



**Consumers  
Power  
Company**

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April 27, 1983

James G Keppler, Administrator  
Region III  
US Nuclear Regulatory Commission  
799 Roosevelt Road  
Glen Ellyn, IL 60137

DOCKET 50-255 - LICENSE DPR-20 -  
PALISADES PLANT - 1982 ENVIRONMENTAL OPERATING REPORT

Appendix B to Provisional Operating License No. DPR-20 for the Palisades Plant dated January 22, 1981 requires Consumers Power Company to submit annually before May 1, the Environmental Operating Report. This submittal covering the period January 1 to December 31, 1982 fulfills that requirement.

*Brian D Johnson*

Brian D Johnson  
Staff Licensing Engineer

CC Director, Office of Nuclear Reactor Regulation  
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NRC Resident Inspector - Palisades

Attachment - Environmental Operating Report

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Consumers Power Company

Palisades Plant

Docket 50-255 - License DPR-20

1982 ENVIRONMENTAL OPERATING REPORT

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## 1982 ANNUAL ENVIRONMENTAL OPERATING REPORT

## PALISADES PLANT

1.0 BACKGROUND

Appendix B to Provisional Operating License NO DPR-20 for the Palisades Plant, Consumers Power Company is entitled "Environmental Protection Plan (Non-Radiological)". This document requires Consumers Power Company to submit to the Nuclear Regulatory Commission an Annual Environmental Operating Report which describes implementation for the Environmental Protection Plan. The period covered by this second annual report is January 1 to December 31, 1982.

During this reporting period, the Palisades Plant generated a total of 3,345,123 MWh gross of electrical energy with an average on-line availability factor of 54.7%.

During the first eight months of the year, the plant experienced a series of unplanned outages which included a primary to secondary leak. None of the outages were shown to have caused any deleterious effects upon the environment.

2.0 ENVIRONMENTAL PROTECTION ACTIVITIES2.1 METEOROLOGICAL MONITORING

A cooling tower drift study was completed in 1978 and submitted to NRC. That study showed that cooling tower effects on the environment were very localized, and that overall environmental impact is negligible. No further work was done during 1982 on this topic.

2.2 HERBICIDE APPLICATION

No herbicides were applied to power line right-of-way, sub-station area, or other plant external areas during 1982.

2.3 CHLORINE MINIMIZATION STUDY

The Palisades Plant NPDES Permit requires the plant to conduct a chlorine minimization study which involves measurement of Free-Available-Chlorine (FAC) and Total Residual Chlorine (TRC) over the four seasons of the year. An objective of the study is to reduce chlorine dose while maintaining condenser efficiency. During each quarter of the year, TRC concentrations in the mixing basin will be held at each of three different levels (eg, 0.14, 0.10, and 0.05 ppm) for a month. This study is now about 50% completed, and no deteriora-

tion in condenser efficiency has been encountered while meeting the environmental objectives. This study indicates that the plant will probably have no difficulty meeting the new BAT Standards for FAC effective in July, 1984.

#### 2.4 PLANT MODIFICATIONS

The only plant modification taking place during 1982 which is of interest from the consideration of potential environmental impact was the construction of a new plant parking lot. Approximately twenty acres of sand dune habitat was affected but environmental assessments conducted by corporate environmental staff indicated that no endangered species were affected by the dune removal, and no significant effect on plant site dune habitat could be found.

A review was done during 1982 of the Palisades Plant Final Environmental Statement and the Final Addendum to the FES in order to establish that conclusions reached in these documents are still valid in view of facility changes which have transpired since the original submission of these documents. Results of this review were reported to NRC in a February 2, 1983 submission. (Docket 50-255-License DPR-20-PALISADES PLANT - Results of Final Environmental Statement (FES) Review).

#### 3.0 NPDES COMPLIANCE EVALUATION INSPECTION

The 1982 Compliance Evaluation Inspection (CEI) was conducted by the Michigan Department of Natural Resources in September. Action items resulting from the CEI were as follows:

1. The company agreed to do a study of the existing oily wastewater treatment system. This study has been completed and is discussed in Paragraph 4.
2. The company agreed to revise its method of storing waste oil on site. The company plans to employ two 300-gallon portable tanks which are held within a diked area. When tanks are full, a disposal company will replace full tanks with empty tanks.
3. On October 9, 1982 the company repaired the recording device for continuous monitoring of pH at Outfall 001 and this device has been in continuous service since being repaired.
4. The continuous temperature recorder at Outfall 001 was repaired and returned to service, but periodic repairs to this recorder have been necessary since it was returned to service.
5. A revised SPCC/PIPP spill prevention plan was written, reviewed, and will be submitted to Michigan Department of Natural Resources.
6. All gravity drain valves for site containment areas will be removed by September, 1983.

