

SEP 25 1970

Docket No. 50-220

Niagara Mohawk Power Corporation  
ATTN: Mr. Minot H. Pratt  
Vice President and  
Executive Engineer  
300 Erie Boulevard West  
Syracuse, New York 13202

Gentlemen:

In reviewing your application dated April 20, 1970, which proposes a power increase for the Nine Mile Point Nuclear Station (NMP), we find that additional information is necessary to complete our evaluation. The specific information requested is described in the enclosure.

In addition, we note that Provisional Operating License (POL) No. DPR-17 for NMP will expire on February 22, 1971, or upon the earlier issuance of a full-term license. Please indicate your plans regarding the application for a full-term license, including your schedule for submission.

Please contact Messrs. C. DeBevec or D. L. Ziemann if you desire additional discussion or clarification of any of the information requested.

Sincerely,

Original signed by  
Peter A. Morris

Peter A. Morris, Director  
Division of Reactor Licensing

Enclosure:  
Request for Additional  
Information

cc: Arvin E. Upton, Esquire  
LeBoeuf, Lamb, Leiby & MacRae

DISTRIBUTION

W. Dooly, DR  
R. Engelken, CO (2)  
H. Shapar, OGC  
J. R. Buchanan, ORNL  
PDR

✓ Docket File  
DR Reading  
DRL Reading  
Branch Reading  
ACRS (3)  
F. Schroeder, DRL  
D. J. Skovholt, DRL  
D. L. Ziemann, DRL  
C. J. DeBevec, DRL  
R. M. Diggs, DRL  
D. Thompson, DRL  
R. H. Vollmer, DRL  
E. G. Case, DRS

OFFICE ▶	DRL	DRL	DRL	DRL	DRL	DRL
SURNAME ▶	CDeBevec:sjg/pl	RMDiggs	DLZiemann	DJSkovholt	ESchroeder	PAMorris
DATE ▶	9/25/70	9/25/70	9/25/70	9/25/70	9/25/70	9/25/70

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**SECRET**

REQUEST FOR ADDITIONAL INFORMATION  
PERTAINING TO APPLICATION FOR POWER INCREASE  
OF NINE MILE POINT NUCLEAR STATION

1. Our review of the proposed instrumentation modifications indicates that the turbine control valve fast closure scram can be defeated by failure of a single acceleration relay and that physical independence is not apparent for the four redundant pressure switches which respond to turbine first-stage pressure and affect the automatic removal of the bypass at power levels above 45% of design rating. Provide additional information justifying, or modifying, the proposed turbine control valve fast closure scram circuitry and describing the physical independence of the turbine first-stage pressure sensors.
2. The information which you submitted by letter dated July 2, 1970, is insufficient to permit evaluation of the effects of failure of a pressure vessel nozzle safe end on the biological shield or shield plugs. In this regard:
  - a. Provide details of construction and appropriate detailed sketches of the biological shield and its load-bearing steel members. Indicate the assumptions made and the calculational methods used to determine the capability of the shield to withstand an internal pressure of 96 psi.
  - b. Describe the calculational methods, including the venting assumptions, and the transient pressure distributions, which were used to determine that the maximum pressure rise in the biological shield in the event of a postulated double-ended break of a recirculation line at the safe end is approximately 40 psi.
  - c. Provide an analysis of the effects of a break of the pressure vessel recirculation nozzle safe end on the shield wall and on the shield gates at the penetrating pipes. Consider the potential for generating missiles or jet forces which could jeopardize the integrity of the containment shell, or engineered safety system components.

OFFICE ▶						
SURNAME ▶						
DATE ▶						



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Docket No. 50-220

Niagara Mohawk Power Corporation  
ATTN: Mr. Minot H. Pratt  
Vice President and  
Executive Engineer  
300 Eric Boulevard West  
Syracuse, New York 13202

Gentlemen:

In reviewing your application dated April 20, 1970, which proposes a power increase for the Nine Mile Point Nuclear Station (NMP), we find that additional information is necessary to complete our evaluation. The specific information requested is described in the enclosure.

In addition, we note that Provisional Operating License (POL) No. DPR-17 for NMP will expire on February 22, 1971, or upon the earlier issuance of a full-term license. ~~To provide guidance in the preparation of an application for a full-term license, the following suggestions are offered:~~

- the*
- should include the following information:*
1. The application should provide a detailed review of the NMP operating history, including *information obtained to* ~~confirmation of~~ design bases and objectives, and ~~the~~ *discussion of* significance of plant problems that have occurred and the remedial actions taken. It should discuss significant changes that have been made to the facility or to operating procedures since the Final Safety Analysis Report was prepared; however, it is not necessary to include extensive details of design and analysis of changes that previously have been submitted to the Commission for approval.
  2. The application should discuss *your evaluation of* the adequacy of your organization during the POL period, including onsite staff, technical support groups and advisory committees.

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Niagara Mohawk Power Corporation - 2 -

*your actions in response to*

3. The status of previous comments and recommendations by the AEC and the Advisory Committee on Reactor Safeguards concerning NMP should also be discussed in your application.

