



Commonwealth Edison
Dresden Nuclear Power Station
R.R. #1
Morris, Illinois 60450
Telephone 815/942-2920

August 20, 1980

DJS LTR: 80-23

Mr. James G. Keppler
Regional Director
Office of Inspection and Enforcement
Region III
U.S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, Illinois 60137

Subject: Dresden Station Operating Report; NRC Dockets 50-10, 50-237,
and 50-249

Dear Mr. Keppler:

Attached is the Semi-Annual Report pertaining to Radioactive
Effluent Discharges and Solid Radioactive Waste for Units 1, 2, and
3 for the period of January 1, 1980 through June 30, 1980, as required
by the Technical Specifications.

One copy of this report is provided for your use, and 39 copies
are being submitted directly to Mr. Edson G. Case, Deputy Director of
the Office of Nuclear Reactor Regulation.

Sincerely,

D. L. Scott
Station Superintendent
Dresden Nuclear Power Station

DJS:GWB:mt

Attachment

cc: G. W. Bergan
File/NRC

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REPORT OF RADIOACTIVE EFFLUENTS

FACILITY: DRESDEN NUCLEAR POWER STATION - UNIT 1

DOCKET NOS.: 50 - 10

YEAR: 1980

I. Gaseous Effluents	UNITS	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	6 MO. TOTAL	TECH. SPEC. REF.
1. Gross Radioactivity Releases									
a) Total Release	curies	18.4	41.7	<LLD	<LLD	<LLD	<LLD	60.1	
b) Maximum Release Rate (daily grab sample)	μCi/sec	1.3E+02	3.1E+02	---	---	---	---	3.1E+02	
c) Isotopes Released									
Kr-85m	curies	---	---	---	---	---	---	---	
Kr-87	curies	---	---	---	---	---	---	---	
Kr-88	curies	---	---	---	---	---	---	---	
Xe-133	curies	18.4	41.7	---	---	---	---	60.1	
Xe-135	curies	---	---	---	---	---	---	---	
Xe-135m	curies	---	---	---	---	---	---	---	
Xe-138	curies	---	---	---	---	---	---	---	
d) Percent of Chimney Limit	%	0.01	0.01	---	---	---	---	0.01	
e) Average Release Rate	μCi/sec	6.9E00	1.7E+01	---	---	---	---	3.8E00	
2. Iodine Releases									
a) Isotopes Released									
I-131	curies	4.1E-04	2.5E-04	2.7E-04	3.9E-04	3.0E-04	3.0E-04	1.9E-03	
I-133	curies	---	---	---	---	---	---	---	
I-135	curies	---	---	---	---	---	---	---	
b) Percent of Chimney Limit	%	0.01	0.01	0.01	0.01	0.01	0.01	0.01	
c) Average Release Rate	μCi/sec	1.5E-04	1.0E-04	1.0E-04	1.5E-04	1.1E-04	1.2E-04	1.2E-04	

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REPORT OF RADIOACTIVE EFFLUENTS

FACILITY: DRESDEN NUCLEAR POWER STATION - UNIT 1

DOCKET NOS.: 50-10

YEAR: 1980

I. Gaseous Effluents (continued)	UNITS	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	6 MO. TOTAL	TECH. SPEC. REF.
3. Particulate Releases	milli-								
a) Gross Radioactivity (BY)	curies	1.58	1.49	1.52	1.43	0.92	0.98	7.92	
b) Gross Alpha Radioactivity	mCi								
c) Isotopes Released	mCi								
Cr-51	mCi	---	---	---	---	---	---	---	
Ni-54	mCi	0.11	0.11	0.18	0.07	---	0.23	0.70	
Co-58	mCi	---	---	---	---	---	---	---	
Co-60	mCi	1.01	1.35	0.67	0.87	0.61	0.01	4.52	
Sr-89	mCi	---	---	---	---	---	---	---	
Sr-90	mCi	---	---	---	0.01	0.04	0.02	0.07	
Zr-95	mCi	---	---	---	---	---	---	---	
Nb-95	mCi	---	---	---	---	---	---	---	
Ru-103	mCi	---	---	---	---	---	---	---	
I-131	mCi	---	---	---	---	---	---	---	
Cs-134	mCi	---	0.03	0.03	0.11	---	0.23	0.40	
Cs-137	mCi	0.46	---	0.64	0.37	0.27	0.49	2.23	
Ba-140	mCi	---	---	---	---	---	---	---	
Ce-141	mCi	---	---	---	---	---	---	---	
Ce-144	mCi	---	---	---	---	---	---	---	
d) Percent of chimney limit	%	0.03	0.03	0.02	0.02	0.01	0.02	0.02	
e) Average release rate	uCi/sec	5.9E-04	6.0E-04	5.7E-04	5.5E-04	3.5E-04	3.8E-04	5.1E-04	
4. Sum of Iodines & Particulates									
a) Percent of Chimney Limit	%	0.03	0.03	0.03	0.03	0.02	0.02	0.03	
5. Gaseous Tritium									
a) Total Release	curies	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	
b) Average Release Rate	uCi/sec	---	---	---	---	---	---	---	

