITERS	5.00E 11	3.80E 10 3.8E 11	

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LTR DTD 11/18/88

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EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT 1978
(JULY-DECEMBER)

SOLID WASTE AND IRRADIATED FUEL SHIPMENTS

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

1. TYPE OF WASTE	UNIT	6-MONTH PERIOD	EST. TOTAL ERROR, %
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR BOTTOMS, ETC.	M3	5.84E 02	
B. DRY COMPRESSIBLE WASTE, CONTAMINATED EQUIPMENT, ETC.	CI	1.10E 03	
C. IRRADIATED COMPONENTS, CONTROL RODS, ETC.	M3	3.00E 02	
D. OTHER (DESCRIBE)	CI	1.47E 01	
	M3		
	CI		

3. SOLID WASTE DISPOSITION-

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
25	MOTOR TRANSPORT	BARNWELL S.C.
134	TRUCK	BARNWELL S.C.

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