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June 10, 1970

Chairman, Hearing Board
U. S. Atomic Energy Commission
Washington, D. C. 20545

H F

Re: Consumers Power Company
(Palisades Plant) Hearing
June 23, 1970
Docket No. 50-255

Dear Sir:

The Consumers Power Company, on June 21, 1966, filed with the Michigan Water Resources Commission a statement of new use of the waters of the state for disposal of cooling and condensing water and other waste water from its proposed Palisades Nuclear Power Plant to be located near South Haven, Michigan.

The statement was filed in accordance with the requirements of Section 8 (b) of Act 245, Public Acts of 1929, as amended, which states in part:

"On and after May 18, 1949, any person requiring a new or substantial increase over and above the present use now made of the waters of the state for sewage or waste disposal purposes shall file with the commission a written statement setting forth the nature of the enterprise or development contemplated, the amount of water required to be used, its source, the proposed point of discharge of the wastes into the waters of the state, the estimated amount so to be discharged, and a fair statement setting forth the expected bacterial, physical, chemical and other known characteristics of the wastes. Within 60 days of receipt of the statement, the commission shall make an order stating such minimum restrictions as in the judgment of the commission may be necessary to guard adequately against such unlawful uses of the waters of the state as are set forth in section 6."

June 10, 1970

Section 6 of the Act reads in part:

"It shall be unlawful for any person directly or indirectly to discharge into the waters of the state any substance which is or may become injurious to the public health, safety or welfare; or which is or may become injurious to domestic, commercial, industrial, agricultural, recreational or other uses which are being or may be made of such waters; or which is or may become injurious to the value or utility of riparian lands; or which is or may become injurious to livestock, wild animals, birds, fish, aquatic life or plants or the growth or propagation thereof be prevented or injuriously affected; or whereby the value of fish and game is or may be destroyed or impaired."

The Water Resources Commission, at its October 27, 1966 meeting, adopted an Order of Determination placing restrictions on the quantity of radioactive substances, heat and other wastes contained in the wastewater discharges which were deemed necessary by the Commission to prevent unlawful pollution of the receiving waters, consistent with Section 6 of the Water Resources Commission statute. Submitted herewith is a copy of the Order of Determination, No. 931, to the Company. The restrictions on radioactive substances in the wastewater discharge conform to Part 20, Title 10, Code of Federal Regulations.

In consultation with staffs of the Bureau of Commercial Fisheries, Department of Natural Resources Fish Division and Water Resources Commission, the Company has agreed to perform appropriate pre and post operational studies to demonstrate any effects of its radioactive wastes and thermal discharges on the aquatic environment. The Company has agreed to submit operational reports of the studies on a regular basis for staff review. In addition to the Company studies, Commission staff, with the assistance from various divisions of the Department of Natural Resources, are conducting pre and post operational studies to verify and supplement the Company's efforts. The pre operational studies by Consumers Power Company and this agency are now nearing completion.

The thermal categories of the water quality standards adopted by the Water Resources Commission, following public hearings, pursuant to the provisions of Section 10 (c) of PL 84-660, as amended, have not as yet been approved by the Secretary of the Interior.

On March 19, 1970, the Commission held another public hearing on these categories in an effort to identify the revisions that would be necessary to secure the Secretary's approval. Testimony at the hearing by two representatives of the Federal Water Quality Administration were not in mutual agreement and, at the request of the Commission, negotiations with that agency's staff to finally resolve the matter are continuing.

Very truly yours,

WATER RESOURCES COMMISSION

Ralph W. Purdy
Ralph W. Purdy
Executive Secretary

TK:ms
Enclosure

STATE OF MICHIGAN
WATER RESOURCES COMMISSION

Statement of CONSUMERS POWER COMPANY, a :

Order No. 931

Maine Corporation, Regarding a New Use :

of LAKE MICHIGAN and OTHER WATERS OF :

THE STATE, near SOUTH HAVEN, MICHIGAN :

ORDER OF DETERMINATION

WHEREAS, Consumers Power Company, a Maine Corporation, has filed with the Water Resources Commission a written statement dated June 21, 1966 for a new use of waters of the state for disposal of wastes from a pressurized water nuclear reactor steam electric generating plant to be located on the shore of Lake Michigan approximately five miles south of South Haven, Michigan, and known as the Palisades Plant; and

WHEREAS, the said written statement sets forth that Consumers Power Company proposes to discharge 743.041 MGD of condensing and auxiliary systems cooling water, five thousand (5,000) gallons per day of demineralizer regeneration water, one hundred ten (110) gallons per day of laundry waste water, two hundred fifty (250) gallons per day of reactor system process waste and eighty four thousand (84,000) gallons per day of steam and power conversion equipment waste from the operation and maintenance of a pressurized water nuclear reactor steam electric generating plant into Lake Michigan and three thousand five hundred (3,500) gallons per day of sanitary sewage into the ground by subsurface percolation methods; and

WHEREAS, the Commission at its meeting on October 27, 1966, after giving due consideration to the statement and to investigations by its staff of the factors involved, is of the opinion and has determined that the restrictions and conditions as hereinafter set forth are necessary to protect the waters of the state against unlawful pollution;