REPORT OF RADIOACTIVE EFFLUENTS

FACILITY: DRESDEN NUCLEAR POWER STATION - UNIT 1

DOCKET NOS.: 50-10

YEAR: 1980

II. Liquid Effluents

[illegible]

REPORT OF PESTICIDE EFFLUENTS

FACILITY: Dresden Nuclear Power Station & Unit 1

DOCKET NOS.: 50 - 10

YEAR: 1980

II. Liquid Effluents (continued)

[illegible]

REPORT ON RADIOACTIVE EFFLUENTS

FACILITY: Dresden Nuclear Power Station-Units 2/3

DOCKET NOS.: 50-237, 50-249

YEAR: 1980

I. Gaseous Effluents	UNITS	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	6 MO. TOTAL	TECH. SPEC. REF.
1. Gross Radioactivity Releases									
a) Total Release 2/3 chimney	curies	1021.2	227.3	12.1	133.0	1153.2	633.3	3180.1	6.6D.1.f. (1)
b) Maximum Release Rate (daily grab sample)	uCi/sec	2.0E+03	9.1E+02	1.4E+02	6.8E+02	1.7E+03	7.4E+02	2.0E+03	6.6D.1.f. (2)
c) Isotopes Released									6.6D.1.f. (4)
Kr-85m	curies	---	---	---	---	24.6	12.7	37.3	
Kr-87	curies	---	---	---	---	---	15.8	15.8	
Kr-88	curies	210.4	---	---	---	66.8	27.9	305.1	
Xe-133	curies	175.9	227.3	12.1	---	39.8	39.4	494.5	
Xe-135	curies	634.9	---	---	133.0	205.8	152.9	1126.6	
Xe-135m	curies	---	---	---	---	---	66.8	66.8	
Xe-138	curies	---	---	---	---	816.2	317.8	1134.0	
d) Percent of Chimney Limit	%	0.04	0.01	0.01	0.01	0.05	0.03	0.02	6.6D.1.f. (3)
e) Average Release Rate	uCi/sec	3.8E+02	9.1E+01	4.5E+00	5.1E+01	4.3E+02	2.4E+02	2.0E+02	
2. Chimney Iodine Releases									6.6D.1.f. (1)
a) Isotopes Released									
I-131	curies	9.5E-02	3.5E-02	1.4E-02	1.4E-02	1.1E-01	1.5E-01	4.2E-01	
I-133	curies	8.3E-01	8.8E-02	1.2E-01	1.2E-01	1.0E00	8.0E-01	3.0E00	
I-135	curies	1.4E00	2.2E-01	3.1E-01	2.8E-01	2.2E00	5.2E-01	4.9E00	
b) Percent of Chimney Limit	%	0.83	0.39	0.15	0.16	1.01	1.37	0.62	6.6D.1.f. (3)
c) Average Release Rate	uCi/sec	3.6E-02	1.4E-02	5.2E-03	5.4E-03	4.0E-02	5.9E-02	2.7E-02	

