



UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

Docket No. 50-220

JUL 5 1973

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Mr. Tony Stadeker
Management Systems Analyst
Office of Management and Budget
Executive Office Building, Room 9026
Washington, D. C. 20503

ENVIRO - FILE

Dear Mr. Stadeker:

Enclosed for your information are two copies of the summary sheet for the Draft Environmental Statement prepared by the Commission's Regulatory staff relating to the facility identified in the enclosure to this letter.

The Draft Environmental Statement was prepared in accordance with the statement of general policy and procedure on implementation of the National Environmental Policy Act of 1969 as set out in Appendix D of the Commission's regulations, 10 CFR Part 50. A notice of availability of the Draft Environmental Statement and the applicant's Environmental Report, and request for comments from interested persons is being sent to the Office of the Federal Register for filing and publication. A request for comments also is being sent to appropriate Federal, State and local agencies.

Sincerely,

Daniel R. Muller, Assistant Director
for Environmental Projects
Directorate of Licensing

Enclosure:
List Identifying Document
Transmitted

Concurrence:

L:EP-4 *sm*
SMSheppard
6/29/73

LIST OF DOCUMENTS TRANSMITTED

Name of Facility: Nine Mile Point Nuclear Station Unit 1

Applicant: Niagara Mohawk Power Corporation

Docket Number: 50-220

Document Transmitted: Draft Environmental Statement
dated July 1973

SUMMARY AND CONCLUSIONS

This Environmental Statement was prepared by the U. S. Atomic Energy Commission, Directorate of Licensing.

1. This action is administrative.
2. The proposed action concerns the application for the conversion of the current provisional operating license to a full-term license by the Niagara Mohawk Power Corporation for the Nine Mile Point Nuclear Station Unit 1 located on Lake Ontario in the State of New York (Docket No. 50-220).

Nine Mile Point Station Unit 1 employs a boiling-water reactor to produce up to 1850 megawatts thermal (MWt). A steam turbine-generator uses this heat to provide 610 MW (net) of electrical power capacity. This capacity is considered in the assessments contained in this statement. The exhaust steam is cooled by once-through flow of water obtained from and discharged to Lake Ontario.

3. Summary of environmental impact and adverse effects:

- Construction of the transmission lines required the use of approximately 1,640 acres for the right-of-way. Land use patterns in such rights-of-way have not changed in any major way but because of inadequate planning the line in many places may be considered by some as an aesthetic detraction. Recommendations have been made for limitations on the use of herbicides for line maintenance because of the possible adverse environmental effects.
- Fish will be impinged on the intake screen. Although it should have little or no noticeable effect on the fish population of the lake as a whole, the kill rate at Unit 1 may be unacceptably high in relation to the fish population in the region of Nine Mile Point. A program of monitoring the kill rate and of determining the local fish population will be required to determine the seriousness and extent of the problem.
- Although small fish, eggs, and fish larvae are not expected to survive passage through the plant cooling system and will add an incremental loss to the fish population, the overall effect on the fish population of the lake will be small. Zooplankton and phytoplankton are expected to suffer high mortality during the summer. However, even if the rate of mortality were 100%, the impact of such mortality among organisms with a short generation time will not be measurable in the area.



- A thermal plume will be present at the discharge. Some juvenile fish may be drawn into it and may be killed; however, if this occurs their numbers are expected to be small. The 6°F isotherm extending to the shore is not expected to act as a barrier to free movement of fishes along the shore. However, the Applicant will be required to conduct tagging or other appropriate studies to determine movement of fishes in the in-shore waters. No shifts in algal species from an abundance of diatoms and green algae to blue-green algae are expected. On the whole, the thermal discharge from Unit 1 is not expected to have any significant deleterious effect on the biota of the lake.
- If Unit 1 were to be shut down suddenly in the winter, the thermal discharge would cease and the fishes in the plume would die. The impact of such mortality is not expected to have an adverse effect on existing fish populations.
- Chemicals discharged to the lake will be limited to concentrations that will pose no threat to aquatic life.
- The risk associated with accidental radiation exposure is very low.
- No significant environmental impacts are anticipated from normal operational releases of radioactive materials within 50 miles. The estimated dose to the 1980 population within 50 miles from operation of Unit 1 will be 2.5 man-rem/yr after modification of the radwaste system (34 man-rem/yr, at present) which is less than the normal fluctuations in the 110,000 man-rem/yr background dose this population would receive.

4. Principal alternatives considered:

- Abandonment of the facility and construction of another nuclear plant on another site.
- Fossil fuel as an alternative power source at the present site.
- Purchase of power from outside sources.
- Heat dissipation with natural-draft and forced-draft cooling towers or cooling ponds.

5. The following federal, state, and local agencies have been requested to comment on this Environmental Statement:

Federal Agencies

Advisory Council on Historic Preservation
Environmental Protection Agency
Department of Agriculture
Department of the Army, Corps of Engineers
Department of Commerce
Department of Health, Education and Welfare
Department of Housing and Urban Development
Department of the Interior
Department of Transportation
Federal Power Commission

New York State Agencies

Department of Environmental Conservation
Department of Public Service
Department of Commerce
Atomic Energy Council

Local Agencies

Oswego County Department of Planning

6. This Draft Environmental Statement was made available to the public, to the Council on Environmental Quality, and to the agencies noted above.
7. On the basis of the analysis set forth in this Statement, after weighing the environmental, economic, technical, and other benefits of Unit 1 against environmental costs and considering available alternatives, the Staff concludes that the action called for under NEPA and Appendix D to 10 CFR Part 50 is the conversion of the current provisional operating license to a full-term license for the facility subject to the following conditions for protection of the environment:

A. License Condition

The Applicant will complete construction of a new radwaste building onsite (expected to be fully operational in late 1975) to assure compliance with the "as low as practicable" criteria contained in 10 CFR 50.

B. Technical Specification Requirements

The Applicant will define a comprehensive environmental monitoring program as discussed below for inclusion in the Technical Specifications that is acceptable to the Staff for determining environmental effects which may occur as a result of the operation of Unit 1.

- The Applicant will establish a revised and comprehensive biological sampling program to provide ecological data from which to measure the impact of Unit 1 operation on the biota of Lake Ontario (Section 6.1).
- The Applicant will conduct a monitoring and sampling program at the intake structure of Unit 1 as outlined in Sections 5.5 and 6.1 to determine the number, species, and size of fish killed at Unit 1 and relate these data to the intake design and field-sampling program as outlined in Section 6. When this information is available, the Staff will evaluate the magnitude of the fish-kill problem. As deemed justified, modification of existing intakes and/or development and implementation of other preventive methods may be required.
- The Applicant will conduct a radiological monitoring program considered by the Staff to be adequate to determine any radiological effects on the environment from operation of Unit 1 (Section 6.3).
- The Applicant will conduct such field investigations of the thermal plume as are necessary to correlate the data obtained from the aquatic environmental program discussed above. These investigations should be made for the different seasons under different hydrological and meteorological conditions, with a variety of measuring techniques (Section 6.2).
- The Applicant will conduct a terrestrial monitoring program to determine the environmental effects of the use of herbicides for line maintenance. The program should also include a field study to determine the presence and status of rare or endangered plants and animals at the site and along the transmission line right-of-way. If endangered species are present, steps should be taken to prevent their destruction during the continued operation of Unit 1 (Section 6.4).
- If harmful effects and/or evidence of irreversible damage are detected, the Applicant will provide to the Staff an analysis of the problem and a plan of action to be taken to alleviate the problem.