NOW THEREFORE BE IT RESOLVED, that it is the order of the Commission that Consumers Power Company, its agents or successors, in disposing of sewage and wastes from a proposed pressurized water nuclear reactor steam electric generating plant to be located on the shore of Lake Michigan approximately five miles south of South Haven, Michigan shall comply with the following restrictions and conditions:

A. Waste discharges to Lake Michigan from all sources, either separately or combined, including but not limited to cooling and condensing water, demineralizer regeneration water, boiler blow down, laundry waste, and miscellaneous process wastes from the operation and maintenance of a pressurized water nuclear reactor steam electric generating plant shall be so treated or controlled that they shall:

1. Not contain radionuclides in excess of the following limits:

a. If the discharge is an unidentified mixture of radionuclides, the concentration averaged over any 365 consecutive days shall not exceed 3×10^{-8} uc/cc above that of plant intake water from Lake Michigan; or

- b. If the discharge is a mixture of radionuclides in which the absence of Ra^{226} and Ra^{228} has been demonstrated by appropriate analysis, the concentration averaged over any 365 consecutive days shall not exceed 10^{-7} uc/cc above that of plant intake water from Lake Michigan; or
- c. If all radionuclides present in the discharge are identified the concentrations shall be such that when averaged over any 365 consecutive days, the sum $\sum_i \frac{C_i}{MPC_i} \leq 1$ where C_i is the concentration of each

of the radionuclides and MPC_i is the corresponding MPC in Appendix B, Table II of Title 10, Chapter 1, Part 20, Code of Federal Regulations, "Standards for Protection Against Radiation".

2. Not contain more than ten (10) milligrams per liter of ether extractable substances.
 3. Not contain more than five (5) milligrams per liter of boric acid (H_3BO_3).
 4. Not have a pH greater than 9.5 nor less than 6.5.
 5. Not contain settleable or floating solids in amounts sufficient to create unnatural deposits on the bed, surface or shores of the receiving waters which are or may become injurious to lawful uses being made of the waters.
 6. Not impart heat or contain any substances in sufficient quantity to create conditions which are or may become injurious to the public health, safety or welfare; or which are or may become injurious to domestic, commercial, industrial, agricultural, recreational or other uses which are being or may be made of such waters; or which are or may become injurious to the value or utility of riparian lands; or which are or may become injurious to livestock, wild animals, birds, fish or aquatic life or the growth or propagation thereof.
- B. No liquid wastes contaminated by radionuclides greater than the concentration specified in paragraph A (1) shall be discharged unless one or more condensing cooling water pumps are operating.
- C. From and after the date the Order becomes final the Company shall notify the office of the Chief Engineer of the Commission:
1. Immediately by telephone or telegraph when an accident or other situation occurs which results or may result in the release of radioactive contaminants from the Palisades Plant to the waters of the state in concentrations which, if averaged over a 24-hour period, would exceed 5000 times the limits in A (1) above.

2. Within 24-hours by telephone or telegraph when an accident or other situation occurs which results or may result in the release of radioactive contaminants from the Palisades Plant to the waters of the state in concentrations which, if averaged over a 24-hour period, would exceed 500 times the limits in A (1) above.
 3. Within 30 days by letter when an accident or other situation occurs which results in the release of radioactive contaminants from the Palisades Plant to the waters of the state in concentrations which exceed 10 times the limits in A (1) above.
- D. The Company shall make measurements of the wastes discharged to Lake Michigan and shall perform such analyses as are necessary to demonstrate that the requirements of this Order are being met. Reports of such analyses and measurements shall be available for inspection by authorized employees of the Water Resources Commission and an annual report thereof shall be submitted to the Commission by the Company.
- E. No human sewage shall be discharged into the surface waters of the State, but the same shall be disposed of into the ground by subsurface percolation methods, facilities for which are constructed in accordance with plans submitted to the Chief Engineer of the Commission and approved by the Director of the Michigan Department of Public Health.
- F. Facilities necessary for compliance with the restrictions and conditions set forth in A (1) above shall be constructed in accordance with design criteria to be submitted to the Chief Engineer of the Commission prior to installation.
- G. Facilities necessary for compliance with the restrictions and conditions set forth in A (2), (3), (4), (5) and (6) above shall be constructed in accordance with design criteria submitted in duplicate to ~~the~~ approved *and* by the Chief Engineer of the Commission.

BE IT FURTHER RESOLVED, that the aforesaid restrictions and conditions set forth in this Order shall become effective at and from the time this Order becomes final as provided herein and shall remain in effect until further order of the Commission.

BE IT FURTHER RESOLVED, that this instrument does not obviate the necessity of obtaining such permits as may be required by law from other units of government.

This Order made this 27th day of October, 1966, by the Commission in accordance with Act 245, P. A. 1929, as amended, and shall be final in the absence of request for public hearing filed within 15 days after receipt hereof, on motion by Mr. Murray, supported by Mr. Vogt, and unanimously carried.

PRESENT AND VOTING:

Gerald E. Eddy (Acting Chairman), for Director of Conservation
John E. Vogt, for Director of Public Health
Stanley Quackenbush, for Director of Agriculture
James V. Murray, for State Highway Commission
Lynn F. Baldwin, for Conservation Groups