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 AUTH.NAME AUTHOR AFFILIATION  
 MANGAN,C.V. Niagara Mohawk Power Corp.  
 RECIP.NAME RECIPIENT AFFILIATION  
 VASSALLO,D.B. Operating Reactors Branch 2

SUBJECT: Forwards response to Generic Ltr 84-15 re diesel generator reliability.

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Author	Title	Year	Journal	Volume	Page
X	P	X	Journal of Mathematics	10	1-10
X	P	X	Journal of Mathematics	11	1-10
X	P	X	Journal of Mathematics	12	1-10
X	P	X	Journal of Mathematics	13	1-10
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X	P	X	Journal of Mathematics	18	1-10
X	P	X	Journal of Mathematics	19	1-10
X	P	X	Journal of Mathematics	20	1-10

October 1, 1984

Director of Nuclear Reactor Regulation  
Attention: Mr. Domenic B. Vassallo, Chief  
Operating Reactors Branch No. 2  
Division of Licensing  
U. S. Nuclear Regulatory Commission  
Washington, D.C. 20555

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

Dear Mr. Vassallo:

Attached is Niagara Mohawk's response to Generic Letter 84-15, dated July 2, 1984, regarding diesel generator reliability.

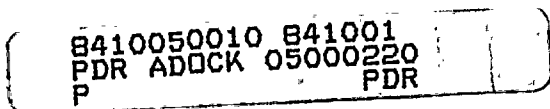
Sincerely,

NIAGARA MOHAWK POWER CORPORATION

*C. V. Mangan*

C. V. Mangan  
Vice President  
Nuclear Engineering and Licensing

AJP/bd  
Attachment



A056  
11



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UNITED STATES  
NUCLEAR REGULATORY COMMISSION

.....  
In the Matter of  
Niagara Mohawk Power Corporation  
(Nine Mile Point Unit 1)  
.....

Docket No. 50-220

AFFIDAVIT:

Charles V. Mangan, being duly sworn, deposes and says:

I am Vice President, Nuclear Engineering and Licensing of Niagara Mohawk Power Corporation, duly authorized to act on the Corporation's behalf; as such, I have read the documents attached hereto and find that the statements made therein are true to the best of my knowledge, information and belief.

*C. V. Mangan*  
C. V. Mangan  
Vice President Nuclear Engineering  
and Licensing  
Niagara Mohawk Power Corporation

Subscribed, acknowledged and  
sworn to before me on this  
1<sup>st</sup> day of October, 1984.

*Christine Austin*  
Notary Public

**CHRISTINE AUSTIN**  
Notary Public in the State of New York  
Qualified in Onondaga Co. No. 4787687  
My Commission Expires March 30, 1985

THE COMMISSION EXPANSION ACT OF 1970  
APPLICABLE TO THE STATE OF TEXAS  
AND TO THE DISTRICT OF COLUMBIA  
AND TO THE TERRITORIES OF ALASKA  
AND HAWAII

RESPONSE TO NUCLEAR REGULATORY COMMISSION

GENERIC LETTER 84-15 DATED JULY 2, 1984

REGARDING DIESEL GENERATOR RELIABILITY

ITEM 1: Reduction in Number of Cold Fast Start Surveillance Tests  
for Diesel Generators

This item is directed towards reducing the number of cold fast start surveillance tests for diesel generators which the staff has determined results in premature diesel engine degradation. The details relating to this subject are provided in Enclosure 1 [to Generic Letter 84-15]. Licensees are requested to describe their current programs to avoid cold fast start surveillance testing or their intended actions to reduce cold fast start surveillance testing for diesel generators.

RESPONSE TO ITEM 1:

The emergency diesel generators at Nine Mile Point Unit 1 contain heating elements. These immersion type heating elements maintain the lubricating oil at an elevated temperature to avoid cold starts. These immersion heaters are powered off powerboards PB161A (for diesel 102) and PB171A (for diesel 103).

Pre-lubrication of the two emergency diesel generator engines has not been practiced prior to diesel generator startup. However, the overall condition of the diesel generators is excellent after approximately 1200 total hours of operation. Niagara Mohawk has evaluated the need for pre-lubrication. In order to increase diesel generator reliability, a modification has been planned for the refueling and maintenance outage of 1986. Upon completion of this modification, an AC lube oil pump continuously will circulate oil inside of each diesel generator. In the event of an AC pump failure, a DC pump will provide backup capability. This will keep the diesel generators in a pre-lubricated state while not in actual use.

Enclosure 1 to Generic Letter 84-15 indicated staff concern regarding additional tests that may be required by Technical Specifications in cases such as when emergency core cooling subsystems are declared inoperable. Additional testing of the diesel generator is not a requirement by Technical Specifications in such cases as when an emergency core cooling subsystem is inoperable.

ITEM 2: Diesel Generator Reliability Data

This item requests licensees to furnish the current reliability of each diesel generator at their plant(s), based on surveillance test data. Licensees are requested to provide the information requested in Enclosure 2 [to Generic Letter 84-15].

UNITED STATES DEPARTMENT OF JUSTICE  
FEDERAL BUREAU OF INVESTIGATION  
WASHINGTON, D. C.

MEMORANDUM FOR THE DIRECTOR  
SUBJECT: [Illegible]

[Illegible text]

[Illegible text]

[Illegible text]



RESPONSE TO ITEM 2:

Table 1 shows the reliability data for the diesel generators. A time history of the failures is given in Table 2. Presently, Niagara Mohawk does not maintain records which itemize the demands and failures as specifically outlined in Regulatory Guide 1.108. However, Niagara Mohawk does keep the data required to compute the information outlined in 1.108(c.3.a).

Table 1

Valid Test and Failure Data

	<u>Emergency Diesel 102</u>	<u>Emergency Diesel 103</u>
A. Failures in last 100 starts	1	1
B. Failures in last 20 starts	0	0

Table 2

Time History of Failures

<u>Emergency Diesel</u>	<u>Date</u>	<u>Reason for Failure</u>
102	April 2, 1979	Circuit breaker would not close
103	January 7, 1981	Circuit breaker tripped

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ITEM 3: Diesel Generator Reliability

Licensees are requested to describe their program, if any, for attaining and maintaining a reliability goal for their diesel generators. An example of a performance Technical Specification to support a desired diesel generator reliability goal has been provided by the staff in Enclosure 3 [to Generic Letter 84-15]. Licensees are requested to comment on, and compare their existing program or any proposed program with the example performance specification.

RESPONSE TO ITEM 3:

Niagara Mohawk's reliability program is predicated upon a surveillance and preventive maintenance program. Vendor recommended practices, as well as vendor expertise, are utilized whenever significant work is performed on the diesel generators. The present Technical Specifications are consistent with this type of program. This reliability program is not the same as the sample performance Technical Specifications in Enclosure 3 of Generic Letter 84-15. In view of a startup success rate of 99% (in the last 100 starts) for each diesel generator, Niagara Mohawk believes the current surveillance and preventive maintenance program is adequate. If the reliability of the diesel generators were to significantly drop from our current success rate of 99%, appropriate action would be taken to improve the reliability of the diesel generators.

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Financial Statement

The following statement shows the financial position of the company as at the end of the year. It is prepared in accordance with the provisions of the Companies Act, 1947.

The total assets of the company are Rs. 10,00,000. The total liabilities are Rs. 10,00,000. The net worth of the company is Rs. 10,00,000. The profit for the year is Rs. 1,00,000. The dividend is Rs. 1,00,000.

