



UNITED STATES
DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
WASHINGTON, D. C. 20240

IN REPLY REFER TO:

JUN 17 1969

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

Dear Mr. Price:

This will transmit the comments of the Fish and Wildlife Service on the application by Jersey Central Power and Light Company and Metropolitan Edison Company for a construction permit for the proposed Three Mile Island Nuclear Power Station, Unit No. 2, Dauphin County, Pennsylvania, AEC Docket No. 50-320. Our comments are provided in response to Mr. Boyd's letter of March 11.

Unit No. 2 would be located adjacent to Unit No. 1 on Three Mile Island in the Susquehanna River at the existing York Haven Dam and would use a pressurized water reactor designed for an ultimate output of 2,772 MWT (965 MWE).

Condenser cooling water would be recirculated through two hyperbolic natural draft cooling towers located to the south of the station. Make up water for tower evaporation, wind loss, and blowdown will be obtained from the Susquehanna River at a rate of 60 c.f.s. The intake structure would be provided with trash racks and traveling screens.

Cooling water would normally discharge to the river via post-cooling tower. The post-cooling tower would be employed to cool the discharge of the nuclear services coolers and the blowdown from the hyperbolic cooling towers prior to discharge to the river at the approximate rate of 35 c.f.s. The cooling water systems would be sized to insure adequate heat removal based on a maximum river water temperature of 85°F, maximum loadings, and leakage allowances.

The waste disposal system will be designed to provide controlled handling and disposal of liquid, gaseous, and solid wastes resulting from plant operation. Liquid radioactive wastes would be processed on a batch basis and would be sampled and analyzed before being discharged to the river. Solid radioactive waste material would be packaged in drums for shipment to an offsite disposal area. Gaseous wastes would be vented to the gaseous waste disposal system.

49-004

1045

7904180047

In the project area the Susquehanna River supports a sport fishery of considerable magnitude. Bluegill, crappies, walleye, yellow perch, bullheads, muskellunge, largemouth bass, and white perch are the principal species caught. The land along Conewago Creek in the vicinity of York Haven tailwater outlet, owned by the Pennsylvania Fish Commission, provides access and boat launching facilities.

The results of studies conducted by the Fish and Wildlife Service in cooperation with the States of Pennsylvania, New York, and Maryland indicate that much of the Susquehanna River is suitable for the restoration of runs of the anadromous American shad.

The application indicates that the release of radioactive wastes would not exceed maximum permissible concentrations prescribed in Title 10, Part 20, of the Code of Federal Regulations. Although these provisions may safeguard man from undue radiation exposure, they may not always guarantee that fish and wildlife will be protected from adverse effects. If the concentration in the receiving waters 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 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 non-radioactive 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.

We understand that the applicant has been conducting a pre-operational radiological survey of the project area and that planned post-operational radiological surveys will make use of the program developed for Unit No. 1. However, in view of the extensive fish and wildlife resources in the project area, it is imperative that every possible effort be made to safeguard these resources from radioactive contamination. Therefore, it is recommended that the Metropolitan Edison Company and Jersey Central Power and Light Company be required to:

1. Cooperate with the Fish and Wildlife Service, Pennsylvania Fish Commission, Pennsylvania Sanitary Water Board, and other interested State and Federal agencies in developing plans for additional radiological surveys.

2. Conduct pre-operational radiological surveys which should include but not be limited to:

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 plants and animals, including mollusks and crustaceans, collected as near the reactor effluent as possible.

3. Prepare a report of the pre-operational radiological surveys and provide five copies to the Secretary of the Interior for evaluation prior to project operation.

4. Conduct post-operational radiological surveys similar to that specified in recommendation two above, analyze the data, and prepare and submit reports every six months or until it has been conclusively demonstrated that no significant adverse conditions exist; submit five copies of these reports to the Secretary of the Interior for distribution to appropriate State and Federal agencies for evaluation.

We understand that the regulatory authority of the Atomic Energy Commission is confined to considerations of common defense and security, and radiological health and safety. However, we recommend and urge that, before the permit be issued, the dangers of other potential hazards to fish and wildlife be called to the attention of the applicant. The federally approved State water quality standards for the Susquehanna River must be maintained. In order to assure adequate quality in the receiving waters, it may be necessary to install additional cooling facilities.

Another potential hazard to the fishery resources of the project area is the cooling water circulating system. A substantial number of fish may be attracted to or drawn in by this system and destroyed, thus resulting in significant fishery losses. The normal trash racks and screens used for cooling water systems may be adequate to prevent this loss. However, if they do not prove satisfactory, it may be necessary to develop and install fish screening facilities or other protective devices.

The applicants should meet with representatives of the Fish and Wildlife Service, Federal Water Pollution Control Administration, Pennsylvania Fish Commission, and the Pennsylvania Sanitary Water Board, to discuss

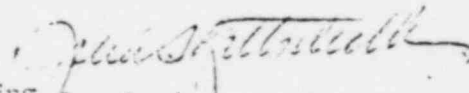
these and other hazards, and should jointly design means to monitor project effects and to mitigate conditions found adverse to fish and wildlife resources.

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

1. Cooperate with the Fish and Wildlife Service, Federal Water Pollution Control Administration, Pennsylvania Fish Commission, and the Pennsylvania Sanitary Water Board 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 on this subject is appreciated.

Sincerely yours,


Acting Commissioner