*may be provided*  
*No TP*  
~~The application may incorporate, where appropriate, the above indicated information by specific reference to information already submitted or being submitted in support of the currently proposed power increase.~~

*Please indicate*  
~~We request that you provide an early indication of your plans regarding the application for a full-term license, or extension of the provisional license, including a schedule of submissions. Please contact Messrs. C. DeBevec or D. L. Ziemann if you desire additional discussion or clarification of this matter or of the additional material requested, in the enclosure.~~  
*any of fig. information*

Sincerely,

Peter A. Morris, Director  
Division of Reactor Licensing

Enclosure:  
Request for Additional  
Information

cc: Arvin E. Upton, Esquire  
LaBoeuf, Lamb, Leiby & MacRae  
1821 Jefferson Place, N. W.  
Washington, D. C. 20036

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OFFICE ▶	DRL	DRL	DRL	DRL	DRL	DRL
SURNAME ▶	<i>CD</i> CJDeBevec:s	<i>AMD</i> gRMDiggs	<i>DLZ</i> DLZiemann	<i>RAW</i> DJSkovholt	FSchroeder	PAMorris
DATE ▶	9/23/70	9/23/70	9/23/70	9/23/70	9/ /70	9/ /70

...the ...

[illegible]

1. The first part of the document is a list of names and dates, which appears to be a roster or a list of events. The names are written in a cursive script, and the dates are in a standard font. The list is organized into two columns, with names on the left and dates on the right.

2. The second part of the document is a series of handwritten notes or a letter. The text is written in a cursive script and is somewhat difficult to read due to the handwriting. It appears to be a personal communication, possibly a letter or a note, and contains several lines of text.

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100-443887-100

9-78-049-8 24

1. The first step in the process is to identify the problem. This involves gathering information about the situation and understanding the needs of the stakeholders involved.

$\frac{1}{\sqrt{\pi}} \int_{-\infty}^{\infty} f(x) e^{-x^2} dx = \frac{1}{\sqrt{\pi}} \int_{-\infty}^{\infty} f(x) e^{-x^2} dx$

1. The first part of the document discusses the importance of maintaining accurate records of all transactions and activities related to the project. It emphasizes the need for transparency and accountability in financial management.

2. The second part outlines the specific steps and procedures for recording transactions, including the use of standardized forms and codes to ensure consistency across different departments and projects.

3. The third part addresses the challenges associated with record-keeping, such as data entry errors and incomplete documentation, and provides strategies to minimize these risks through regular audits and training.

4. Finally, the document concludes by highlighting the long-term benefits of a robust record-keeping system, which facilitates better decision-making, improves compliance, and enhances the overall efficiency of the organization's operations.

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100-443887-100



REQUEST FOR ADDITIONAL INFORMATION  
PERTAINING TO APPLICATION FOR POWER INCREASE  
OF NINE MILE POINT NUCLEAR STATION

1. Our review of the proposed instrumentation modifications indicates that the turbine control valve fast closure scram can be defeated by failure of a single acceleration relay and that physical independence is not apparent for the four redundant pressure switches which respond to turbine first-stage pressure and effect the automatic removal of the bypass at power levels above 45% of design rating. Provide additional information justifying, or modifying, the proposed turbine control valve fast closure scram circuitry and describing the physical independence of the turbine first-stage pressure sensors.
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  - c. Provide an analysis of the effects of a break of the pressure vessel recirculation nozzle safe end on the shield wall and on the shield gates at the penetrating pipes. Consider the potential for generating missiles or jet forces which could jeopardize the integrity of the containment shell, or engineered ~~safety~~ <sup>safety</sup> system components.

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DATE ▶						

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10. The tenth part of the document is a list of names and addresses, which appears to be a directory or a list of contacts. The names are written in a cursive script, and the addresses are listed below them.

U.S. DEPARTMENT OF AGRICULTURE  
BUREAU OF PLANT INDUSTRY  
WASHINGTON, D. C.

1. The first part of the document is a list of names and titles, including "The Hon. Mr. Justice" and "The Hon. Mr. Justice".

1. The first part of the document is a list of names and dates, which appears to be a roster or a list of participants. The names are written in a cursive script, and the dates are written in a more formal, printed style. The list is organized into two columns, with names on the left and dates on the right.

2. The second part of the document is a list of names and dates, which appears to be a roster or a list of participants. The names are written in a cursive script, and the dates are written in a more formal, printed style. The list is organized into two columns, with names on the left and dates on the right.

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1. The first part of the document discusses the importance of maintaining accurate records of all transactions, both financial and non-financial. It emphasizes that such records are essential for transparency and accountability, particularly in the context of public administration or corporate governance.

2. The second part outlines the various methods used to collect and analyze data. This includes direct observation, interviews, surveys, and the use of statistical models. Each method has its own strengths and limitations, and the choice of method depends on the specific research objectives and the nature of the data being collected.

3. The third part focuses on the ethical considerations surrounding data collection and analysis. Researchers must ensure that their work adheres to established ethical guidelines, which typically include obtaining informed consent from participants, ensuring confidentiality, and minimizing potential harm.

4. Finally, the document concludes by highlighting the significance of the findings and their implications for future research and practice. It suggests that the insights gained from this study can inform policy decisions and improve organizational performance.

Figure 1. The effect of the concentration of the *Agrobacterium* suspension on the transformation efficiency of *Agrobacterium* strains. The *Agrobacterium* strains were grown in the YEA medium for 24 h and then adjusted to the concentration of  $1 \times 10^8$  cells/ml. The cells were then mixed with the plant cells and cocultured for 24 h. The plant cells were then cultured on the selective medium for 2 weeks. The transformation efficiency was calculated as the number of transformants per  $10^6$  plant cells. The data are the mean  $\pm$  SD of three independent experiments.