



**Consumers
Power
Company**

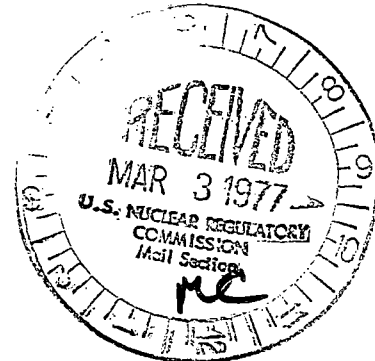
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February 28, 1977

REGULATORY DOCKET FILE COPY

Mr James G Keppler
Office of Inspection & Enforcement
Region III
US Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, IL 60137



DOCKET 50-255 - LICENSE DPR-20 -
PALISADES PLANT - SEMIANNUAL
RADIOACTIVE EFFLUENT REPORT

Attached are summary tables of the effluents released for the period of July 1, 1976 through December 31, 1976. These tables are in the format associated with Appendix B of Regulatory Guide 1.21 and constitute our semiannual radioactive effluent report.

David P Hoffman (Signed)

David P Hoffman
Assistant Nuclear Licensing Administrator

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Consumers Power Company
Palisades Nuclear Plant, Docket No 50-255
Atmospheric Radioactive Effluents

	UNITS	JULY	AUGUST	SEPTEMBER	3RD QTR	OCTOBER	NOVEMBER	DECEMBER	4TH QTR	SIX MONTH TOTAL	YEARLY TOTAL
Total Noble Gases	Curies	3.06E-01	2.96E-01	2.05E-02	6.23E-01	9.41E-01	2.67E+01	2.64E-01	2.79E+01	2.85E+01	2.99E+01
Total Halogens		2.25E-04	6.27E-04	3.61E-03	4.46E-03	2.06E-03	2.58E-03	1.45E-03	6.10E-03	1.06E-02	3.06E-02
Total Particulates (Beta & Gamma)		1.40E-05	2.25E-05	2.25E-05	5.91E-05	9.79E-06	7.10E-05	5.23E-06	8.60E-05	1.45E-04	1.43E+02
Percent of Applicable Limits	%										
Noble Gases		7.62E-05	7.37E-05	5.27E-06	5.23E-05	2.28E-04	1.45E-02	6.57E-05	4.81E-03	2.43E-03	1.25E-03
Halogens		5.88E-03	7.28E-03	8.30E-02	3.15E-02	5.36E-02	6.00E-02	3.19E-02	4.84E-02	3.99E-02	6.47E-02
Particulates		7.78E-05	8.75E-04	4.44E-04	7.02E-04	7.07E-04	6.31E-03	2.30E-04	2.37E-03	1.54E-03	1.20E-03
Isotopic Releases	Curies										
Noble Gases											
Xe-131m		-----	-----	-----	-----	9.37E-02	5.69E-01	-----	6.63E-01	6.63E-01	6.63E-01
Xe-133		3.06E-01	2.96E-01	2.05E-02	6.23E-01	8.45E-01	2.12E+01	2.63E-01	2.23E+01	2.29E+01	2.30E+01
Xe-133m		-----	-----	-----	-----	2.33E-03	5.43E-01	1.02E-03	5.46E-01	5.46E-01	5.46E-01
Xe-135		-----	-----	-----	-----	-----	3.84E-01	1.83E-06	3.84E-01	3.84E-01	3.84E-01
Kr-85		-----	-----	-----	-----	-----	4.05E-01	-----	4.05E-01	4.05E-01	1.68E+00
Kr-85m		-----	-----	-----	-----	-----	8.27E-01	-----	8.27E-01	8.27E-01	8.27E-01
Kr-87		-----	-----	-----	-----	-----	2.38E-01	-----	2.38E-01	2.38E-01	2.38E-01
Kr-88		-----	-----	-----	-----	-----	9.93E-01	-----	9.93E-01	9.93E-01	9.93E-01
Ar-41		-----	-----	-----	-----	-----	1.54E+00	-----	1.54E+00	1.54E+00	1.54E+00
Halogens											
I-131		2.25E-04	2.77E-04	3.07E-03	3.57E-03	2.05E-03	2.22E-03	1.22E-03	5.49E-03	9.06E-03	2.92E-02
I-133		-----	1.71E-04	5.43E-04	7.14E-04	1.31E-05	2.95E-04	2.33E-04	5.41E-04	1.26E-03	1.29E-03
I-135		-----	1.79E-04	-----	1.79E-04	-----	6.44E-05	-----	6.44E-05	2.43E-04	6.44E-05
Particulates											
Cr-51		-----	-----	-----	-----	-----	-----	-----	-----	-----	1.40E-02
Mn-54		-----	-----	-----	-----	-----	8.50E-07	-----	8.50E-07	8.50E-07	1.20E-05
Co-58		-----	-----	-----	-----	1.70E-06	-----	-----	1.70E-06	1.70E-06	4.63E-05
Co-60		5.66E-06	1.11E-05	1.77E-05	3.45E-05	-----	-----	2.88E-06	2.88E-06	3.74E-05	5.84E-05
Cs-137		-----	2.65E-06	1.70E-06	4.35E-06	-----	8.70E-08	-----	8.70E-08	4.44E-06	1.72E-05
Co-57		-----	-----	-----	-----	-----	-----	-----	-----	-----	9.60E-07
Ce-141		-----	-----	-----	-----	-----	-----	-----	-----	-----	2.10E-06
Net Unidentified Beta		8.37E-06	8.77E-06	3.06E-06	2.02E-05	8.09E-06	7.01E-05	2.35E-06	8.05E-05	1.01E-04	1.49E-04
Alpha		1.14E-06	1.28E-06	1.39E-06	3.81E-06	1.48E-06	6.24E-06	2.90E-07	8.01E-06	1.18E-05	1.38E-05