#### 4.0 NPDES PERMIT RELATED NON-COMPLIANCES

Appendix B to Provisional Operating License No DPR-20 for the Palisades Plant requires that the Annual Environmental Operating Report should include a list of Environmental Protection Plan (EPP) non-compliances and corresponding corrective actions.

The following table summarizes non-compliances for 1982 relating to environmental matters.

The only environmental problem at the Palisades Plant during 1982 was the problem of non-compliances caused by oil and grease discharges from discharge point 00G which is the outlet from T-41 the Turbine Building Drain Tank. Corrective action was to change filters in the oily waste polisher or to change absorbent pillow in T-41 whenever a non-compliance occurred. In September, 1982 the plant adopted a program of increased preventative maintenance on the oily waste polisher which has reduced the frequency of equipment failure. As a result, the frequency of non-compliance has been reduced.

TABLE 1

NPDES NON-COMPLIANCES - 1982  
Palisades

<u>January, 1982</u>			
01/05/82	Turbine Building Drain Tank	Oil & Grease	43 mg/l
01/08/82	Turbine Building Drain Tank	Oil & Grease	25.4 mg/l
01/12/82	Turbine Building Drain Tank	Oil & Grease	25.5 mg/l
01/21/82	Turbine Building Drain Tank	Oil & Grease	20.6 mg/l
<u>February, 1982</u>			
02/06/82	C/T Suction Basin Overflow	pH	Flow existed over weir & no pH analysis was made
<u>March, 1982</u>			
03/10/82	Turbine Building Drain Tank	Oil & Grease	50.2 mg/l
03/11/82	Turbine Building Drain Tank	Oil & Grease	188.1 mg/l
03/12/82	Turbine Building Drain Tank	Oil & Grease	63.8 mg/l
03/15/82	Turbine Building Drain Tank	Oil & Grease	55.5 mg/l
<u>June, 1982</u>			
06/28/82	Turbine Building Drain Tank	Oil & Grease	37.7 mg/l
06/29/82	Turbine Building Drain Tank	Oil & Grease	23.1 mg/l
06/30/82	Turbine Building Drain Tank	Oil & Grease	20.8 mg/l
<u>July, 1982</u>			
07/12/82	Turbine Building Drain Tank	Oil & Grease	21.7 mg/l
07/13/82	Turbine Building Drain Tank	Oil & Grease	25.5 mg/l
07/14/82	Turbine Building Drain Tank	Oil & Grease	112.5 mg/l
07/20/82	Turbine Building Drain Tank	Oil & Grease	23.5 mg/l
07/22/82	Turbine Building Drain Tank	Oil & Grease	26.5 mg/l
07/23/82	Turbine Building Drain Tank	Oil & Grease	31.8 mg/l
<u>September, 1982</u>			
09/20/82	Turbine Building Drain Tank	Oil & Grease	123 mg/l
09/27/82	Turbine Building Drain Tank	Oil & Grease	23 mg/l
<u>December, 1982</u>			
12/01/82	Turbine Building Drain Tank	Oil & Grease	33.2 mg/l

#### 4.1 NON-ROUTINE REPORTS

On June 16, 1982 a spill occurred when an acid feedline to the south side of cooling tower B failed. Approximately 900 gallons of sulfuric acid was released to the sand. The acid was neutralized in-situ with powdered limestone and subsequent soil analysis indicated the spill was contained before reaching ground waters.

#### 4.2 RESOLUTION OF OILY WASTE PROBLEM

Consistent with an agreement with the Michigan Department of Natural Resources, the company has conducted a thirty day study of the present oily waste treatment system. The study indicated that the oil interceptor and emulsion breaker presently in service is not consistently effective in removing oil and grease from the waste stream. Based on the study results, oil and grease removal from the stream occurs primarily in the effluent tank T-41 by physical clarification. Two recommendations were made in the study to facilitate oil and grease removal from the waste stream. As a result of the study, the plant is currently pursuing the installation of a 200-gpm API separator at the present location of the emulsion breaker skid between the turbine building sump and T-41. The installation date for the system is subject to plant conditions and has not yet been determined. It is anticipated that review within the budgeting cycle will be completed by July, 1983.