



Consumers  
Power  
Company

Central  
Mail

General Offices: 212 West Michigan Avenue, Jackson, Michigan 49201 • Area Code 517 788-0550

September 2, 1976

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 January 1, 1976 through June 30, 1976. These tables are in the format associated with Appendix B of Regulatory Guide 1.21 and constitute our semiannual radioactive effluent report.

It has been brought to our attention that a number of errors exist in data previously reported. The corrected data are given below.

Errors in Table VIIIC of the Ninth Semiannual (Jan 1, 1975 Through June 30, 1975) and the First Annual Report (Jan 1, 1975 Through Dec 31, 1975)

<u>Shipment</u>	<u>Total Curies</u>	
	<u>Reported</u>	<u>Correct Value</u>
75014S	6.66E-02	6.60E-02
75022S	1.36E+01	1.33E+01
75046S	0.42	4.2E-02
75048S	0.8	1.15E-01

Error on Page VIII-4 of the Ninth Semiannual Report (Jan 1, 1975 Through June 30, 1975)

	<u>Total Curies</u>	
	<u>Reported</u>	<u>Correct Value</u>
Total Solid Waste Shipped	114	126

SEP 7 1976

Error on Page VIII-12 of the First Annual Report (Jan 1, 1975 Through  
Dec 31, 1975)

	<u>Total Curies</u>	
	<u>Reported</u>	<u>Correct Value</u>
Total Solid Waste Shipped	163	221

We regret any inconvenience these errors may have caused.



David A. Bixel  
Assistant Nuclear Licensing Administrator

CC: Office of Inspection & Enforcement  
Div of Reactor Inspection Programs (25)

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

	<u>Units</u>	<u>January</u>	<u>February</u>	<u>March</u>	<u>1st Quarter</u>	<u>April</u>	<u>May</u>	<u>June</u>	<u>2nd Quarter</u>	<u>Six-Month Total</u>
Total Radioactivity Released . . . . . (Including Tritium)	Curies	1.73E-01	1.84E-01	1.52E-01	5.08E-01	6.02E-02	1.33E-02	-----	7.35E-02	5.83E-01
Volume of Waste Discharged . . . . .	Liters	1.53E+05	1.06E+05	9.52E+04	3.54E+05	7.44E+04	2.92E+04	-----	1.04E+05	4.58E+05
Average Concentration of Waste Prior to Release . . . . .	uCi/ml	1.13E-03	1.74E-03	1.59E-03	1.44E-03	8.09E-04	4.55E-04	-----	7.06E-04	1.27E-03
Volume of Circulating Discharge Water. . . . .	Liters	1.15E+10	1.08E+10	1.15E+10	3.38E+10	1.05E+10	1.14E+10	9.81E+09	3.17E+10	6.55E+10
Average Concentration Released . . . . .	uCi/ml	1.51E-08	1.70E-08	1.32E-08	1.50E-08	5.73E-09	1.17E-09	-----	2.32E-09	8.90E-09
Percent of Technical Specifications. . . . .	%	6.02E+01	6.81E+01	5.27E+01	6.01E+01	2.29E+01	4.67E+00	-----	9.26E+00	3.56E+01
Isotopes	Curies									
Co-57. . . . .		1.40E-05	2.23E-04	1.96E-04	4.33E-04	3.10E-05	-----	-----	3.10E-05	4.64E-04
Cr-51. . . . .		4.05E-03	1.81E-02	1.43E-02	3.65E-02	5.65E-04	7.74E-04	-----	1.34E-03	3.78E-02
Co-58. . . . .		2.95E-02	8.64E-02	7.29E-02	1.89E-01	8.79E-03	4.02E-03	-----	1.28E-02	2.02E-01
Mn-54. . . . .		3.61E-03	3.87E-03	3.39E-03	1.09E-02	1.08E-03	5.92E-04	-----	1.67E-03	1.25E-02
Zn-65. . . . .		-----	-----	1.54E-04	1.54E-04	6.70E-05	-----	-----	6.70E-05	2.21E-04
I-131. . . . .		3.06E-03	6.20E-05	-----	3.13E-03	-----	-----	-----	-----	3.13E-03
Nb-95. . . . .		2.76E-04	1.32E-03	1.46E-03	3.06E-03	7.94E-04	3.00E-05	-----	8.24E-04	3.89E-03
Cs-134. . . . .		6.62E-03	6.07E-03	4.74E-03	1.74E-03	4.26E-03	6.83E-04	-----	4.94E-03	2.24E-02
Cs-136. . . . .		4.04E-04	2.10E-05	9.56E-04	1.38E-03	-----	-----	-----	-----	1.38E-03
Cs-137. . . . .		1.34E-02	1.17E-02	8.23E-03	3.33E-02	1.34E-02	1.52E-03	-----	1.49E-02	4.82E-02
Xe-133. . . . .		1.14E-04	-----	-----	1.14E-04	-----	-----	-----	-----	1.14E-04
Zr-95. . . . .		9.90E-05	9.04E-04	7.29E-04	1.73E-03	4.63E-04	4.30E-05	-----	5.06E-04	2.24E-03
Cs-141. . . . .		-----	3.50E-05	5.40E-05	8.90E-05	-----	-----	-----	-----	8.90E-05
La-140. . . . .		1.24E-04	-----	-----	1.24E-04	-----	-----	-----	-----	1.24E-04
Fe-59. . . . .		4.03E-04	7.33E-04	4.28E-04	1.56E-03	4.90E-05	-----	-----	4.90E-05	1.61E-03
Co-60. . . . .		7.74E-03	1.04E-02	1.05E-02	2.87E-02	4.11E-03	1.68E-03	-----	5.78E-03	3.45E-02
Ni-63. . . . .		1.43E-02	-----	-----	1.43E-02	-----	-----	-----	-----	1.43E-02
Net Unidentified Beta. . . . .		1.18E-02	4.73E-03	-----	1.65E-02	-----	3.11E-04	-----	3.11E-04	1.68E-02
H-3. . . . .		7.76E-02	3.94E-02	3.35E-02	1.50E-01	2.66E-02	3.64E-03	-----	3.02E-02	1.81E-01
Percent of Total Identified. . . . .	%	93.2	> 95	> 95	> 95	> 95	> 95	-----	> 95	> 95