1976

1976

Consumers Power Company
Palisades Nuclear Plant, Docket No 50-255
Liquid Radioactive Effluents - Laundry System Drains

	UNITS	JULY	AUGUST	SEPTEMBER	3RD QTR	OCTOBER	NOVEMBER	DECEMBER	4TH QTR	SIX MONTH TOTAL	YEARLY TOTAL
Total Radioactivity Released (Except Tritium)	Curies	3.31E-03	4.07E-03	5.75E-03	1.31E-02	3.54E-03	3.33E-03	8.20E-03	1.51E-02	2.82E-02	4.30E-01
Volume of Waste Discharged	Liters	2.03E+04	1.07E+04	1.94E+04	5.04E+04	1.05E+04	1.09E+04	1.04E+04	3.18E+04	8.22E+04	5.40E+05
Average Concentration of Waste Prior to Release *	µCi/ml	2.19E-03	1.57E-03	1.79E-03	1.90E-03	2.90E-03	2.17E-02	1.58E-02	1.36E-02	6.41E-03	2.06E-03
Volume of Circulating Discharge Water	Liters	9.96E+09	1.01E+10	9.81E+09	2.99E+10	1.01E+10	9.81E+09	1.01E+10	3.00E+10	5.99E+10	1.25E+11
Average Concentration Released *	µCi/ml	4.47E-09	1.66E-09	3.53E-09	3.21E-09	3.01E-09	2.41E-08	1.63E-08	1.44E-08	8.80E-09	8.88E-09
Percent of Technical Specifications*	%	1.79E+01	6.64E+00	1.41E+01	1.28E+01	1.21E+01	9.64E+01	6.50E+01	5.75E+01	3.52E+01	3.55E+01
Isotopes	Curies										
Co-57		-----	-----	-----	-----	-----	-----	-----	-----	-----	4.64E-04
Cr-51		-----	-----	-----	-----	-----	-----	-----	-----	-----	3.78E-02
Co-58		7.24E-04	5.35E-04	1.04E-03	2.30E-03	4.48E-04	8.21E-04	2.32E-03	3.59E-03	5.89E-03	2.08E-01
Mn-54		3.63E-04	2.86E-04	6.71E-04	1.32E-03	1.02E-04	9.90E-05	2.53E-04	4.54E-04	1.77E-03	1.44E-02
Zn-65		-----	-----	-----	-----	-----	-----	-----	-----	-----	2.21E-04
I-131		-----	-----	-----	-----	3.32E-04	1.95E-04	5.00E-05	5.77E-04	5.77E-04	3.71E-03
I-133		-----	-----	-----	-----	1.60E-05	-----	-----	1.60E-05	1.60E-05	1.60E-05
Cs-134		2.75E-04	7.66E-04	5.88E-04	1.63E-03	1.96E-04	1.71E-04	7.32E-04	1.10E-03	2.73E-03	2.51E-02
Cs-136		-----	-----	-----	-----	-----	-----	-----	-----	-----	1.38E-03
Cs-137		8.17E-04	1.72E-03	1.76E-03	4.30E-03	7.92E-04	6.71E-04	1.91E-03	3.37E-03	7.67E-03	5.59E-02
Xe-133		1.50E-05	-----	1.93E-04	2.08E-04	1.37E-04	-----	1.48E-03	1.62E-03	1.83E-03	1.94E-03
Zr-95		-----	-----	-----	-----	-----	-----	-----	-----	-----	2.24E-03
Nb-95		-----	-----	-----	-----	-----	-----	-----	-----	-----	3.88E-03
Ce-141		-----	-----	-----	-----	-----	-----	-----	-----	-----	8.90E-05
Fe-59		-----	-----	-----	-----	-----	-----	1.55E-04	1.55E-04	1.55E-04	1.77E-03
Co-60		6.59E-04	3.57E-04	1.42E-03	2.44E-03	4.10E-04	4.20E-04	1.30E-03	2.13E-03	4.57E-03	3.91E-02
La-140		-----	-----	-----	-----	-----	-----	-----	-----	-----	1.24E-04
Ni-63		-----	-----	-----	-----	-----	-----	-----	-----	-----	1.43E-02
Net Unidentified Beta		4.55E-04	4.05E-04	7.30E-05	9.33E-04	1.11E-03	9.54E-04	-----	2.07E-03	3.00E-03	1.98E-02
H-3		4.12E-02	1.27E-02	2.89E-02	8.28E-02	2.69E-02	2.33E-01	1.56E-01	4.16E-01	4.99E-01	6.80E-01
Percent of Total Identified	%	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95

