



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

RETS MASTER FILE

EFF-82B

March 2, 1983

DJS LTR: #83-216

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

FRANCIS L. J. J. J.	
MA	
DA	
PA	
DE	
ML	
OL	

SUBJECT: Dresden Station Operating Report, NRC Dockets 50-10, (50-237),
and 50-249.

Dear Mr. Keppler:

Enclosed is Part 2 of the Dresden Station Operating Report reporting
radioactive effluents and occupational radiation dose. Part 1 of the
Operating Report reporting on operating experience of this facility is
being submitted under separate cover. Part 3 of the Operating Report
reporting environmental radiological monitoring data will be submitted
in March.

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,

DJS Scott

D.S. Scott
Station Superintendant
Dresden Nuclear Power Station

DJS:RA:sp

Attachment

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

8306130275 830302
PDR ADOCK 05000010
R PDR

MAR 8 1983

REPORT OF RADIOACTIVE EFFLUENTS

FACILITY: DRESDEN NUCLEAR POWER STATION - UNIT 1

DOCKET NOS.: 50 - 10

YEAR: 1982

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	
Maximum Release Rate									
b) (daily grab sample)	uCi/sec	---	---	---	---	---	---	---	
c) Isotopes Released									
Kr-85m	curies								
Kr-97	curies								
Kr-98	curies								
Kr-133	curies								
Kr-135	curies								
Kr-135m	curies								
Kr-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	2.14E-07	3.89E-08	1.50E-06	1.75E-06	
I-133	curies	---	---	---	1.99E-06	3.62E-07	---	2.35E-06	
I-135	curies	---	---	---	1.82E-05	3.31E-04	---	2.15E-03	
b) Percent of Chimney Limit	%	---	---	---	<0.01	<0.01	<0.01	<0.01	
c) Average Release Rate	uCi/sec	---	---	---	7.99E-08	1.50E-08	5.60E-07	1.10E-07	

REPORT OF RADIOACTIVE EFFLUENTS

FACILITY: INDEPENDENT NUCLEAR POWER STATION - UNIT 1

PERMIT NO.: 50-10

YEAR: 1982

1. Gaseous Effluents (continued)	UNITS	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	6 MO. TOTAL	TECH. SPEC. REF.
3. Particulate Releases	milli-curies								
a) Gross Radioactivity (Bq)		1.98E-03	2.52E-03	6.78E-03	1.04E-02	4.58E-02	1.45E-01	2.12E-01	
b) Gross Alpha Radioactivity	mCi								
c) Isotopes Released	mCi								
Cr-51	mCi	---	---	---	---	---	---	---	
Ni-54	mCi	---	---	---	3.8E-04	3.49E-04	---	7.36E-04	
Co-58	mCi	---	---	---	---	---	---	---	
Co-60	mCi	1.29E-03	1.19E-03	1.93E-03	5.84E-03	3.84E-03	6.23E-03	2.03E-02	
Sr-89	mCi	5.26E-06	1.49E-04	5.66E-05	2.10E-05	3.15E-05	3.15E-05	2.95E-04	
Sr-90	mCi	2.63E-06	2.67E-06	4.36E-06	4.20E-06	2.86E-06	2.86E-06	1.96E-05	
Zr-95	mCi	---	---	---	---	---	---	---	
Nb-95	mCi	---	---	---	---	---	---	---	
Ru-103/Ag-110m	mCi	--/--	--/--	--/--	--/--	--/7.04E-05	--/--	--/7.04E-05	
I-131	mCi	---	---	---	---	---	---	---	
Cs-134	mCi	2.54E-04	6.45E-04	7.17E-04	4.37E-04	4.07E-03	1.43E-02	2.04E-02	
Cs-137	mCi	4.25E-04	5.31E-04	4.07E-03	3.71E-03	3.64E-02	1.24E-01	1.69E-01	
Ba-140/Ba-133	mCi	--/--	--/--	--/--	--/--	--/5.78E-04	--/--	5.78E-04	
Ce-141	mCi	---	---	---	---	---	---	---	
C-144	mCi	---	---	---	---	4.91E-04	---	4.91E-04	
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	2.39E-07	9.41E-07	2.62E-06	3.88E-06	1.77E-05	5.41E-05	1.33E-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: INASCON NUCLEAR POWER STATION - UNIT 1

