

REPORT OF RADIOACTIVE EFFLUENTS

FACILITY: DRESDEN NUCLEAR POWER STATION - UNIT 1

DOCKET NOS.: 50 - 10

YEAR: 1983

I. Gaseous Effluents	UNITS	July	August	September	October	November	December	6 MO. TOTAL	TECH. SPEC. REF.
1. Gross Radioactivity Releases									
a) Total Release	curies	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	
b) Maximum Release Rate (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	2.19E-08	3.33E-07	<LLD	<LLD	3.55E-07	
I-133	curies	---	---	---	---	---	---	---	
I-135	curies	---	---	---	---	---	---	---	
b) Percent of Chimney Limit	%	---	---	<0.01	<0.01	---	---	<0.01	
c) Average Release Rate	uCi/sec	---	---	8.45E-15	1.24E-07	---	---	2.23E-08	

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REPORT OF RADIOACTIVE EFFLUENTS

FACILITY: DRESDEN NUCLEAR POWER STATION - UNIT 1

DOCKET NOS.: 50-10

YEAR: 1983

1. Gaseous Effluents (continued)	UNITS	July	August	September	October	November	December	6 MO. TOTAL	TECH. SPEC. REF.
3. Particulate Releases	milli-								
a) Gross Radioactivity (Bq)	curies	2.69E-02	3.45E-02	1.55E-02	4.53E-02	4.29E-02	3.88E-02	2.04E-01	
b) Gross Alpha Radioactivity	mCi								
c) Isotopes Released	mCi								
Cr-51	mCi	---	---	---	---	---	---	---	
Mn-54	mCi	2.15E-05	7.19E-04	5.68E-04	4.35E-04	4.35E-04	2.09E-04	2.39E-03	
Co-58	mCi	---	---	---	---	---	---	---	
Co-60	mCi	6.17E-03	2.54E-02	8.57E-03	2.63E-02	2.53E-02	2.97E-02	1.21E-01	
Sr-89	mCi	2.99E-03	5.22E-04	4.21E-04	2.53E-04	3.17E-04	2.54E-04	4.76E-03	
Sr-90	mCi	2.84E-04	2.98E-04	2.41E-04	7.44E-05	9.34E-05	7.47E-05	1.07E-03	
Zr-95	mCi	---	---	---	---	---	---	---	
Nb-95	mCi	---	---	---	---	---	---	---	
Ru-103	mCi	---	---	---	1.48E-03	---	---	1.48E-03	
I-131	mCi	---	---	---	---	---	---	---	
Cs-134	mCi	1.84E-03	---	---	---	---	---	1.84E-03	
Cs-137	mCi	1.55E-02	7.53E-03	5.67E-03	1.68E-02	1.68E-02	8.68E-03	7.10E-02	
Ba-140	mCi	---	---	---	---	---	---	---	
Ce-141	mCi	---	---	---	---	---	---	---	
Ce-144	mCi	5.53E-05	---	---	---	---	---	5.53E-05	
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	1.00E-05	1.29E-05	5.98E-06	1.68E-05	1.66E-05	1.45E-05	1.28E-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: DRESDEN NUCLEAR POWER STATION - UNIT 1

DOCKET NOS.: 50-10

YEAR: 1983

II. Liquid Effluents

[illegible]

REPORT OF RADIOACTIVE EFFLUENTS

FACILITY: Dresden Nuclear Power Station & Unit 1

DOCKET NOS.: 50 - 10

YEAR: 1983

II. Liquid Effluents (continued)

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REPORT OF RADIOACTIVE EFFLUENTS

