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Docket No. 50-220

MARCH 26 1979

Mr. Donald P. Dise
 Vice President - Engineering
 Niagara Mohawk Power Corporation
 300 Erie Boulevard West
 Syracuse, New York 13202

Dear Mr. Dise:

The Commission has issued the enclosed Amendment No. **30** to Facility Operating License No. DPR-63 for the Nine Mile Point Nuclear Station Unit 1. The amendment consists of a modification to the Technical Specifications in response to your application submitted by letter dated January 11, 1977.

The amendment revises the Technical Specifications to delete the stress-corrosion cracking surveillance program. However, as verbally agreed to by members of your organization, you are to perform a detailed examination of all sensitized stainless steel samples now installed inside the reactor pressure vessel as a final test to assure freedom from detectable cracks.

Copies of the Safety Evaluation and the Notice of Issuance are also enclosed.

Sincerely,
 Original Signed by
 T. A. Ippolito

*Cmohtw
CCP*

Thomas A. Ippolito, Chief
 Operating Reactors Branch #3
 Division of Operating Reactors

Enclosures:

- Amendment No. **30** to License No. DPR-63
- Safety Evaluation
- Notice

EB REF (noting edits on working copy) REF as edited on 3/10/79
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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

March 26, 1979

Docket No. 50-220

Mr. Donald P. Dise
Vice President - Engineering
Niagara Mohawk Power Corporation
300 Erie Boulevard West
Syracuse, New York 13202

Dear Mr. Dise:

The Commission has issued the enclosed Amendment No. 30 to Facility Operating License No. DPR-63 for the Nine Mile Point Nuclear Station Unit 1. The amendment consists of a modification to the Technical Specifications in response to your application submitted by letter dated January 11, 1977.

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Sincerely,


Thomas A. Appolito, Chief
Operating Reactors Branch #3
Division of Operating Reactors

Enclosures:

1. Amendment No. 30 to License No. DPR-63
2. Safety Evaluation
3. Notice

cc w/enclosures:
See next page

Mr. Donald P. Dise

- 2 -

March 26, 1979

cc: Eugene B. Thomas, Jr., Esquire
LeBoeuf, Lamb, Leiby & MacRae
1757 N Street, N. W.
Washington, D. C. 20036

Anthony Z. Roisman
Natural Resources Defense Council
917 15th Street, N. W.
Washington, D. C. 20005

T. K. DeBoer, Director
Technological Development Programs
State of New York
Energy Office
Swan Street Building
CORE 1 - Second Floor
Empire State Plaza
Albany, New York 12223

Mr. Robert P. Jones, Supervisor
Town of Scriba
R. D. #4
Oswego, New York 13126

Niagara Mohawk Power Corporation
ATTN: Mr. Thomas Perkins
Plant Superintendent
Nine Mile Point Plant
300 Erie Boulevard West
Syracuse, New York 13202

Director, Technical Assessment Division
Office of Radiation Programs (AW-459)
US EPA
Crystal Mall #2
Arlington, Virginia 20460

U. S. Environmental Protection Agency
Region II Office
ATTN: EIS COORDINATOR
26 Federal Plaza
New York, New York 10007

Oswego County Office Building
46 E. Bridge Street
Oswego, New York 13126



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

NIAGARA MOHAWK POWER CORPORATION

DOCKET NO. 50-220

NINE MILE POINT NUCLEAR STATION, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 30
License No. DPR-63

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Niagara Mohawk Power Corporation (the licensee) dated January 11, 1977, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

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2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-63 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 30, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION


Thomas A. Appolito, Chief
Operating Reactors Branch #3
Division of Operating Reactors

Attachment:
Changes to the Technical
Specifications

Date of Issuance: March 26, 1979

ATTACHMENT TO LICENSE AMENDMENT NO. 30

FACILITY OPERATING LICENSE NO. DPR-63

DOCKET NO. 50-220

Revise Appendix A by removing page 78 and replacing with revised page 78.
Marginal lines indicate area of change.