REPORT OF RADIOACTIVE EFFLUENTS

FACILITY: Dresden Nuclear Power Station - Unit 2/3

DOCKET NOS.: 50-237, 50-249

YEAR: 1980

I. Gaseous Effluents(continued)	UNITS	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	6 MO. TOTAL	TECH. SPEC. REF.
3. Chimney Particulate Release									
a) Gross Radioactivity(A-Y)	mili-curies	526.25	206.76	105.84	122.33	528.59	744.25	2234.02	6.6D.1.f.(1)
b) Gross Alpha Radioactivity	mCi								
c) Isotopes Released									6.6D.1.f.(1)
Cr-51	mCi	---	---	---	---	---	---	---	
Mn-54	mCi	---	1.65	1.11	4.37	0.21	17.94	25.28	
Co-58	mCi	---	---	---	---	---	---	---	
Co-60	mCi	---	14.08	5.39	15.90	2.01	154.06	191.44	
Sr-90	mCi	72.83	64.41	34.53	41.73	49.48	53.88	316.86	
Sr-90	mCi	0.42	0.48	0.32	0.32	0.37	0.45	2.36	
I-131	mCi	21.58	19.48	9.44	---	45.93	69.29	165.72	
Cs-134	mCi	---	0.16	---	---	0.53	---	0.69	
Cs-137	mCi	9.84	1.94	1.72	---	3.44	5.13	22.07	
Ba-140	mCi	391.22	79.40	49.77	57.63	423.93	436.43	1438.38	
Ce-141	mCi	5.00	11.99	2.34	2.38	2.69	7.07	31.47	
Zr-95/Nb-95	mCi	18.89/3.79	---/---	---/---	---/---	---/---	---/---	18.89/3.79	
Ru-103	mCi	2.68	13.17	1.22	---	---	---	17.07	
d) Percent of Chimney Limit	%	4.57	2.32	1.13	1.35	4.82	6.68	3.32	6.6D.1.f.(3)
e) Average Release Rate	uCi/sec	2.0E-01	8.3E-02	4.0E-02	4.7E-02	2.0E-01	2.9E-01	1.4E-01	
4. Vent Stack Iodine Release									6.6D.1.f.(1)
a) Isotopes Released									
I-131	curies	1.2E-02	8.2E-03	1.6E-03	2.0E-03	4.5E-03	7.4E-03	3.6E-02	
I-133	curies	6.4E-02	1.7E-03	5.6E-03	8.5E-03	2.2E-02	2.9E-02	1.3E-01	
I-135	curies	1.1E-01	---	---	---	1.1E-01	5.2E-02	2.7E-01	
b) Percent of Vent Stack Limit	%	3.60	2.74	0.50	0.64	1.40	2.38	1.92	6.6D.1.f.(3)
c) Average Release Rate	uCi/sec	4.3E-03	3.3E-03	6.0E-04	7.7E-04	1.7E-03	2.9E-03	2.3E-03	

REPORT OF RADIOACTIVE EFFLUENTS

FACILITY: Dresden Nuclear Power Station - Unit 2/3

DOCKET NOS.: 50-237, 50-249

YEAR: 1980

I, Gaseous Effluents (Continued)									
	UNITS	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	6 MO. TOTAL	TECH. SPEC. REF.
5. Vent Stack Particulate Release	mili-								
(a) Gross Radioactivity (B-Y)	curies	59.86	46.86	51.89	82.95	81.37	55.68	378.61	
(b) Gross Alpha Radioactivity	mCi								6.6D.1.f.(1)
(c) Isotopes Released									
Cr-51	mCi	2.11	1.26	2.19	---	2.18	6.28	14.02	6.6D.1.f.(1)
Mn-54	mCi	3.55	4.43	5.80	9.19	5.73	1.81	30.51	
Co-58	mCi	1.04	1.01	1.21	1.23	1.22	0.39	6.10	
Fe-59	mCi	1.49	1.65	1.07	2.12	1.12	0.40	7.85	
Co-60	mCi	21.17	23.25	21.38	52.78	30.80	9.11	158.49	
Zn-65	mCi	---	0.18	0.52	---	1.15	0.05	1.90	
Sr-89	mCi	0.09	1.05	1.34	0.59	0.98	0.42	4.47	
Sr-90	mCi	0.02	0.05	0.08	0.13	0.11	0.05	0.44	
Zr-95	mCi	1.81	0.76	1.11	2.12	0.23	0.11	6.14	
Nb-95	mCi	2.59	1.40	2.16	3.50	1.85	0.21	11.71	
Ru-103	mCi	1.90	1.80	1.65	1.34	0.58	0.17	7.44	
(continued on next page)									
(d) Percent Vent Stack Limit	%	18.62	15.59	16.14	26.67	25.32	17.90	20.18	6.6D.1.f.(3)
(e) Average Release Rate	uCi/sec	2.2E-02	1.9E-02	1.9E-02	3.2E-02	3.0E-02	2.1E-02	2.4E-02	
6. Sum of Iodine and Particulate									
a) Percent of Chimney Limit	%	5.40	2.71	1.28	1.50	5.83	8.05	3.95	6.6D.1.f.(3)
b) Percent of Vent Stack Limit	%	22.22	18.33	16.64	27.31	26.71	20.28	22.10	
7. Gaseous Tritium									
a) Release	curies	5.8E+01	1.3E+01	7.2E+02	2.3E+01	3.2E+01	1.3E+01	8.6E+02	
b) Average Release Rate	uCi/sec	2.2E+01	5.1E00	2.7E+02	8.4E00	1.2E+01	5.0E00	5.5E+01	
c) Percent Tech Spec Limit	%	NA	NA	NA	NA	NA	NA	NA	