FACILITY: Dresden Nuclear Power Station-Units 2/3

DOCKET NOS.: 50-237, 50-249

YEAR: 1983

I. Gaseous Effluents	UNITS	July	August	September	October	November	December	6 MO. TOTAL	TECH. SPEC. REF.
1. Gross Radioactivity Releases									
a) Total Release 2/3 chimney	curies	1.20E+03	8.71E+02	7.88E+02	<LLD	<LLD	<LLD	2.86E+03	6.6D.1.f. (1)
b) Maximum Release Rate (daily grab sample)	uCi/sec	1.54E+03	5.16E+02	7.30E+02	----	---	---	1.54E+03	6.6D.1.f. (2)
c) Isotopes Released									6.6D.1.f. (4)
Kr-85m	curies	1.04E+01	---	----				1.04E+01	
Kr-87	curies	-----	---	----				---	
Kr-88	curies	-----	---	----				---	
Xe-133	curies	3.79E+01	---	----				3.79E+01	
Xe-135	curies	1.72E+02	8.71E+02	1.72E+02				1.22E+03	
Xe-135m	curies	-----	---	----				-----	
Xe-138	curies	9.80E+02	---	6.16E+02				1.60E+03	
Kr-85		2.17E-02	1.78E-02	1.65E-02				5.60E-02	
d) Percent of Chimney Limit	%	0.06	0.04	0.03	----	---	---	0.02	6.6D.1.f. (3)
e) Average Release Rate	uCi/sec	4.48E+02	3.25E+02	3.04E+02	----	---	---	1.80E+02	
2. Chimney Iodine Releases									6.6D.1.f. (1)
a) Isotopes Released									
I-131	curies	1.49E-02	1.09E-02	2.42E-02	1.89E-03	9.84E-04	1.04E-03	5.39E-02	
I-133	curies	1.04E-01	6.80E-02	1.95E-01	3.91E-03	7.30E-03	8.92E-03	3.87E-01	
I-135	curies	1.71E-01	9.77E-02	3.57E-01	5.58E-03	9.73E-03	1.92E-02	6.60E-01	
b) Percent of Chimney Limit	%	0.14	0.10	0.22	0.02	0.01	0.01	0.08	6.6D.1.f. (3)
c) Average Release Rate	uCi/sec	5.56E-03	4.07E-03	2.34E-03	7.06E-04	3.80E-04	3.88E-04	3.39E-03	

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	July	August	September	October	November	December	6 MO. TOTAL	TECH. SPEC. REF.
3. Chimney Particulate Release									
a) Gross Radioactivity(β - γ)	curies	1.59E-02	1.48E-02	2.62E-02	2.14E-03	2.22E-03	3.71E-03	6.49E-02	6.6D.1.f.(1)
b) Gross Alpha Radioactivity									
c) Isotopes Released									6.6D.1.f.(1)
Cr-51	mCi	-----	---	-----	---	---	---	---	
Mn-54	mCi	2.45E-02	---	1.03E-01	3.01E-02	7.45E-02	7.47E-02	3.07E-01	
Co-58	mCi	-----	---	-----	-----	6.54E-03	---	6.54E-03	
Fe-59	mCi	3.86E-04	---	-----	-----	---	---	3.86E-04	
Co-60	mCi	2.64E-01	6.83E-01	2.12E00	6.85E-01	5.86E-01	1.07E00	5.41E00	
Zn-65	mCi	-----	---	-----	-----	---	---	---	
Sr-89	mCi	2.89E00	2.94E00	2.36E00	3.43E-01	4.31E-01	3.44E-01	9.31E00	
Sr-90	mCi	1.31E-02	1.14E-02	9.17E-03	2.87E-03	3.60E-03	2.87E-03	4.30E-02	
Zr-95	mCi	-----	---	-----	-----	-----	---	---	
Nb-95	mCi	-----	---	-----	-----	-----	---	---	
Ru-103	mCi	7.34E-03	---	1.06E-02	6.79E-02	7.41E-03	---	9.33E-02	
Aq-110m	mCi	-----	---	-----	-----	---	---	---	
Continued on next page									
d) Percent of Chimney Limit	%	0.17	0.13	0.24	0.02	0.02	0.04	0.11	6.6D.1.f.(3)
e) Average Release Rate	uCi/sec	5.94E-03	5.51E-03	1.01E-02	7.99E-04	8.56E-04	1.39E-03	4.08E-03	
4. Vent Stack Iodine Release									6.6D.1.f.(1)
a) Isotopes Released									
I-131	curies	8.66E-04	9.61E-04	8.59E-04	1.03E-03	7.52E-05	7.32E-05	3.86E-03	
I-133	curies	3.79E-03	5.05E-03	4.24E-03	1.60E-03	3.96E-04	4.32E-04	1.55E-02	
I-135	curies	5.79E-03	5.26E-03	5.71E-03	2.42E-03	2.42E-04	---	1.94E-02	
b) Percent of Vent Stack Limit	%	0.27	0.30	0.28	0.32	0.02	0.02	0.20	6.6D.1.f.(3)
c) Average Release Rate	uCi/sec	3.23E-04	3.59E-04	3.31E-04	3.85E-04	2.90E-05	2.73E-05	2.43E-04	