LIMITING CONDITION FOR OPERATION

- c. During hydrostatic testing the reactor vessel pressure and temperature shall satisfy the most limiting requirements of Figure 3.2.2.b.
- d. The reactor vessel head bolting studs shall not be under tension unless the temperature of the vessel head flange and the head are equal to or greater than 100F.

SURVEILLANCE REQUIREMENT

- c. Vessel material surveillance samples located within the core region to permit periodic monitoring of exposure and material properties shall be inspected on the following schedule:

First capsule - one fourth service life
Second capsule - three fourth service life
Third capsule - standby

In the event the surveillance specimens at one quarter of the vessels service life indicate a shift of reference temperature greater than predicted the schedule shall be revised as follows:

Second capsule - one half service life
Third capsule - standby



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
SUPPORTING AMENDMENT NO. 30 TO FACILITY OPERATING LICENSE NO. DPR-63

NIAGARA MOHAWK POWER CORPORATION

NINE MILE POINT NUCLEAR STATION, UNIT NO. 1

DOCKET NO. 50-220

Introduction

By letter dated July 11, 1977, counsel for the Niagara Mohawk Power Corporation (NMPC) submitted the following: (1) an Application for Amendment to Operating License; (2) Proposed Changes to Technical Specifications (Appendix A to License No. DPR-63); and (3) Supporting Information.

The Technical Specification change was requested because NMPC had not been able to perform one of the tasks called for (see below) during the Spring, 1977, outage. The proposed change would formalize delaying the task until the next refueling outage. Since the plant had returned to operation, the choices for the NRC were either to approve the Technical Specification change or require an unscheduled shutdown for the purpose of performing the task. The task was to remove and inspect stainless steel stress corrosion surveillance specimens installed in the water phase. The need to perform the task was judged of insufficient importance to warrant an unscheduled shutdown.

Discussion

The basic conclusion thereby was reached that the proposed Technical Specification change was acceptable to the NRC. Thus, NMPC will develop a method which will permit the water phase stress corrosion samples to be removed during the 1979 refueling outage. It was reported that the water phase samples were inaccessible during the 1977 refueling outage and were not removed. That constituted a violation of the Technical Specification which required that the samples, along with those in the steam and steam/water phases be removed and examined at each outage.

We agree with the statement in the Supporting Information to the Proposed Technical Specification Changes which contends that the delay in the water phase sample examination will be unimportant relative to the program goals. It is safe to draw that conclusion for two reasons. First, in the six years of the stress-corrosion cracking surveillance program, none of the sensitized stainless steel samples have shown any signs of crack initiation. Second, several stainless steel components in the Nine Mile Point Nuclear Station, over the same period of time, have developed stress corrosion cracks. Thus, although the surveillance samples have contributed nothing

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to the prediction or control of stress-corrosion failure, operating experience has been used to develop a plan of inservice inspection and make necessary repairs or replacements. Time has shown that virtually nothing useful has been gained from the surveillance program while service experience has provided the information that the program originally set out to obtain.

The program was started in 1969 at the request of the NRC (or what then was the Division of Reactor Licensing, AEC). The material employed was stainless steel provided by the General Electric Company, judged representative of the type 304 used in the Nine Mile plant construction. Three material conditions were included: (1) annealed sheet (reference condition); (2) furnace sensitized sheet; (3) furnace sensitized forging. Nine specimens were taken from each source (a total of 27 specimens) and equally distributed in three specimen holders. The holders were loaded in the reactor pressure vessel in the steam, steam/water and water phases. Thus each of the three material conditions was exposed to the three different operating conditions with triplicate representation.

The specimens were rectangular bars, 3 in. long, 3/8 in. wide and 60-mils thick. They were assembled in holders designed to stress them individually in three-point bending.

During the 1970 refueling outage, nine of the original 27 specimens were removed and examined both non-destructively and destructively. The nine represented the three material conditions and exposure to the three operating conditions. No evidence of cracking could be detected. Subsequently, at each refueling outage except, as noted earlier, for the 1977 outage, the remaining specimens have been examined non-destructively without any evidence of cracking having been discovered. In the same period of time, stainless steel components in the core spray system, exposed to the same operating conditions, have showed through-wall cracking by the action of stress corrosion mechanisms.