REPORT OF ACTIVE EFFLUENTS

EAGILITY: DRESDEN NUCLEAR POWER STATION-UNITS 2/3

DOCKET NOS.: 50-237, 50-249

YEAR: 1980

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REPORT ON BIOACTIVE EFFLUENTS

EAGLITY: Dresden Nuclear Power Station-Units 2/3

DOCKET NOS.: 50-237, 50-249

YEAR: 1980

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REPORT OF RADIOACTIVE EFFLUENTS

FACILITY: DRESDEN NUCLEAR POWER STATION - UNIT 2/3

DOCKET NOS.: 50-237, 50-249

YEAR: 1980

II. Liquid Effluents

	UNITS	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	6 MO. TOTAL	TECH. SPEC. REF.
1. Gross Radioactivity (β - γ)									
a) Total Release (2/3 Radwaste)	Milli-Curies	8.81	139.88	57.72	NO DISCHARGE	45.67	45.42	297.50	
b) Average Concentration Released	uci/ml	9.8E-10	4.7E-09	3.9E-09		3.9E-09	1.6E-09	3.2E-09	
c) Maximum Concentration Released	uci/ml	4.1E-08	4.8E-08	4.2E-08		4.4E-08	4.3E-08	4.8E-08	
d) Percent of Tech Spec Limit based on average conc. released	%	0.98	4.67	3.90		3.90	1.60	3.16	
2. Tritium									
a) Total Release	Curies	8.8E-01	1.1E+01	9.3E00		3.3E00	3.8E00	2.8E+01	
b) Average Concentration Released	uci/ml	9.8E-08	3.6E-07	6.2E-07		2.8E-07	1.4E-07	3.0E-07	
c) Percent of Tech Spec Limit	%	NA	NA	NA		NA	NA	NA	
3. Dissolved Noble Gases									
a) Total Release	Curies	NONE	NONE	NONE		NONE	NONE	NONE	
b) Average Concentration Released	uci/ml	---	---	---		---	---	---	
c) Percent of Tech Spec Limit	%	---	---	---		---	---	---	
4. Gross Alpha Radioactivity									
a) Total Release	Curies	3.3E-05	5.5E-04	4.2E-04		6.9E-05	8.0E-05	1.2E-03	
b) Average Concentration Released	uci/ml	3.7E-12	1.8E-11	2.8E-11		5.9E-12	2.8E-12	1.2E-11	
5. Volume of Liquid Waste to Discharge Canal	Liters	1.0E+05	1.8E+06	1.5E+06		6.5E+05	7.5E+05	4.8E+06	
6. Volume of Dilution Water	Liters	9.0E+09	3.0E+10	1.5E+10		1.2E+10	2.8E+10	9.4E+10	

REPORT OF [REDACTED] CTIVE EFFLUENTS

FACILITY: Dresden Nuclear Power Station - Unit 2/3

DOCKET NOS.: 50-237, 50-219

YEAR: 1980

II. Liquid Effluents (continued)

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REPORT OF RADIOACTIVE EFFLUENTS

