



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

DmB

PRINCIPAL STAFF			
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CA			
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8/11/83

8/11/83

DJS LTR: #83-791

Mr. James G. Keppler
Regional Administrator
Directorate 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:

Enclosed is the radioactive effluent report for January
Through June, 1983 for Dresden Nuclear Power Station.

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 Yours;

D. J. Scott
Station Superintendent
Dresden Nuclear Power Station

RA:sp

Attachment

cc: T. Gilman
R. Arnoldi
File/NRC
File/Numerical

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AUG 19 1983

REPORT OF RADIOACTIVE EFFLUENTS

FACILITY: DRESDEN NUCLEAR POWER STATION - UNIT 1

DOCKET NOS.: 50 - 10

YEAR: 1983

I. Gaseous Effluents	UNITS	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	6 MO. TOTAL	TECH. SPEC. REF.
1. Gross Radioactivity Releases									
a) Total Release	curies	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	
Maximum Release Rate									
b) (daily grab sample)	uCi/sec	---	---	---	---	---	---	---	
c) Isotopes Released									
Kr-85m	curies								
Kr-87	curies								
Kr-88	curies								
Xe-133	curies								
Xe-135	curies								
Xe-135m	curies								
Xe-138	curies								
d) Percent of Chimney Limit	%	---	---	---	---	---	---	---	
e) Average Release Rate	uCi/sec	---	---	---	---	---	---	---	
2. Iodine Releases									
a) Isotopes Released									
I-131	curies	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	
I-133	curies	---	---	---	---	---	---	---	
I-135	curies	---	---	---	---	---	---	---	
b) Percent of Chimney Limit	%	---	---	---	---	---	---	---	
c) Average Release Rate	uCi/sec	---	---	---	---	---	---	---	

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REPORT OF RADIOACTIVE EFFLUENTS

FACILITY: DRESDEN NUCLEAR POWER STATION - UNIT 1

PERMIT NO.: 50-10

YEAR: 1982

1. Gaseous Effluents (continued)	UNITS	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	6 MO. TOTAL	TECH. SPEC. REF.
3. Particulate Releases	millicuries								
a) Gross Radioactivity (uCi)	uCi	1.61E-01	9.06E-02	1.67E-01	6.38E-02	3.74E-02	3.31E-02	5.52E-01	
b) Gross Alpha Radioactivity	uCi								
c) Isotopes Released	uCi								
Cr-51	uCi	-----	-----	-----	-----	---	---	---	
Mn-54	uCi	6.13E-04	3.08E-04	3.72E-04	-----	---	3.20E-04	1.61E-03	
Co-58	uCi	-----	---	-----	-----	---	---	---	
Co-60	uCi	8.99E-03	1.95E-02	4.42E-02	1.31E-02	1.15E-02	2.49E-03	9.98E-02	
Sr-89	uCi	5.64E-06	6.25E-05	3.55E-05	7.41E-06	9.74E-06	9.74E-06	1.31E-04	
Sr-90	uCi	8.46E-06	5.00E-06	7.61E-06	4.94E-06	2.44E-06	2.44E-06	3.09E-05	
Zr-95	uCi	-----	---	---	---	---	7.16E-04	7.16E-04	
Nb-95	uCi	-----	---	---	---	---	---	---	
Ru-103	uCi	-----	---	-----	---	---	---	---	
I-131	uCi	3.09E-04	---	---	---	---	---	3.09E-04	
Cs-134	uCi	1.66E-02	1.64E-02	1.13E-02	4.18E-03	3.04E-03	3.23E-03	5.48E-02	
Cs-137	uCi	1.34E-01	5.43E-02	1.11E-01	4.65E-02	2.28E-02	2.53E-02	3.94E-01	
Ba-140	uCi	-----	---	---	---	---	---	---	
Ce-141	uCi	-----	---	---	---	---	---	---	
Ce-144	uCi	-----	---	---	---	---	1.01E-03	1.01E-03	
d) Percent of chimney limit	%	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
e) Average release rate	uCi/sec	6.01E-05	3.75E-05	6.24E-05	2.46E-05	1.40E-05	1.28E-05	3.53E-05	
4. Sum of Iodines & Particulates									
a) Percent of Chimney Limit	%	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
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: BRADSHAW NUCLEAR POWER STATION - UNIT 1