Noting that the surveillance specimen fixtures impose a constant deflection (initially pre-set to achieve a pre-determined elastic outer fiber stress), the most likely reason for the continued crack-free behavior is that the initial stress has relaxed below the threshold needed for crack initiation. Moreover, the nature of stress relaxation under constant deflection is a roughly exponential decay. Therefore, if there is merit in the relaxation hypothesis, then there has been insufficient stress to make a fair test of the program for the past several years. Under such conditions, continuation of the Nine Mile Point stress corrosion surveillance program would be fruitless.

The program was requested by the AEC in reaction to the observation of extensive cracking in the core spray lines at the Oyster Creek (New Jersey) nuclear power station. The Oyster Creek plant core spray lines included type 304 stainless steel which cracked because it was sensitized.

NMPC was asked to institute a stress corrosion cracking surveillance program because the Nine Mile plant was the sister to Oyster Creek. Cracking of the core spray line stainless at Nine Mile subsequently has provided the perspective. Nine Mile's stainless was not sensitized as much as that at Oyster Creek but enough to have cracked in less than ten years of operation.

The NMPC stress corrosion surveillance program shall be brought to a conclusion in the following manner. All samples shall be removed from the reactor during the 1979 refueling outage. NMPC should engage an independent, technically competent, organization to examine the samples destructively and/or non-destructively, as judged necessary by the independent organization, to determine if any stress corrosion cracking has occurred. Those individuals who have examined the samples in the past (at Nine Mile and at GE) should participate in the 1979 task to provide continuity. A final report shall be formally submitted which provides the findings of this examination.

Environmental Considerations

We have determined that this amendment does not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that this amendment involves an action which is insignificant from the standpoint of environmental impact, and pursuant to 10 CFR §51.5(d)(4) that an environmental impact statement, or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of this amendment.

Conclusion

We have concluded that: (1) because the amendment does not involve a significant increase in the probability or consequences of accidents previously considered and does not involve a significant decrease in a safety margin, the amendment does not involve a significant hazards consideration, (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (3) such activities will be conducted in compliance with the Commission's regulations and the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Dated: March 26, 1979

UNITED STATES NUCLEAR REGULATORY COMMISSIONDOCKET NO. 50-220NIAGARA MOHAWK POWER CORPORATIONNOTICE OF ISSUANCE OF FACILITY LICENSE AMENDMENT

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 30 to Facility Operating License No. DPR-63 to Niagara Mohawk Power Corporation (the licensee) which revised the Technical Specifications for operation of the Nine Mile Point Nuclear Station, Unit No. 1 (the facility) located in Oswego County, New York. The amendment is effective as of its date of issuance.

The amendment revises the Technical Specifications to delete the stress-corrosion cracking surveillance program.

The application for the amendment complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission has made appropriate findings as required by the Act and the Commission's rules and regulations in 10 CFR Chapter I which are set forth in the license amendment. Prior public notice of this amendment was not required since the amendment does not involve a significant hazards consideration.

The Commission has determined that the issuance of this amendment will not result in any significant environmental impact and that pursuant to 10 CFR §51.5(d)(4) an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with issuance of this amendment.

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For further details with respect to this action, see (1) the application for amendment dated January 11, 1977, (2) Amendment No. 30 to License No. DPR-63, and (3) the Commission's related Safety Evaluation. All of these items are available for public inspection at the Commission's Public Document Room, 1717 H Street, N. W., Washington, D. C. and at the Oswego County Office Building, 46 E. Bridge Street, Oswego, New York 13126. A copy of items (2) and (3) may be obtained upon request addressed to the U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, Attention: Director, Division of Operating Reactors.

Dated at Bethesda, Maryland this 26th day of March 1979.

FOR THE NUCLEAR REGULATORY COMMISSION


Thomas A. Appolito, Chief
Operating Reactors Branch #3
Division of Operating Reactors