DOCKET NOB.: 50-10

YEAR: 1982

[illegible]

REPORT OF RADIOACTIVE EFFLUENTS

FACILITY: Dresden Nuclear Power Station - Unit 1

DOCKET NOS.: 50 - 10

YEAR: 1962

11. Liquid Effluents (continued)

[illegible]

1. 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	1.99E+03	1.98E+03	2.06E+03	1.32E+03	1.24E+03	1.45E+03	1.42E+03	6.60E+03	6.60.1.f. (1)
b) Maximum Release Rate (daily grab sample)	$\mu\text{Ci/sec}$	1.12E+03	2.10E+03	4.30E+03	7.95E+02	1.40E+03	4.35E+03	4.35E+03	6.60E+03	6.60.1.f. (2)
c) Isotopes Released									6.60.1.f. (4)	
Kr-85m	curies	3.12E+01	2.97E+01	2.50E+01	---	2.31E+01	1.22E+02	2.31E+02		
Kr-87	curies	4.95E+01	7.72E+01	---	---	3.29E+01	---	1.60E+02		
Kr-88	curies	8.84E+01	6.93E+01	1.61E+02	---	---	1.60E+02	4.79E+02		
Xe-133	curies	1.17E+02	1.15E+02	1.08E+02	6.58E+01	5.40E+01	2.71E+02	7.31E+02		
Xe-135	curies	5.72E+02	4.89E+02	4.43E+02	3.87E+02	2.70E+02	2.43E+02	2.40E+03		
Xe-135m	curies	1.66E+02	2.22E+02	4.43E+02	---	1.38E+02	2.03E+02	1.17E+03		
Xe-138	curies	9.62E+02	9.78E+02	8.55E+02	8.64E+02	7.20E+02	6.49E+02	5.03E+03		
Kr-85	curies	3.94E-02	3.62E-02	3.12E-02	3.74E-02	3.07E-02	3.37E-02	2.09E-01		
d) Percent of Chimney Limit	%	0.09	0.08	0.10	0.05	0.06	0.07	0.08	6.60.1.f. (3)	
e) Average Release Rate	$\mu\text{Ci/sec}$	7.42E+02	7.38E+02	7.86E+02	4.92E+02	4.78E+02	6.16E+02	6.42E+02		
2. Chimney Iodine Releases									6.60.1.f. (1)	
a) Isotopes Released										
I-131	curies	6.26E-02	4.72E-02	9.48E-02	5.16E-02	5.29E-02	4.09E-02	3.50E-01		
I-133	curies	3.36E-01	2.86E-01	6.88E-01	2.08E-01	3.54E-01	2.78E-01	2.15E00		
I-135	curies	4.40E-01	4.46E-01	1.21E00	2.40E-01	6.12E-01	4.84E-01	3.43E00		
b) Percent of Chimney Limit	%	0.63	0.43	0.96	0.44	0.47	0.37	0.55	6.60.1.f. (3)	
c) Average Release Rate	$\mu\text{Ci/sec}$	2.34E-02	1.76E-02	3.66E-02	1.92E-02	2.04E-02	1.53E-02	2.20E-02		