DOCKET NOS.: 50-10

YEAR: 1943

II. Liquid Effluents

[illegible]

EFFECT OF RADIOACTIVE ELEMENTS

FACILITY: Division Nuclear Power Station - Unit 1

SECRET NO. 10 - 10

YEAR: 1983

II. Liquid Effluents (continued)

[illegible]

REPORT OF RADIOACTIVE EFFLUENTS

FACILITY: Dresden Nuclear Power Station-Units 2/3

DOCKET NOS.: 50-237, 50-249

YEAR: 1983

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	1.05E+03	8.05E+02	1.01E+03	8.58E+02	6.32E+02	9.23E+02	5.27E+03	6.6D.I.F. (1)
b) Maximum Release Rate (daily grab sample)	μCi/sec	1.83E+03	5.91E+02	6.85E+02	5.83E+02	5.77E+02	7.66E+02	1.83E+03	6.6D.I.F. (2)
c) Isotopes Released									6.6D.I.F. (4)
Kr-85m	curies	-----	8.77E00	----	-----	----	1.75E+01	2.63E+01	
Kr-87	curies	-----	----	----	-----	----	-----	----	
Kr-88	curies	-----	----	----	-----	----	-----	----	
Xe-133	curies	1.68E+02	3.25E+01	3.93E+01	4.03E+01	1.41E+02	6.53E+01	4.86E+02	
Xe-135	curies	8.80E+02	2.01E+02	2.03E+02	2.22E+02	4.91E+02	3.10E+02	2.31E+03	
Xe-135m	curies	-----	1.77E+02	1.88E+02	1.35E+02	-----	-----	5.00E+02	
Xe-138	curies	-----	3.86E+02	5.75E+02	4.60E+02	-----	5.30E+02	1.95E+03	
Kr-85	curies	2.87E-02	2.64E-02	3.48E-02	2.86E-02	2.85E-02	2.21E-02	1.69E-01	
d) Percent of Chimney Limit	%	0.05	0.05	0.05	0.05	0.03	0.05	0.05	6.6D.I.F. (3)
e) Average Release Rate	μCi/sec	3.92E+02	3.33E+02	3.77E+02	3.31E+02	2.36E+02	3.56E+02	3.37E+02	
2. Chimney Iodine Releases									6.6D.I.F. (1)
a) Isotopes Released									
I-131	curies	4.03E-02	1.84E-02	5.12E-02	5.95E-02	6.32E-02	1.61E-02	2.49E-01	
I-133	curies	2.48E-01	9.75E-02	3.48E-01	4.27E-01	4.71E-01	7.73E-02	1.67E00	
I-135	curies	4.04E-01	1.37E-01	1.73E00	7.57E-01	8.20E-01	9.13E-02	3.94E00	
b) Percent of Chimney Limit	%	0.41	0.22	0.55	0.64	0.58	0.17	0.42	6.6D.I.F. (3)
c) Average Release Rate	μCi/sec	1.50E-02	7.61E-03	1.91E-02	2.30E-02	2.36E-02	6.21E-03	1.59E-02	

