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UNITED STATES NUCLEAR REGULATORY COMMISSION

NIAGARA MOHAWK POWER CORPORATION

NINE MILE POINT NUCLEAR STATION UNIT NO. 1

DOCKET NO. 50-220

ENVIRONMENTAL ASSESSMENT AND FINDING OF

NO SIGNIFICANT IMPACT

The U. S. Nuclear Regulatory Commission (the Commission) is considering issuance of an exemption from the requirements of 10 CFR Part 50.62(c)(4) to Niagara Mohawk Power Corporation (the licensee), for Unit No. 1 of the Nine Mile Point Nuclear Station (NMP-1) located in Oswego County, New York.

ENVIRONMENTAL ASSESSMENT

Identification of Proposed Action:

The exemption would grant relief from 10 CFR 50.62(c)(4) to allow the NMP-1 plant to use an equivalency formula considering sodium pentaborate solution concentration, pump flow rate, boron enrichment and vessel size to determine the requirements for the liquid poison system which performs the function of the standby liquid control system (SLCS).

The licensee's exemption request, and the bases therefor, are contained in a letter dated September 14, 1988.

The Need for the Proposed Action:

The exemption is needed because the licensee proposes to depart from 10 CFR 50.62(c)(4) requirements, as a result of NMP-1 having a reactor vessel diameter which is smaller than that used to establish the minimum flow and

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boron content requirements set forth in the regulation. NMP-1 will use an equivalency formula which considers the concentration of sodium pentaborate, pump flow rate, boron enrichment and vessel size to determine the system requirements. This equivalency formula was discussed in the licensee's March 7, 1988 request for a Technical Specification amendment for Sections 3.1.2, and 4.1.2 regarding the liquid poison system. A smaller amount of sodium pentaborate will be required because of the higher enrichment and because the vessel diameter is 213 inches, as opposed to 251 inches which is the basis for the 86 gallons per minute requirement in 10 CFR Part 50.62.

Generic Letter 85-03, "Clarification of Equivalent Control Capacity for Standby Liquid Control Systems," dated January 28, 1985 states, in part:

The "equivalent in control capacity" wording was chosen to allow flexibility in implementation of the requirement.

The 86 gallons per minute and 13 weight percent sodium pentaborate concentration were values used in NEDE-24222, "Assessment of BWR Mitigation of ATWS, Volumes I and II," December 1979 for BWR/4, BWR/5, and BWR/6 plants with 251-inch diameter vessels. NEDE-24222 recognized that different values would provide equivalent control capacity for smaller plants.

Environmental Impacts of the Proposed Action:

The exemption provides a degree of protection of NMP-1 equivalent to that required by the regulation for reactors with larger reactor vessels to ensure prompt injection of negative reactivity into a boiling water reactor pressure vessel in the event of an Anticipated Transient Without Scram (ATWS). This exemption will not affect containment integrity, nor the probability of facility accidents. Thus, post-accident radiological releases will not be



greater than previously determined, nor will the granting of the proposed exemption otherwise effect radiological plant effluents, or result in any significant occupational exposure. Likewise, the exemption will not affect non-radiological environmental impacts associated with the proposed exemption.

Alternatives to the Proposed Action:

Because it has been concluded that there is no measurable environmental impact associated with the proposed exemption, any alternatives to the exemption will have either no environmental impacts or greater environmental impacts.

The principal alternative to granting the exemption would be to deny the requested exemption. Such action would not reduce environmental impacts of NMP-1 operations and would not enhance the protection of the environment.

Alternative Use of Resources:

This does not involve the use of resources not previously considered in connection with the Final Environmental Statement for NMP-1 dated January 1974.

Agencies and Persons Consulted:

The NRC staff reviewed the licensee's request and did not consult other agencies or persons.

FINDING OF NO SIGNIFICANT IMPACT

The Commission has determined not to prepare an environmental impact statement for the proposed exemption. Based on the foregoing environmental assessment, the staff concludes that the proposed action will not have a significant effect on the quality of human environment.

For further information with respect to this action, see the application for exemption dated September 14, 1988, which is available for public



inspection at the Commission's Public Document Room, 2120 L Street, NW,
Washington, DC 20555 and at the Penfield Library, State University of New
York, Oswego, New York 13126.

Dated at Rockville, Maryland, this 13th day of October 1988

FOR THE NUCLEAR REGULATORY COMMISSION

Original signed by

Robert A. Capra, Director
Project Directorate I-1
Division of Reactor Projects I/II

<i>W</i> PDI-1 CVogan 9/28/88	<i>MHaughey</i> PDI-1 MHaughey:vr 9/27/88	<i>MH</i> SRXB MWHodges 10/14/88	<i>OG</i> OGE 10/17/88	<i>RC</i> PDI-1 RCapra 10/13/88
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