REPORT OF RADIOACTIVE EFFLUENTS

EASILY: Dresden Nuclear Power Station - Unit 2/3

DOCKET NOS.: 50-237, 50-249

YEAR: 1983

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* 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	July	August	September	October	November	December	6 MO. TOTAL	TECH. SPEC. REF.
5. Vent Stack Particulate Release									
(a) Gross Radioactivity (B-Y)	curies	2.27E-03	3.35E-03	2.54E-03	5.51E-03	3.01E-03	2.92E-03	1.96E-02	
(b) Gross Alpha Radioactivity	mCi								6.6D.1.f.(1)
(c) Isotopes Released									
Cr-51	mCi	7.77E-02	1.20E-01	1.51E-01	1.28E00	3.83E-01	2.13E-01	2.22E00	6.6D.1.f.(1)
Mn-54	mCi	8.85E-02	1.04E-01	8.41E-02	2.87E-01	1.91E-01	1.77E-01	9.32E-01	
Co-58	mCi	4.21E-02	5.55E-02	6.97E-02	2.63E-01	1.16E-01	5.46E-02	6.01E-01	
Fe-59	mCi	1.09E-02	5.44E-03	1.25E-03	9.35E-02	5.13E-02	3.32E-02	1.96E-01	
Co-60	mCi	1.39E00	1.73E00	1.45E00	3.03E00	2.09E00	2.23E00	1.19E+01	
Zn-65	mCi	1.51E-02	3.65E-02	2.79E-02	3.32E-02	1.35E-03	1.44E-02	1.28E-01	
Sr-89	mCi	4.89E-02	8.65E-02	6.92E-02	2.56E-02	3.20E-02	2.84E-02	2.91E-01	
Sr-90	mCi	1.63E-03	2.99E-03	2.39E-03	1.52E-03	1.90E-03	2.00E-03	1.24E-02	
Zr-95	mCi	3.01E-03	---	---	8.75E-03	3.53E-03	---	1.53E-02	
Nb-95	mCi	---	---	---	7.86E-03	3.17E-03	2.72E-03	1.38E-02	
Ru-103	mCi	3.32E-03	---	---	5.64E-02	1.75E-02	---	7.72E-02	
(continued on next page)									
(d) Percent Vent Stack Limit	%	0.71	1.04	0.82	1.72	0.97	0.91	1.03	6.6D.1.f.(3)
(e) Average Release Rate	uCi/sec	8.48E-04	1.25E-03	9.80E-04	2.06E-03	1.16E-03	1.09E-03	1.23E-03	
6. Sum of Iodine and Particulate									
a) Percent of Chimney Limit	%	0.31	0.23	0.46	0.04	0.03	0.05	0.19	6.6D.1.f.(3)
b) Percent of Vent Stack Limit	%	0.98	1.34	1.10	2.04	0.99	0.93	1.23	
7. Gaseous Tritium									
a) Release	curies	2.50E+01	1.06E+01	1.80E+01	7.04E00	7.95E00	1.77E+01	8.63E+01	
b) Average Release Rate	uCi/sec	9.34E00	3.96E00	6.96E00	2.63E00	3.07E00	6.61E00	5.43E00	
c) Percent Tech Spec Limit	%	NA	NA	NA	NA	NA	NA	NA	

REPORT OF RADIOACTIVE EFFLUENTS

EAGILITY: DRESDEN NUCLEAR POWER STATION-UNITS 2/3

DOCKET NOS.: 50-237, 50-249

YEAR: 1983

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* Detected but not reported.

REPORT OF RADIOACTIVE EFFLUENTS

EACILITY: 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, 50-249

YEAR: 1983

II. Liquid Effluents	UNITS	July	August	September	October	November	December	6 MO. TOTAL	TECH. SPEC. REF.
1. Gross Radioactivity ($\beta\text{-}\gamma$)									
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)

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REPORT OF RADIOACTIVE EFFLUENTS

