



**Consumers
Power**

**POWERING
MICHIGAN'S PROGRESS**

Palisades Nuclear Plant: 27780 Blue Star Memorial Highway, Covert, MI 49043

G B Slade
General Manager

March 18, 1991

Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555

DOCKET 50-255 - LICENSE DPR-20 - PALISADES PLANT -
1990 ANNUAL ENVIRONMENTAL OPERATING REPORT

Pursuant to Appendix B (Environmental Protection Plan) of the Facility Palisades Operating License the 1990 Annual Environmental Operating Report is enclosed. The attached report covering the period from January 1 to December 31, 1990 fulfills the referenced report requirements.

Gerald B Slade
General Manager

CC Administrator, Region III, USNRC
NRC Resident Inspector - Palisades

Attachment

9103250350 901231
PDR ADOCK 05000255
R PDR

A CMS ENERGY COMPANY

1/1
IE25

ATTACHMENT

Consumers Power Company
Palisades Plant
Docket 50-255

1990 ANNUAL ENVIRONMENTAL OPERATING REPORT

March 18, 1991

6 Pages

PALISADES NUCLEAR PLANT

1990 ANNUAL NON-RADIOLOGICAL ENVIRONMENTAL OPERATING REPORT

1.0 BACKGROUND

Appendix B to the Facility Operating License Number DPR-20 for the Palisades Nuclear 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 prior to May 1 which describes implementation of the Environmental Protection Plan during the previous year. The period covered by this annual report is January 1, 1990 to December 31, 1990. Palisades operated for 5075.2 hours in 1990 producing a net total of 3,008,095 MWH. This represents 44.6% of the net demonstrated capacity for 1990.

2.0 ENVIRONMENTAL IMPACT EVALUATIONS

Several revisions to procedures and modifications to the facility were evaluated using the Environmental Evaluation form for impact on the environment during 1990. Ninety-three of these Environmental Evaluations had potential concerns dealing with the environment. One of the evaluations required formal review by the Consumers Power Company Environmental Department of General Office for impact on the environment and is described in Section 2.1.

2.1 FC-875 Condenser/Feedwater Heaters Hydrostatic Test and Flush

Received approval from the Michigan Department of Natural Resources (MDNR) for a one time release of 1.0 million gallons of demineralized water with the potential for this water to contain approximately 10 ppm of Rhodamine WT, a red dye for leak detection.

3.0 ADDITIONAL ACTIVITIES AUTHORIZED UNDER NPDES

- 3.1 The plant received permission from the MDNR in 1989 to discharge Component Cooling Water (CCW) to Lake Michigan for a one time release. 232 gallons of CCW was discharged on December 4, 1990. (Special Test T-282)
- 3.2 Renewal of the plant's NPDES Permit for 3 years (expiration date October 1, 1993).
- 3.3 The plant was issued a separate NPDES permit for the groundwater cleanup of Tetrachlorethylene (PCE) and Trichlorethylene (TCE) at the North Fuel Depot area. The plant was granted permission to utilize the storm drains as a discharge path for treated groundwater pumped during the cleanup of the plume. This permit expires on October 1, 1994.

4.0 UNUSUAL ENVIRONMENTAL EVENTS

There were no occurrences of Unusual Environmental Events in 1990 as described in Appendix B of the Facility Operating License Section 4.1.

5.0 ENVIRONMENTAL MONITORING

5.1 Meteorological Monitoring to Document Effects of Cooling Tower Operation on Meteorological Variables.

There was no activity on this in 1990.

5.2 Herbicide Application

Herbicides were applied at Palisades during the period of September 17, 1990 to September 21, 1990. The following is a list of herbicide treatment:

<u>FOLIAGE TREATMENT</u>		
Commercial Name:	Garlon 4 Herbicide	Tordon 101 Mixture.
Chemical Name(s)	Triclopyr	2, 4-D & Picloram
Concentration of A.I. in Field Use Mixture	0.01 lbs/gal	0.01 lbs/gal & 0.0027 lbs/gal
Diluting Substances Other Than Water:	None	None
Rate of Application:	Spray to Drip (x = 0.1575 gal/acre)	Spray to Drip (x = 0.315 gal/acre)
Method of Application:	High Volume Ground Foliar	High Volume Foliage Spray
Frequency of Application:	Approx Every 6 Years	Approx Every 6 Years
Location:	<u>Line No</u> 306 A&B 309 A&B 310 A&B	<u>Structures</u> 1-21 1011-1030 1241-1244
		Used on Brush in Areas Indicated in Column 1

BASAL TREATMENT

Commercial Name: Carlon 4 Herbicide

Chemical Name: Triclopyr

Concentration of A. I.
in Field Use Mixture: 1.0 lb/gal

Diluting Substance other
than Water: Low Volume Basal Oil (JLB Oil)