FACILITY: Dresden Nuclear Power Station - Unit 2/3

DOCKET NOS.: 50-237, 50-249

YEAR: 1980

II. Liquid Effluents (continued)

	UNITS	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	6 MO. TOTAL	TECH. SPEC. REF.
8. Gross Radioactivity (β - γ) LPCI Service H ₂ O Heat Exchanger									
a) Total Release	Milli-Curies	30.29	18.67	12.24	0.85	16.51	11.35	89.91	
b) Average Concentration Released*	uci/ml	2.2E-10	2.2E-10	1.8E-10	9.0E-12	1.1E-10	1.2E-10	1.3E-10	
c) Maximum Concentration Released*	uci/ml	1.7E-06	2.4E-06	3.9E-06	1.5E-07	2.5E-06	5.3E-07	3.9E-06	
d) Percent of Tech Spec Limit	%	0.22	0.22	0.18	0.01	0.11	0.12	0.13	
based on average conc released									
9. Tritium									
a) Total Release	Curies	1.0E00	1.8E-01	1.2E-01	1.1E00	1.4E00	2.5E00	6.3E00	
b) Average Concentration Released	uci/ml	7.2E-09	1.9E-09	1.7E-09	1.2E-08	9.3E-09	2.5E-08	9.0E-09	
c) Percent of Tech Spec Limit	%	NA	NA	NA	NA	NA	NA	NA	
10. Dissolved Noble Gases									
a) Total Release	Curies	NONE	NONE	NONE	NONE	NONE	NONE	NONE	
b) Average Concentration Released	uci/ml	---	---	---	---	---	---	---	
c) Percent of Tech Spec Limit	%	---	---	---	---	---	---	---	
11. Gross Alpha Radioactivity									
a) Total Release	Curies	1.1E-05	3.4E-05	3.2E-06	1.5E-06	1.0E-05	1.2E-05	7.2E-05	
b) Average Concentration Released	uci/ml	7.8E-14	4.0E-13	4.7E-14	1.6E-14	6.7E-14	7.5E-14	1.0E-13	
12. Volume of Liquid Waste to Discharge Canal	liters	5.6E+05	5.6E+05	9.9E+04	1.8E+05	2.1E+05	3.8E+05	2.0E+06	
13. Volume of Dilution Water	liters	1.4E+11	8.6E+10	6.8E+10	9.4E+10	1.5E+11	1.6E+11	7.0E+11	

*Prior to dilution by 1275 acre cooling lake and subsequent discharge to Illinois River.

REPORT OF INVESTIGATIVE EFFLUENTS

FACILITY: Dresden Nuclear Power Station - Unit 2/3

DOCKET NOS.: 50-237, 50-212

YEAR: 1980

II. Liquid Effluents (continued)

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REPORT OF RELATIVE EFFLUENTS

FACILITY: Dresden Nuclear Power Station

DOCKET NOS.: 50-10, 50-237, 50-549

YEAR: 1980

[illegible]

DRESDEN NUCLEAR POWER STATION

SOLID WASTE DISPOSITION

YEAR 1980

MONTH	NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
JAN	15	Motor Freight (Exclusive Use Only)	Barnwell, S.C.
JAN	1	Motor Freight (Exclusive Use Only)	Richland, WA
FEB	22	Motor Freight (Exclusive Use Only)	Barnwell, S.C.
FEB	2	Motor Freight (Exclusive Use Only)	Richland, WA
MAR	22	Motor Freight (Exclusive Use Only)	Barnwell, S.C.
MAR	4	Motor Freight (Exclusive Use Only)	Richland, WA
APR	24	Motor Freight (Exclusive Use Only)	Barnwell, S.C.
APR	3	Motor Freight (Exclusive Use Only)	Richland, WA
MAY	25	Motor Freight (Exclusive Use Only)	Barnwell, S.C.
MAY	2	Motor Freight (Exclusive Use Only)	Richland, WA
JUN	25	Motor Freight (Exclusive Use Only)	Barnwell, S.C.
JUN	6	Motor Freight (Exclusive Use Only)	Richland, WA