REPORT OF RADIOACTIVE EFFLUENTS

FACILITY: Dresden Nuclear Power Station - Unit 2/3

DOCKET NOS.: 50-237, 50-249

YEAR: 1982

I. Gaseous Effluents(continued)	UNITS	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	6 MO. TOTAL	TECH. SPEC. REF.
3. Chimney Particulate Release									
a) Gross Radioactivity(A-Y)	curies	4.07E-02	3.50E-02	6.11E-02	3.63E-02	3.06E-02	3.55E-02	2.39E-01	6.6D.1.f.(1)
b) Gross Alpha Radioactivity									
c) Isotopes Released									6.6D.1.f.(1)
Cr-51	mCi	5.19E-02	---	---	3.42E-02	8.37E-02	---	1.70E-01	
Mn-54	mCi	3.50E-01	3.70E-01	1.30E-01	1.66E-01	2.35E-01	4.88E-01	1.74E00	
Co-58	mCi	8.49E-03	5.05E-03	7.11E-03	2.02E-02	2.59E-02	---	6.68E-02	
Fe-59	mCi	---	1.65E-02	---	---	---	---	1.65E-02	
Co-60	mCi	3.93E00	4.03E00	1.88E00	1.72E00	2.57E00	5.15E00	1.93E+01	
Zn-65	mCi	---	---	---	1.26E-02	3.42E-02	---	4.68E-02	
Sr-89	mCi	2.24E-02	2.81E-02	4.20E-02	2.34E-02	1.30E-02	1.30E-02	1.42E-01	
Sr-90	mCi	5.20E-05	1.32E-04	2.32E-04	1.25E-04	7.24E-05	7.24E-05	6.86E-04	
Zr-95	mCi	---	2.73E-02	1.99E-02	---	---	1.13E-01	1.60E-01	
Nb-95	mCi	4.02E-03	1.25E-02	---	---	---	---	1.65E-02	
Ru-103	mCi	3.72E-02	4.17E-02	1.03E-01	9.63E-02	9.62E-02	1.24E-01	4.98E-01	
Ag-110m	mCi	1.76E-03	---	---	1.80E-02	1.09E-03	2.73E-02	4.82E-02	
Continued on next page									
d) Percent of Chimney Limit	%	0.52	0.46	0.75	0.40	0.36	0.41	0.48	6.6D.1.f.(2)
e) Average Release Rate	uCi/sec	1.52E-02	1.31E-02	2.36E-02	1.36E-02	1.18E-02	1.33E-02	1.50E-02	
4. Vent Stack Iodine Release									6.6D.1.f.(1)
a) Isotopes Released									
I-131	curies	2.03E-03	2.74E-03	4.98E-03	8.26E-03	9.54E-03	1.26E-02	4.02E-02	
I-133	curies	1.40E-02	2.08E-02	4.86E-02	6.88E-02	8.66E-02	1.23E-01	3.62E-01	
I-135	curies	2.57E-02	4.22E-02	1.01E-01	1.31E-01	1.86E-01	2.86E-01	7.72E-01	
b) Percent of Vent Stack Limit	%	0.63	0.85	1.60	2.57	3.07	3.92	2.11	6.6D.1.f.(3)
c) Average Release Rate	uCi/sec	7.58E-04	1.02E-03	1.92E-03	3.08E-03	3.68E-03	4.70E-03	2.53E-03	

REPORT OF RADIOACTIVE EFFLUENTS

FACILITY: Dresden Nuclear Power Station - Unit 2/3

DOCKET NOS.: 50-237, 50-249

YEAR: 1982

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REPORT OF RADIOACTIVE EFFLUENTS