TABLE  
 Consumers Power Company  
 Palisades Nuclear Plant, Docket 50-255  
 Liquid Radioactive Effluents - Modified Liquid Waste System

	<u>Units</u>	<u>January</u>	<u>February</u>	<u>March</u>	<u>1st Quarter</u>	<u>April</u>	<u>May</u>	<u>June</u>	<u>2nd Quarter</u>	<u>Six-Month Total</u>
Total Radioactivity Released (Except Tritium, Dissolved Noble Gases & Alpha) . . . . .	Curies	4.37E-04	3.83E-03	6.40E-04	4.91E-03	2.95E-05	3.42E-04	1.50E-05	3.87E-04	5.29E-03
Volume of Waste Discharged. . . . .	Liters	7.42E+05	7.24E+05	4.88E+05	1.95E+06	4.26E+05	1.99E+06	1.39E+06	3.81E+06	5.76E+06
Average Concentration of Waste Prior to Release (Except Tritium, Dissolved Noble Gases & Alpha). . . . .	µCi/ml	5.89E-07	5.29E-06	1.31E-06	2.52E-06	6.92E-08	1.72E-07	1.08E-08	1.02E-07	9.18E-07
Volume of Circulating Discharge Water . . . . .	Liters	1.15E+10	1.08E+10	1.15E+10	3.38E+10	1.05E+10	1.14E+10	9.81E+09	3.17E+10	6.55E+10
Average Concentration Released (Except Tritium, Dissolved Gases & Alpha). . . . .	µCi/ml	3.80E-11	3.55E-10	5.57E-11	1.45E-10	2.81E-12	3.00E-11	1.53E-12	1.22E-11	8.07E-11
Percent of MPC . . . . .	%	-----	-----	-----	5.30E-02	-----	-----	-----	4.12E-03	2.93E-02
Tritium Released. . . . .	Curies	3.17E+00	2.70E+00	2.69E+00	8.55E+00	1.16E-02	2.22E-02	1.27E-02	4.65E-02	8.60E+00
Average Tritium Concentration Released . . . . .	µCi/ml	2.76E-07	2.50E-07	2.34E-07	2.53E-07	1.10E-09	1.95E-09	1.29E-09	1.47E-09	1.31E-07
Isotopes	Curies									
Co-58 . . . . .		2.40E-04	-----	-----	2.40E-04	-----	-----	-----	-----	2.40E-04
Mn-54 . . . . .		1.31E-04	-----	-----	1.31E-04	-----	-----	-----	-----	1.31E-04
Cs-137 . . . . .		1.60E-05	-----	-----	1.60E-05	-----	-----	-----	-----	1.60E-05
Net Unidentified Beta . . . . .		5.00E-05	3.83E-03	6.40E-04	4.52E-03	2.95E-05	3.42E-04	1.50E-05	3.87E-04	4.90E-03
Percent of Total Identified (Except Tritium, Dissolved Gases & Alpha) . . . . .	%	88.6	0.0	0.0	7.9	0.0	0.0	0.0	0.0	7.3

