

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

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 FACIL: 50-220 Nine Mile Point Nuclear Station, Unit 1, Niagara Powe 05000220  
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 DIS. D.P. Niagara Mohawk Power Corp.  
 RECIP. NAME RECIPIENT AFFILIATION  
 GAMMILL, W.P. Assistant Director for Standard & Advanced Reactors

SUBJECT: Forwards addl info re station electrical distribution sys,  
 per NRC 791015 request. Addl deviations from NRC guidelines  
 have not been found. Onsite distribution sys test should not  
 be necessary.

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The first part of the document discusses the importance of maintaining accurate records. It emphasizes that proper record-keeping is essential for ensuring the integrity and reliability of the data collected. This section also outlines the various methods used to collect and analyze the data, highlighting the challenges faced during the process.

The second part of the document provides a detailed overview of the experimental procedures. It describes the setup of the equipment, the calibration of the instruments, and the specific steps followed during the data collection phase. This section is crucial for understanding the methodology used in the study.

The third part of the document presents the results of the experiments. It includes a series of tables and graphs that illustrate the data collected. The tables provide numerical values for various parameters, while the graphs show the trends and relationships between different variables. This section is the core of the report, where the findings are presented and discussed.

The fourth part of the document discusses the implications of the findings. It explores how the results of the study can be applied in practical scenarios and what they tell us about the underlying phenomena being investigated. This section is important for understanding the significance of the work.

The fifth part of the document concludes the report by summarizing the key points and providing a final thought on the study. It reiterates the importance of the research and offers suggestions for future work. The conclusion is a concise summary of the entire document, highlighting the main contributions and the overall impact of the study.

The sixth part of the document contains a list of references and a list of figures. The references cite the works of other researchers in the field, providing context and supporting the findings of the study. The list of figures provides a quick reference to the data visualizations presented in the report.

The seventh part of the document is an appendix containing additional data and detailed calculations. This section provides supplementary information that supports the main findings of the study but is too detailed to include in the main body of the report. It is useful for readers who want to delve deeper into the data and the mathematical models used.

The eighth part of the document is a glossary of terms and a list of abbreviations. This section helps to clarify the terminology used throughout the report, ensuring that all readers can understand the content. It is particularly useful for those who are new to the field or who are not familiar with the specific terms used in the study.

The ninth part of the document is a list of acknowledgments and a list of authors. This section expresses gratitude to the individuals and organizations that supported the research. It also identifies the authors of the report, providing contact information and their affiliations. This section is important for recognizing the contributions of others and for providing a point of contact for further inquiries.

The tenth part of the document is a list of appendices and a list of figures. This section provides a detailed index of the content in the report, making it easy for readers to find the information they are looking for. It is a valuable tool for navigating the document and for locating specific data points and figures.

December 7, 1979

Director of Nuclear Reactor Regulation  
Attn: Mr. W. P. Gammill,  
Acting Assistant Director  
Operating Reactor Projects  
U. S. Nuclear Regulatory Commission  
Washington, D.C. 20555

RE: Nine Mile Point Unit 1  
Docket No. 50-220  
DPR-63

Gentlemen:

During our meeting of October 15, 1979, members of your staff requested additional information on the station electric distribution system. The attachment to this letter addresses your request.

Very truly yours,

NIAGARA MOHAWK POWER CORPORATION

*Donald P. Dise*

Donald P. Dise  
Vice President-Engineering

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NINE MILE POINT UNIT 1  
DEGRADED GRID VOLTAGE/ONSITE DISTRIBUTION SYSTEM

The following additional information is provided in clarification of our October 3, 1979 response regarding degraded grid voltage. Specifically, Enclosure 2 to your August 8, 1979 letter suggested that consideration be given to starting of large non-safety related loads under degraded grid conditions.

During 1974, analysis and testing was performed to demonstrate start-up of a feedwater string with power from a single generator at our Bennetts Bridge hydro station. This included a sequenced start of a 1000 horsepower condensate pump, a 1500 horsepower feedwater booster pump and a 2500 horsepower feedwater pump (largest motor at Nine Mile Point Unit 1). The test results showed start-up times of 1.6, 1.7 and four (4) seconds respectively. This condition represents a more severe condition than if the 115 KV offsite power grid were under minimum voltage conditions and full load on the station reserve supply. Start-up times under these conditions would be less than the four (4) seconds stated above.

During the 1977 refueling outage, undervoltage relays were installed for protection against a degraded grid condition. Since there is a ten (10) second time delay at 3150 volts associated with these relays and the starting time of the largest motor is less than four (4) seconds, the relay would respond but reset without initiating a transfer of engineered safeguards to onsite power (diesel generators).

We have re-reviewed our calculations with respect to your guidelines and have found no other deviations. In light of the above information, a test of the onsite distribution system is not necessary as stated in our response of October 3, 1979.