FACILITY: Dresden Nuclear Power Station - Unit 2/3

DOCKET NOS.: 50-237, 50-239

YEAR: 1982

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		4.06E-03	5.11E-03	1.27E-02	1.74E-02	1.97E-02	2.93E-02	8.83E-02	
(b) Gross Alpha Radioactivity	mCi									6.6D.1.f.(1)
(c) Isotopes Released										
Cs-51	mCi		1.73E00	1.73E00	4.77E00	6.34E00	8.09E00	1.10E+01	3.37E+01	6.6D.1.f.(1)
mn-54	mCi		8.58E-02	9.47E-02	1.23E-01	1.64E-01	3.13E-01	2.85E-01	1.07E00	
Cs-58	mCi		1.41E-01	6.99E-02	1.21E-01	1.49E-01	2.25E-01	4.16E-01	1.12E00	
Po-59	mCi		1.16E-02	3.19E-02	9.96E-02	9.12E-02	2.47E-01	1.20E-01	6.01E-01	
Cs-60	mCi		1.05E00	1.14E00	1.19E00	2.26E00	2.79E00	2.89E00	1.13E+01	
Zn-65	mCi		3.59E-02	2.88E-02	6.09E-02	7.45E-02	1.29E-01	2.89E-01	6.18E-01	
Sr-89	mCi		1.04E-03	2.26E-03	5.22E-03	4.93E-03	3.73E-03	3.73E-03	2.09E-02	
Sr-90	mCi		3.71E-05	8.11E-05	1.38E-04	6.30E-05	6.38E-05	6.38E-05	4.47E-04	
Zr-95	mCi		4.96E-04	6.14E-03	1.38E-02	5.35E-03	2.89E-02	1.67E-02	7.14E-02	
Nb-95	mCi		4.11E-04	3.87E-03	8.96E-03	9.63E-03	1.67E-02	3.26E-03	4.28E-02	
Ru-101	mCi		4.46E-03	1.37E-02	4.38E-02	5.17E-02	7.72E-02	9.79E-02	2.89E-01	
(continued on next page)										
(d) Percent Vent Stack Limit	%		1.26	1.39	4.08	5.41	6.33	9.12	4.63	6.6D.1.f.(3)
(e) Average Release Rate	mCi/sec		1.52E-03	1.91E-03	4.90E-03	6.50E-03	7.60E-03	1.09E-02	5.56E-03	
6. Sum of Iodine and Particulate										
a) Percent of Chimney Limit	%		1.15	0.89	1.71	0.83	0.83	0.78	1.03	6.6D.1.f.(3)
b) Percent of Vent Stack Limit	%		1.89	2.44	5.68	7.98	9.40	13.04	6.74	
7. Gaseous Tritium										
a) Release	curies		2.10E+01	1.87E+01	1.68E+01	3.21E+01	5.52E+01	5.68E+01	2.01E+02	
b) Average Release Rate	mCi/sec		2.84E00	6.99E00	6.48E00	1.20E+01	2.13E+01	2.12E+01	1.26E+01	
c) Percent Tech Spec Limit	%		NA	NA	NA	NA	NA	NA	NA	

REPORT OF RADIOACTIVE EFFLUENTS

ENCLIVITY: DRESDEN NUCLEAR POWER STATION UNITS 2/3

DOCKET NOS.: 90-917, 90-749

YEAR: 1982

[illegible]

REPORT OF RADIOACTIVE EFFLUENTS

Facility: Dresden Nuclear Power Station-Units 2/3

DOCKET NOS.: 50-237, 50-249

YEAR: 1982

[illegible]

REPORT OF RADIOACTIVE EFFLUENTS

FACILITY: DRESDEN NUCLEAR POWER STATION - UNIT 2/3

DOCKET NOS.: 50-217, 50-219

YEAR: 1982

II. Liquid Effluents

	UNITS	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	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: 1982

II. Liquid Effluents (continued)

[illegible]

REPORT OF RADIOACTIVE EFFLUENTS

FACILITY: Dresden Nuclear Power Station - Unit 2/3

DOCKET NO.: 50-237, 50-249

YEAR: 1982

II. Liquid Effluents (continued)		UNITS	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	6 MO. TOTAL	TECH. SPEC. REF.
8. Gross Radioactivity (d-f) LPCI Service H ₂ O Heat Exchanger										
a) Total Release	Curies	1.29E00	1.25E00	4.90E-01	6.00E-01	3.00E-01	1.10E-01	4.04E00		
b) Average Concentration Released	uci/ml	7.67E-12	7.25E-12	3.16E-12	4.14E-12	2.29E-12	8.15E-13	4.46E-12		
c) Maximum Concentration Released	uci/ml	7.21E-08	2.84E-08	3.23E-08	5.46E-08	1.53E-08	9.71E-09	7.21E-08		
d) Percent of Tech Spec Limit	%	0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
based on average conc released										
9. Tritium										
a) Total Release	Curies	1.44E-04	1.87E-04	3.35E-05	4.44E-05	1.37E-04	7.69E-05	6.23E-04		
b) Average Concentration Released	uci/ml	8.57E-13	1.09E-12	2.16E-13	3.06E-13	1.04E-12	5.69E-13	6.87E-13		
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	8.99E-07	7.16E-07	2.76E-07	3.75E-07	2.69E-07	2.37E-07	2.77E-06		
b) Average Concentration Released	uci/ml	5.35E-15	4.15E-15	1.78E-15	2.59E-15	2.05E-15	1.76E-15	3.06E-15		
12. Volume of Liquid Waste to Discharge Canal		Liters	3.12E+05	4.93E+05	9.86E+04	1.64E+04	2.63E+05	1.48E+05	1.33E+06	
13. Volume of Dilution Water		Liters	1.68E+11	1.72E+11	1.55E+11	1.45E+11	1.31E+11	1.35E+11	9.06E+11	