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

	<u>Units</u>	<u>January</u>	<u>February</u>	<u>March</u>	<u>1st Quarter</u>	<u>April</u>	<u>May</u>	<u>June</u>	<u>2nd Quarter</u>	<u>Six-Month Total</u>
Total Noble Gases . . . . .	Curies	-----	-----	-----	-----	1.28E+00	3.90E-02	-----	1.32E+00	1.32E+00
Total Halogens . . . . .		1.85E-02	1.46E-03	1.78E-04	2.02E-02	2.09E-06	2.37E-05	1.47E-05	4.05E-05	2.01E-02
Total Particulates (Beta & Gamma) . . . . .		1.45E-05	1.40E-02	5.63E-05	1.41E-02	1.87E-05	2.46E-05	9.38E-06	5.27E-05	1.42E-02
Percent of Applicable Limits	%									
Noble Gases . . . . .		-----	-----	-----	-----	3.17E-04	9.71E-06	-----	1.12E-04	5.58E-05
Halogens . . . . .		4.83E-01	4.08E-02	4.65E-03	1.80E-01	5.46E-05	9.78E-05	2.84E-06	5.29E-05	8.99E-02
Particulates . . . . .		3.30E-04	1.98E-03	7.77E-04	1.01E-03	5.75E-04	1.21E-03	2.54E-04	6.90E-04	8.49E-04
Isotopic Releases	Curies									
<u>Noble Gases</u>										
Xe-133 . . . . .		-----	-----	-----	-----	4.50E-02	-----	-----	4.50E-02	4.50E-02
Kr-85 . . . . .		-----	-----	-----	-----	1.23E+00	3.90E-02	-----	1.27E+00	1.27E+00
<u>Halogens</u>										
I-131 . . . . .		1.85E-02	1.46E-03	1.78E-04	2.02E-02	2.09E-06	3.60E-06	-----	5.69E-06	2.02E-02
I-133 . . . . .		-----	-----	-----	-----	-----	2.01E-05	1.47E-05	3.48E-05	3.48E-05
<u>Particulates</u>										
Mn-54 . . . . .		-----	-----	6.64E-06	6.64E-06	2.19E-06	-----	2.23E-06	4.42E-06	1.11E-05
Co-58 . . . . .		4.90E-06	1.09E-05	1.97E-05	3.55E-05	6.54E-06	2.56E-06	-----	9.10E-06	4.46E-05
Co-60 . . . . .		3.16E-06	-----	4.79E-06	7.95E-06	3.91E-06	9.11E-06	-----	1.30E-05	2.10E-05
Cr-51 . . . . .		-----	1.40E-02	1.24E-05	1.40E-02	-----	-----	-----	-----	1.40E-02
Cs-137 . . . . .		-----	3.04E-06	5.13E-06	8.17E-06	-----	-----	4.67E-06	4.67E-06	1.28E-05
Co-57 . . . . .		9.60E-07	-----	-----	9.60E-07	-----	-----	-----	-----	9.60E-07
Ce-141 . . . . .		2.10E-06	-----	-----	2.10E-06	-----	-----	-----	-----	2.10E-06
Net Unidentified Beta . . . . .		3.38E-06	1.57E-05	7.63E-06	2.67E-05	6.04E-06	1.29E-05	2.48E-06	2.14E-05	4.81E-05
Alpha . . . . .		3.30E-07	2.55E-07	2.61E-07	8.46E-07	2.62E-07	2.77E-07	5.59E-07	1.10E-06	1.94E-06