Rate of Application: Spray to Wet (x = 0.3546 gal/acre)

Method of Application: Low Volume Basal

Frequency of Application: Approx Every 6 Years

Location: 310 A&B, 1241-1244

Dates: September 18, 1990

6.0 REPORTS TO MICHIGAN DEPARTMENT OF NATURAL RESOURCES

There were 8 reports to MDNR generated in 1990. One report was generated due to a minor loss of hydraulic oil, and one due to the limits exceeded during the pump test performed at the North fuel depot area. Six reports were due to problems associated with Palisades septic systems. The following is a chronological list of the reports (notifications) transmitted to MDNR during 1990:

- 6.1 April 15, 1990, septic tank overflow on the north side of the plant, clear liquid overflow from a septic tank to a storm drain. The volume of clear water overflow was unknown. No presence of solids or evidence of sewage reaching the beach or discharged to surface waters.
- 6.2 May 29-30, 1990, overflow from the south septic system cleanout line. A runoff of clear liquid effluent sewage to a storm drain. Less than 50 gallons of clear effluent discharged. There was no evidence that the clear effluent reached either the beach or surface waters.
- 6.3 August 30, 1990, clear liquid overflow from the north septic tank to a storm drain. Volume of clear effluent released was approximately 5 gallons. There was no evidence that the clear effluent reached either the beach or surface waters.
- 6.4 September 4, 1990, a repeat of August 30, 1990 occurrence at the north septic tank. Approximately 10 gallons of clear sewage effluent released.

This north septic tank was abandoned in December, 1990. This sewage collection system was tied into the recently completed septic tank/drainfield north of the Outage Building.
- 6.5 September 20, 1990, a release of clear sewage effluent to a storm drain. Approximately 5 gallons of clear effluent overflowed. There was no evidence of the clear effluent reaching either the beach or surface waters.
- 6.6 On October 13, 1990, approximately 700 gallons of clear sewage effluent was released to a storm drain during a 12 hour period. Inspections were made of the beach and Lake Michigan. There was no evidence of the overflow reaching either.

Steps were taken to resolve problems associated with sewage overflows. The north septic tank was abandoned. Four sewage lift pumps were installed to pump the sewage to a new drainfield located north of the Outage Building. Repairs were made to the south septic system sewage lift pumps. Repairs to the level controllers (of the sewage lift pumps) and replacement of the electrical control panel has been beneficial to the operation of this system.

6.7 On November 18 and 20, 1990 treated groundwater was discharged to a storm sewer during a pump test. The one-time pump test was conducted to determine the hydrogeological characteristics of the underlying aquifer. The NPDES limit for TCE was exceeded at two sampling intervals during the 64 hour period of discharge. The total discharge during the 64 hour test was approximately 172,800 gallons (45 gpm).

6.8 December 6, 1990, a spill of approximately 25 gallons of hydraulic oil from a crane. There was no damage or threat to groundwaters or surface waters due to immediate containment and cleanup of the spill.

7.0 MISCELLANEOUS

7.1 Three potable wells were drilled to serve the New Outage Building. The wells are identified as well nos. 11, 12, and 13.

7.2 Potable water well no. 8 was abandoned. This well previously served the PE&C Building (PM&MP) which is located at the northeast corner of the protected area of the plant site. This well was considered shallow and in close proximity to the North Fuel Depot Area.

7.3 December, 1990 started special monitoring of potable water well no. 2 as required by Michigan Department of Public Health. Monthly bacteriological analysis and annual Volatile Organic Compounds (VOC's) are the parameters analyzed. This requirement is being placed on Palisades due to the close distance of well no. 2 to a sanitary force main. Palisades is currently evaluating other long term alternatives to the domestic water situation (i.e. surface water treatment and municipal water).

7.4 Two Soil Erosion and Sedimentation Control Act Permits were obtained from Van Buren County. The permits were for the following construction activities:

- a) Construction of a sanitary sewer line and septic tanks (Facility Change 882 Support Building Sanitary Drainfield Relocation)
- b) Construction of the Building and Grounds crew workshop and Security Building addition.

7.5 Consumers Power Company Environmental Department of General Office expressed concern due to the number of trees removed along the Palisades - Van Buren State Park property line. The trees were removed to expand the overflow parking lot. Palisades is planning to plant trees during 1991 to provide a buffer zone along the Palisades-Van Buren State Park property line.

7.6 Sand Dune Protection and Management permits were obtained for the:

- a) Buildings and Grounds crew workshop
- b) Security Building Addition

- 7.7 A historical hydrocarbon release of unknown origin was located in the vicinity of the former warehouse water supply well (well no. 7). The release substance is petroleum in nature and has impacted the shallow groundwater. The release was reported to the Michigan Department of Natural Resources in January, 1990 and the need for corrective action is currently being assessed.