REPORT OF RADIOACTIVE EFFLUENTS

FACILITY: Dresden Nuclear Power Station - Unit 2/3

DOCKET NOS.: 90-237, 90-249

YEAR: 1983

I. Gaseous Effluents(continued)	UNITS	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	6 MO. TOTAL	TECH. SPEC. REF.
3. Chimney Particulate Release									
a) Gross Radioactivity(β - γ)	curies	4.00E-02	1.75E-02	3.32E-02	3.31E-02	4.34E-02	8.40E-03	1.76E-01	6.60.1.f.(1)
b) Gross Alpha Radioactivity									
c) Isotopes Released									6.60.1.f.(1)
Cr-51	mCi	1.78E-01	---	---	1.31E-01	9.84E-02	---	4.07E-01	
Mn-54	mCi	4.29E-01	2.37E-01	1.12E-01	1.09E-03	4.25E-02	1.69E-02	8.38E-01	
Co-58	mCi	4.21E-03	---	---	5.82E-03	1.25E-02	---	2.25E-02	
Fe-59	mCi	2.66E-02	1.15E-02	1.12E-02	---	---	6.77E-03	5.61E-02	
Co-60	mCi	8.44E00	1.97E00	1.58E00	1.61E00	1.53E00	1.47E-01	1.53E+01	
Zn-65	mCi	---	---	---	---	6.66E-02	---	6.66E-02	
Sr-89	mCi	1.20E-02	7.89E-03	1.72E-02	5.32E-03	9.92E-03	9.92E-03	6.23E-02	
Sr-90	mCi	5.67E-03	4.15E-05	7.60E-05	2.65E-05	5.50E-05	5.50E-05	5.92E-03	
Zr-95	mCi	6.95E-03	---	---	---	---	---	6.95E-03	
Nb-95	mCi	---	---	---	---	---	---	---	
Ru-103	mCi	7.88E-02	4.25E-02	3.03E-02	1.61E-02	1.69E-02	1.75E-02	2.02E-01	
Ag-110m	mCi	6.23E-03	---	---	1.69E-02	---	---	2.31E-02	
Continued on next page									
d) Percent of Chimney Limit	%	0.52	0.21	0.35	0.41	0.32	0.11	0.29	6.60.1.f.(3)
e) Average Release Rate	uCi/sec	1.49E-02	7.23E-03	1.24E-02	1.28E-02	1.62E-02	3.24E-03	1.13E-02	
4. Vent Stack Iodine Release									6.60.1.f.(1)
a) Isotopes Released									
I-131	curies	4.22E-03	5.07E-03	1.64E-03	8.13E-04	8.73E-04	7.55E-04	1.34E-02	
I-133	curies	3.22E-02	3.96E-02	6.97E-03	5.16E-03	3.74E-03	3.38E-03	9.11E-02	
I-135	curies	5.42E-02	6.92E-02	1.14E-02	7.48E-03	5.60E-03	4.86E-03	1.53E-01	
b) Percent of Vent Stack Limit	%	1.31	1.75	0.51	0.26	0.27	0.24	0.71	6.60.1.f.(3)
c) Average Release Rate	uCi/sec	1.58E-03	2.10E-03	6.12E-04	3.16E-04	3.26E-04	2.91E-04	8.57E-04	

REPORT OF RADIOACTIVE EFFLUENTS

FACILITY: Dresden Nuclear Power Station - Unit 2/3

DOCKET NOS.: 50-237, 50-249

YEAR: 1983

[illegible]

* La-140 Detected but Not Reported.