FACILITY: Dresden Nuclear Power Station - Unit 2/3

DOCKET NOS.: 50-237, 50-219

YEAR: 1983

II. Liquid Effluents (continued)	UNITS	July	August	September	October	November	December	6 MO. TOTAL	TECH. SPEC. REF.
8. Gross Radioactivity (B-1) LPCI Service H ₂ O Heat Exchanger	Milli-Curies								
a) Total Release		1.76E00	2.84E00	2.25E00	4.00E-01	4.60E-01	5.20E-01	8.23E00	
b) Average Concentration Released*	uci/ml	1.12E-11	1.66E-11	1.40E-11	2.76E-12	6.39E-12	7.69E-12	1.06E-11	
c) Maximum Concentration Released*	uci/ml	2.31E-07	1.75E-07	1.51E-07	6.74E-08	3.84E-08	1.04E-07	2.31E-07	
d) Percent of Tech Spec Limit	%	0.01	0.02	0.01	<0.01	0.01	0.01	0.01	
based on average conc released									
9. Tritium									
a) Total Release	Curies	4.54E-04	1.28E-04	1.16E-04	3.45E-05	9.21E-05	4.59E-05	8.71E-04	
b) Average Concentration Released	uci/ml	2.89E-12	7.49E-13	7.20E-13	2.38E-13	1.28E-12	6.79E-13	1.13E-12	
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	1.21E-05	2.09E-05	1.22E-05	2.14E-06	2.53E-06	2.13E-06	5.20E-05	
b) Average Concentration Released	uci/ml	7.71E-14	1.22E-13	7.58E-14	1.48E-14	3.51E-14	3.15E-14	6.72E-14	
12. Volume of Liquid Waste to Discharge Canal	Liters	3.29E+05	3.61E+05	3.29E+05	9.86E+04	2.63E+05	1.31E+05	1.51E+06	
13. Volume of Dilution Water	Liters	1.57E+11	1.71E+11	1.61E+11	1.45E+11	7.20E+10	6.76E+10	7.74E+11	

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

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FACILITY: Dresden Nuclear Power Station - Unit 2/3

DOCKET NOS.: 50-237, 50-2112

YEAR: 1983

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REPORT OF RADIOACTIVE EFFLUENTS

FACILITY: Dresden Nuclear Power Station

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

YEAR: 1983

I. Solid Waste Shipped Offsite For Burial or Disposal		UNITS	July	August	September	October	November	December	6 MO. TOTAL	TECH. SPEC. REF.
1. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.										
a) Quantity Shipped	cubic meters	4.12E+01	1.32E+02	1.17E+02	1.29E+02	8.91E+01	3.17E+01	5.40E+02	6.5.D.g.(1)	
b) Radioactivity	curies	1.01E+02	2.24E+02	1.51E+02	1.85E+02	5.66E+02	3.65E+02	1.59E+03	6.5.D.g.(2)	
2. Dry compressible waste, contaminated equipment, etc.										
a) Quantity Shipped	cubic meters	4.95E+01	4.37E+01	4.82E+01	8.95E+01	7.40E+01	2.15E+01	3.26E+02	6.5.D.g.(1)	
b) Radioactivity	curies	3.11E00	2.29E00	2.92E00	1.03E+01	6.69E00	7.90E-01	2.61E+01	6.5.D.g.(2)	
II. Solid Waste Shipped Offsite For Burial or Disposal (Processed by contractor)										
1. Spent Resins, Filter Sludges, evaporator bottoms, etc.										
a) Quantity Shipped	cubic meters	0	0	0	0	0	0	0	6.5.D.g.(1)	
b) Radioactivity	curies	0	0	0	0	0	0	0	6.5.D.g.(2)	
2. Dry Compressible Waste, contaminated equipment, etc.										
a) Quantity	cubic meters	0	0	0	0	0	0	0	6.5.D.g.(1)	
b) Radioactivity	curies	0	0	0	0	0	0	0	6.5.D.g.(2)	

DRESDEN NUCLEAR POWER STATION

SOLID WASTE DISPOSITION

YEAR 1983

MONTH	NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
July	9	Motor Freight (Exclusive Use Only)	Barnwell, S.C.
July	8	Motor Freight (Exclusive Use Only)	Richland, W.A.
August	13	Motor Freight (Exclusive Use Only)	Barnwell, S.C.
August	31	Motor Freight (Exclusive Use Only)	Richland, WA.
September	12	Motor Freight (Exclusive Use Only)	Barnwell, S.C.
September	23	Motor Freight (Exclusive Use Only)	Richland, W.A.
October	10	Motor Freight (Exclusive Use Only)	Barnwell, S.C.
October	30	Motor Freight (Exclusive Use Only)	Richland, W.A.
November	24	Motor Freight (Exclusive Use Only)	Barnwell, SC.
November	13	Motor Freight (Exclusive Use Only)	Richland, WA..
December	5	Motor Freight (Exclusive Use Only)	Barnwell, SC
December	7	Motor Freight (Exclusive Use Only)	Richland, WA

**Commonwealth Edison**

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

PRINCIPAL STAFF			
RA*		DPRP	
D/RA		DE	
A/RA		DRMSP	
RC		DRMA	
PAO		SCS	
SGA		MIL	
ENF		File	Das

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February 15, 1984

DMB

Mr. James G. Keppler
Regional Administrator
Directorate of Inspection and Enforcement
Region III
U.S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, IL 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 July through
December 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

D.J. Scott
Station Superintendent
Dresden Nuclear Power Station

DJS:RA:sp

Enclosure

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

1E:25
1/1

MAR 1 1984