* Including Tritium.

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1976

Consumers Power Company
Palisades Nuclear Plant, Docket No 50-255
Liquid Radioactive Effluents - Modified Liquid Waste System

	UNITS	JULY	AUGUST	SEPTEMBER	3RD QTR	OCTOBER	NOVEMBER	DECEMBER	4TH QTR	SIX MONTH TOTAL	YEARLY TOTAL
Total Radioactivity Released (Except Tritium, Dissolved Noble Gases & Alpha)	Curies	7.90E-05	2.00E-06	1.50E-05	9.60E-05	2.30E-05	-----	-----	2.30E-05	1.19E-04	5.42E-03
Volume of Waste Discharged	Liters	2.02E+06	1.92E+06	1.89E+06	5.83E+06	1.79E+06	1.64E+06	1.76E+06	5.19E+06	1.10E+07	1.68E+07
Average Concentration of Waste Prior to Release (Except Tritium, Dissolved Noble Gases & Alpha)	µCi/ml	3.91E-08	1.04E-09	7.94E-10	1.65E-08	1.28E-08	-----	-----	4.43E-09	1.08E-08	3.22E-07
Volume of Circulating Discharge Water	Liters	9.96E+09	1.01E+10	9.81E+09	2.99E+10	1.01E+10	9.81E+09	1.01E+10	3.00E+10	5.99E+10	1.25E+11
Average Concentration Released (Except Tritium, Dissolved Gases & Alpha)	µCi/ml	7.93E-12	1.98E-13	1.53E-13	3.21E-12	2.28E-12	-----	-----	7.67E-13	1.99E-12	4.33E-11
Percent of MPC	%	3.65E-03	6.60E-05	5.10E-05	1.41E-03	8.91E-04	-----	-----	3.00E-04	8.52E-04	1.58E-02
Tritium Released	Curies	3.02E-01	-----	-----	3.02E-01	4.01E-02	-----	-----	4.01E-02	3.42E-01	8.95E+00
Average Tritium Concentration Released	µCi/ml	3.03E-08	-----	-----	1.01E-08	3.97E-09	-----	-----	1.34E-09	5.71E-09	7.16E-08
Isotopes	Curies										
Co-58		-----	-----	-----	-----	-----	-----	-----	-----	-----	2.40E-04
Mn-54		-----	-----	-----	-----	-----	-----	-----	-----	-----	1.31E-04
Cs-137		-----	-----	-----	-----	-----	-----	-----	-----	-----	1.60E-05
Net Unidentified Beta		7.90E-05	2.00E-06	1.50E-05	9.60E-05	2.30E-05	-----	-----	2.30E-05	1.19E-04	5.03E-03
Percent of Total Identified (Except Tritium, Dissolved Gases & Alpha)	%	0.0	0.0	0.0	0.0	0.0	-----	-----	0.0	0.0	7.1