REPORT OF RADIOACTIVE EFFLUENTS

FACILITY: Dresden Nuclear Power Station - Unit 2/3

DOCKET NOS.: 50-237, 50-249

YEAR: 1983

I. Gaseous Effluents (Continued)	UNITS	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	6 MO. TOTAL	TECH. SPEC. REF.
5. Vent Stack Particulate Release									
(a) Gross Radioactivity (B-7)	curies	1.75E-02	2.11E-02	6.32E-03	2.25E-03	2.01E-03	2.33E-03	5.16E-02	
(b) Gross Alpha Radioactivity	mCi								6.6D.1.f.(1)
(c) Isotopes Released									
Cr-51	mCi	5.51E00	5.59E00	6.98E-01	2.78E-02	5.91E-02	2.30E-01	1.21E+01	6.6D.1.f.(1)
Mn-54	mCi	2.78E-01	2.96E-01	3.01E-01	1.43E-01	1.33E-01	1.21E-01	1.27E00	
Co-58	mCi	4.09E-01	3.49E-01	1.11E-01	3.74E-02	4.39E-02	6.59E-02	1.02E00	
Fe-59	mCi	7.67E-02	9.69E-02	3.18E-02	6.96E-03	5.66E-03	2.04E-02	2.38E-01	
Co-60	mCi	2.63E00	3.83E00	3.15E00	1.25E00	1.33E00	1.37E00	1.36E+01	
Zn-65	mCi	2.27E-01	1.89E-01	6.33E-02	5.79E-03	1.79E-02	1.77E-02	5.21E-01	
Sr-89*	mCi	7.29E-03	7.46E-03	1.13E-03	9.76E-04	4.87E-04	4.87E-04	1.78E-02	
Sr-90*	mCi	2.31E-04	2.65E-04	5.25E-05	3.51E-05	3.06E-05	3.06E-05	6.45E-04	
Zr-95	mCi	7.29E-03	1.31E-02	4.70E-03	---	---	2.98E-03	2.81E-02	
Nb-95	mCi	4.99E-03	1.81E-02	7.85E-03	---	---	---	3.09E-02	
Ru-103	mCi	7.23E-02	9.81E-02	1.76E-02	2.73E-03	1.70E-02	3.44E-03	2.11E-01	
(continued on next page)									
(d) Percent Vent Stack Limit	%	5.48	7.27	1.97	0.72	0.63	0.75	2.75	6.6D.1.f.(3)
(e) Average Release Rate	uCi/sec	6.53E-03	8.72E-03	2.36E-03	8.68E-04	7.50E-04	8.98E-04	3.30E-03	
6. Sum of Iodine and Particulate									
a) Percent of Chimney Limit	%	0.93	0.43	0.90	1.05	0.90	0.28	0.71	6.6D.1.f.(3)
b) Percent of Vent Stack Limit	%	6.79	9.02	2.48	0.98	0.90	0.99	3.46	
7. Gaseous Tritium									
a) Release	curies	3.01E+01	3.92E+01	3.61E+01	3.01E+01	3.36E+01	2.46E00	1.72E+02	
b) Average Release Rate	uCi/sec	1.12E+01	1.62E+01	1.35E+01	1.16E+01	1.25E+01	9.48E-01	1.10E+01	
c) Percent Tech Spec Limit	%	NA	NA	NA	NA	NA	NA	NA	

*Not included in monthly report; will be included when data available.

REPORT OF RADIOACTIVE EFFLUENTS

FACILITY: DRESDEN NUCLEAR POWER STATION-UNITS 2/3

DOCKET NOS.: 50-217, 50-249

YEAR: 1983

[illegible]

*Detected but not reported.

REPORT OF RADIOACTIVE EFFLUENTS

ENCLITY: Dresden Nuclear Power Station-Units 2/3

DOCKET NOS.: 50-237, 50-249

YEAR: 1983

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REPORT OF RADIOACTIVE EFFLUENTS

FACILITY: DRESDEN NUCLEAR POWER STATION - UNIT 2/3

DOCKET NOS.: 50-237, 50-242

YEAR: 1981

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)	Curies	NO DISCHARGE	NO DISCHARGE	NO DISCHARGE	NO DISCHARGE	NO DISCHARGE	NO DISCHARGE	NO DISCHARGE	
b) Average Concentration Released	uci/ml								
c) Maximum Concentration Released	uci/ml								
d) Percent of Tech Spec Limit	%								
based on average conc. released									
2. Tritium									
a) Total Release	Curies								
b) Average Concentration Released	uci/ml								
c) Percent of Tech Spec Limit	%								
3. Dissolved Noble Gases									
a) Total Release	Curies								
b) Average Concentration Released	uci/ml								
c) Percent of Tech Spec Limit	%								
4. Gross Alpha Radioactivity									
a) Total Release	Curies								
b) Average Concentration Released	uci/ml								
5. Volume of Liquid Waste to Discharge Canal	Liters								
6. Volume of Dilution Water	Liters								

REPORT OF RADIOACTIVE EFFLUENTS

FACILITY: Dresden Nuclear Power Station - Unit 2/3

DOCKET NOS.: 50-237, 50-249

YEAR: 1983

II. Liquid Effluents (continued)

[illegible]