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

1

FACILITY: Dresden Nuclear Power Station - Unit 2/3

DOCKET NOS.: 50-237, 50-242

YEAR: 1982

11. Liquid Effluents (continued)

[illegible]

REPORT OF RADIOACTIVE EFFLUENTS

FACILITY: Breeding Nuclear Power Station

BUCKET NOS.: 30-10, 30-237, 30-249

YEAR: 1982

1. Solid Waste Shipped Offsite For Recycling or Disposal

[illegible]

DRESDEN NUCLEAR POWER STATION

SOLID WASTE DISPOSITION

YEAR 1982

MONTH	NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
July	12	Motor Freight (Exclusive Use Only)	Barnwell, SC
July	3	Motor Freight (Exclusive Use Only)	Richland, WA
August	19	Motor Freight (Exclusive Use Only)	Barnwell, SC
September	14	Motor Freight (Exclusive Use Only)	Barnwell, SC
September	1	Motor Freight (Exclusive Use Only)	Richland, WA
October	17	Motor Freight (Exclusive Use Only)	Barnwell, SC
October	2	Motor Freight (Exclusive Use Only)	Richland, WA
November	15	Motor Freight (Exclusive Use Only)	Barnwell, SC
November	1	Motor Freight (Exclusive Use Only)	Richland, WA
December	13	Motor Freight (Exclusive Use Only)	Barnwell, S.C.
December	3	Motor Freight (Exclusive Use Only)	Richland, W.A.

Dresden Station

1982 Report of Occupational Personnel Radiation Doses
Commonwealth Edison Company

Station Fuelers

Work Function						
Reactor Operations & Surveillance # of People/Man-Hrs	Routine Maint. # of People/ Man-Hrs	Inservice Inspection # of People/Man-Hrs	Waste Processing # of People/ Man-Hrs	Refueling # of People/ Man-Hrs	Special Maint. NRC Mandated # of People/Man-Hrs	Total By Job Function # of People/Man-Hrs
26/39.10	170/255.90	20/30.40	29/43.30	43/65.10	-----	288/433.80
71/74.60	32/33.10	6/6.60	36/38.10	13/13.20	-----	158/165.60
2/3.90	27/62.40	3/6.00	9/21.80	2/5.00	-----	43/99.10
9/11.50	82/80.90	8/6.20	28/27.80	9/12.20	-----	136/138.60
2/1.20	43/22.20	5/2.70	4/1.80	4/2.10	-----	58/30.00

Dresden Station

1982 Report of Occupational Personnel Radiation Doses*
Commonwealth Edison Company

Contract Workers

Function	Work Function						Total By Job Function # of People/Man-Ren
	Reactor Operations & Surveillance # of People/Man-Ren	Routine Maint. # of People/ Man-Ren	Inservice Inspection # of People/Man-Ren	Waste Processing # of People/ Man-Ren	Refueling # of People/ Man-Ren	Special Maint. NRC Mandated # of People Man-Ren	
Maintenance	-----	772/1520.00	69/135.10	17/33.80	-----	-----	858/1688.90
Operating	-----	-----	-----	-----	-----	-----	-----
Health Physics	-----	-----	-----	-----	-----	-----	-----
Supervision	-----	-----	-----	-----	-----	-----	-----
Engineering	-----	-----	-----	-----	-----	-----	-----