



# United States Department of the Interior

OFFICE OF THE SECRETARY  
WASHINGTON, D.C. 20240

MAR 27 1969

Dear Mr. Price:

This will transmit the comments of the Fish and Wildlife Service on the application by Consumers Power Company for a construction permit and facility license for the proposed Midland Generating Plant, Units 1 and 2, Tittabawassee River, Midland County, Michigan, AEC Dockets Nos. 50-329 and 50-330. These comments are provided in response to Mr. Boyd's letter of November 7, 1968.

The project would be located adjacent to the southern boundary of Midland, Michigan, on the south bank of the Tittabawassee River and would use two pressurized water reactors, each designed for an initial output of 2,452 megawatts thermal and a gross electrical output of 650 megawatts.

The condensers would be cooled by water recirculated from a 14,000 acre-foot storage pond constructed on the flood plain at the plant site. The applicant proposes to fill the pond during the flood season since pumping at this time requires a smaller pumping head and there is less chance of reducing the residual river flow to undesirable low levels. After initial filling of the pond, makeup water would be required at a rate of approximately 70 c.f.s. to maintain a full storage pool. The storage pond would have the capacity to supply the plant for about 100 days without the addition of makeup water. Therefore, no pumping would be undertaken during periods of insufficient river flow.

The water quality in the project area is significantly lowered by the addition of industrial pollutants from nearby plants. However, the river supports a moderate sport fishery for largemouth bass, yellow perch, bluegill, carp, catfishes, and suckers.

The application indicates that the release of radioactive wastes would not exceed limits prescribed in title 10, part 20, of the Code of Federal Regulations. If the concentration in the receiving water were the only consideration, maximum permissible limits would be adequate criteria for determining the safe rate of discharge for fish and wildlife. However, radioisotopes of many elements are concentrated and stored by organisms that require these elements for their normal metabolic activities. Some organisms concentrate and store radioisotopes of elements not normally required but which are chemically

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similar to elements essential for metabolism. In both cases, the radionuclides are transferred from one organism to another through various levels of the food chain just as are the nonradioactive elements. These transfers may result in further concentration of radionuclides and a wide dispersion from the project area, particularly by migratory fish, mammals, and birds.

It is imperative that every possible effort be made to protect the fish and wildlife resources of the area from radioactive contamination. An environmental radiological monitoring program is needed to determine if the radionuclides released to the environment are affecting fish and wildlife resources adversely. This program should be planned in cooperation with the Fish and Wildlife Service and the Michigan Department of Natural Resources.

In order to provide for the conservation, development, and protection of the fish and wildlife resources, it is recommended that Consumers Power Company be required to:

1. Cooperate with the Fish and Wildlife Service, the Michigan Department of Natural Resources, and other interested State and Federal agencies in developing plans for radiological surveys.
2. Conduct pre-operational radiological surveys including but not limited to the following:
  - a. Gamma radioactivity analysis of water and sediment samples collected within 500 feet of the reactor effluent outfall.
  - b. Beta and gamma radioactivity analysis of selected fish and wildlife species and organisms important in their food chain collected as near the reactor effluent outfall as possible.
3. Prepare a report of the pre-operational radiological surveys and provide 5 copies to the Secretary of the Interior for evaluation prior to project operation.
4. Conduct post-operational radiological surveys similar to those specified in recommendation 2 above, analyze the data, prepare reports every 6 months during reactor operation until it has been conclusively demonstrated that no significant adverse conditions exist, and submit 5 copies of these reports to the Secretary of the Interior for distribution to appropriate State and Federal agencies for evaluation.

5. Make such reasonable modifications of project structures and operations as may be ordered by the Atomic Energy Commission upon its own motion or upon the recommendation of the Secretary of the Interior or the Michigan Department of Natural Resources, after notice and opportunity for hearing and upon findings that such modifications are necessary and desirable.

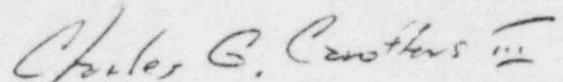
We understand that the regulatory authority of the Atomic Energy Commission is confined to considerations of common defense, security, radiological health, and safety. However, we recommend and urge that before the permit is issued, the dangers of other potential hazards to fish and wildlife resources which may result from plant construction and operation be called to the attention of the applicant. Sufficient numbers of fish may be drawn into the intake to reduce the fishable population in the Tittabawassee River below desirable levels. The release of plant wastes, coupled with the anticipated reduction of the flow of the river, may create further hazards to aquatic life. The applicant should meet with representatives of the Fish and Wildlife Service, the Federal Water Pollution Control Administration, and the Michigan Department of Natural Resources to discuss these and any other hazards and should jointly design means to monitor project effects and to mitigate conditions found adverse to fish and wildlife resources.

In view of the Administration's policy to maintain, protect, and improve the quality of our environment, we request that the Commission urge Consumers Power Company to:

1. Cooperate with the Fish and Wildlife Service, the Federal Water Pollution Control Administration, and the Michigan Department of Natural Resources in designing measures to monitor the effects of the project on the natural resources of the area.
2. Take such steps as may be determined necessary by the above named agencies to mitigate any adverse effects of the project.

The opportunity for presenting our views is appreciated.

Sincerely yours,



Deputy Assistant Secretary of the Interior

Mr. Harold I. Price  
Director of Regulations  
U.S. Atomic Energy Commission  
Washington, D.C. 20545

FROM: Dept of Interior Geological Survey		DATE OF DOCUMENT 5-7-70	DATE RECEIVED 5-11-70	NO.:
TO: H.L. Price		LTR. <input checked="" type="checkbox"/>	MEMO:	REPORT: <input type="checkbox"/>
CLASSIF: U		ORIG.:	CC:	OTHER:
POST OFFICE		ACTION NECESSARY <input type="checkbox"/>		CONCURRENCE <input type="checkbox"/>
REG. NO:		NO ACTION NECESSARY <input type="checkbox"/>		DATE ANSWERED
DESCRIPTION: (Must Be Unclassified)		COMMENT <input type="checkbox"/>		BY:
Ltr trans the following per our request		FILE CODE: 50-329-330		
( 1 cys )		REFERRED TO	DATE	RECEIVED BY
ENCLOSURES:		Howe	5-11-70	
Report- On Geology & Hydrology for Midland Plant Units 1-2		W/2 cys for action		
REMARKS:		<u>DISTRIBUTION:</u>		
		Reg file cy		
		OGC- Room P-306-A		
		H. Price & Staff		
		Morris/Schroeder		
		Boyd		
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		N. Blunt/Muller		
		Orig & 3 cys...orig to be returned to room 016		

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