FACILITY: Dresden Nuclear Power Station - Unit 2/3

DOCKET NO.: 50-237, 50-249

YEAR: 1981

II. Liquid Effluents (continued)		UNITS	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	6 MO. TOTAL	TECH. SPEC. REF.
8. Gross Radioactivity (d-p) LPCI Service H ₂ O Heat Exchanger										
a) Total Release	Curies		8.00E-02	2.70E-01	1.60E-01	4.80E-01	2.48E00	7.00E-01	4.17E00	
b) Average Concentration Released	uci/ml		7.84E-13	4.42E-12	2.22E-12	3.66E-12	3.04E-11	4.70E-12	7.00E-12	
c) Maximum Concentration Released	uci/ml		7.46E-09	2.02E-08	2.27E-08	3.79E-08	4.04E-07	6.22E-08	4.04E-07	
d) Percent of Tech Spec Limit based on average conc released	%		<0.01	<0.01	<0.01	<0.01	0.03	0.01	0.01	
9. Tritium										
a) Total Release	Curies		2.46E-05	1.07E-04	4.72E-05	1.76E-04	1.03E-04	1.22E-04	5.80E-04	
b) Average Concentration Released	uci/ml		2.41E-13	1.75E-12	6.56E-13	1.34E-12	1.27E-12	8.17E-13	9.73E-13	
c) Percent of Tech Spec Limit	%		NA	NA	NA	NA	NA	NA	NA	
10. Dissolved Noble Gases										
a) Total Release	Curies		NA	NA	NA	NA	NA	NA	NA	
b) Average Concentration Released	uci/ml		----	---	---	---	---	----	---	
c) Percent of Tech Spec Limit	%		----	---	----	---	----	----	---	
11. Gross Alpha Radioactivity										
a) Total Release	Curies		1.38E-07	1.52E-06	2.06E-06	3.60E-06	1.51E-05	5.17E-06	2.76E-05	
b) Average Concentration Released	uci/ml		1.35E-15	2.49E-14	2.86E-14	2.75E-14	1.85E-13	3.47E-14	4.63E-14	
12. Volume of Liquid Waste to Discharge Canal		Liters	1.64E+04	2.96E+05	1.31E+05	3.45E+05	2.79E+05	3.29E+05	1.40E+06	
13. Volume of Dilution Water		Liters	1.02E+11	6.10E+10	7.19E+10	1.31E+11	8.15E+10	1.49E+11	5.96E+11	

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

1

BUCKET NOS.: 50-217, 50-212

YEAR: 1983

2

[illegible]

3 2

YEAR: 1983

[illegible]

DRESDEN NUCLEAR POWER STATION

SOLID WASTE DISPOSITION

YEAR 1983

MONTH	NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
JAN	13		
JAN	5	MOTOR FREIGHT (EXCLUSIVE USE ONLY)	BARNWELL, S.C.
		MOTOR FREIGHT (EXCLUSIVE USE ONLY)	RICHLAND, WA.
FEB.	12	MOTOR FREIGHT (EXCLUSIVE USE ONLY)	BARNWELL, S.C.
FEB.	2	MOTOR FREIGHT (EXCLUSIVE USE ONLY)	RICHLAND, WA.
MAR.	14	MOTOR FREIGHT (EXCLUSIVE USE ONLY)	BARNWELL, S.C.
MAR.	6	MOTOR FREIGHT (EXCLUSIVE USE ONLY)	RICHLAND, WA.
APR.	14	MOTOR FREIGHT (EXCLUSIVE USE ONLY)	BARNWELL, S.C.
APR.	2	MOTOR FREIGHT (EXCLUSIVE USE ONLY)	RICHLAND, WA.
MAY	11	MOTOR FREIGHT (EXCLUSIVE USE ONLY)	BARNWELL, S.C.
MAY	2	MOTOR FREIGHT (EXCLUSIVE USE ONLY)	RICHLAND, WA.
JUNE	12	MOTOR FREIGHT (EXCLUSIVE USE ONLY)	BARNWELL, S.C.
JUNE	4	MOTOR FREIGHT (EXCLUSIVE USE ONLY)	RICHLAND, WA.