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ACCESSION NBR: 8412050172 DOC. DATE: 84/12/03 NOTARIZED: YES DOCKET #
 FACIL: 50-410 Nine Mile Point Nuclear Station, Unit 2, Niagara Moha 05000410
 AUTH. NAME: MANGAN, C.V. AUTHOR AFFILIATION: Niagara Mohawk Power Corp.
 RECIP. NAME: SCHWENCER, A. RECIPIENT AFFILIATION: Licensing Branch 2

SUBJECT: Forwards revised response to Reg. Guide 1.75, "Physical Independence of Electric Sys," to aid in review of resolution of FSAR Question 421.47. Info will be included in FSAR Amend 17.

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TO: DR. J. H. GOLDSTEIN
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December 3, 1984
(NMP2L 0273)

Mr. A. Schwencer, Chief
Licensing Branch No. 2
Division of Licensing
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Dear Mr. Schwencer:

Re: Nine Mile Point Unit 2
Docket No. 50-410

Attached is a revised response to Regulatory Guide 1.75, "Physical Independence of Electric Systems." This information is submitted to aid your review in the resolution of Final Safety Analysis Report question 421.47.

This information will be included in Final Safety Analysis Report Amendment 17.

Very truly yours,

C. V. Mangani

C. V. Mangani
Vice President
Nuclear Engineering & Licensing

DS:ja
Attachment
xc: R. A. Gramm, NRC Resident Inspector

Project File (2)

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of)
Niagara Mohawk Power Corporation)
(Nine Mile Point Unit 2))

Docket No. 50-410

AFFIDAVIT

C. V. Mangan, being duly sworn, states that he is Vice President of Niagara Mohawk Power Corporation; that he is authorized on the part of said Corporation to sign and file with the Nuclear Regulatory Commission the documents attached hereto; and that all such documents are true and correct to the best of his knowledge, information and belief.

C. V. Mangan

Subscribed and sworn to before me, a Notary Public in and for the State of New York and County of Onondaga, this 3 day of December, 1984.

Janis M. Macro
Notary Public in and for
Onondaga County, New York

My Commission expires:

JANIS M. MACRO

Notary Public in the State of New York
Qualified in Onondaga County No. 4784555
My Commission Expires March 30, 1985.

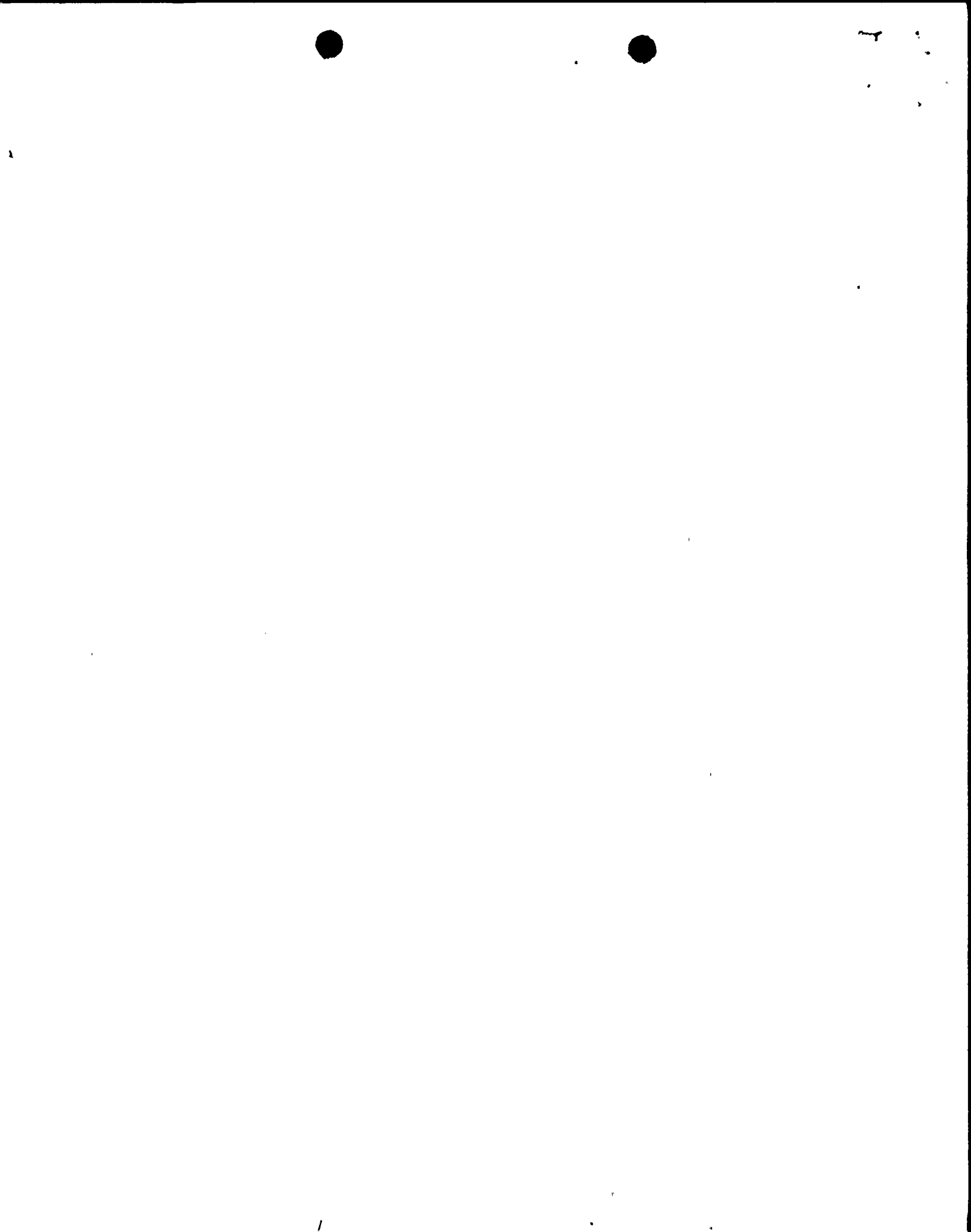


TABLE 1.8-1 (Cont)

Regulatory Guide 1.75, Revision 2 (September 1978)

Physical Independence of Electric Systems

FSAR Sections 7.1.2, 7.6.2, 8.3.1Position

The Unit 2 project complies with the Regulatory Position (Paragraph C) of this guide through the alternate approach described below and in Section 7.6.2 and 8.3.1.

Regulatory Position C.9 requires that cable splices in raceways be prohibited. Splicing in electrical penetrations is considered to be exempt from this requirement.

Regulatory Position C.10 requires that the cables be marked at 5-ft intervals. This is a typographical error as confirmed by the former Electrical, Instrument and Control Branch Chief of USNRC, T. A. Ippolito, on October 10, 1975, and the NRC Power Systems Branch Section Leader, R. G. FitzPatrick, on October 30, 1980. The correct distance is 15 ft, which has been followed in Unit 2.

IEEE384-1974, Sections 5.1.3 and 5.1.4 requires that "where termination arrangements preclude maintaining the minimum separation distance, the redundant circuits shall be run in enclosed raceways" In the case where non-safety 600-V and 120-V cables are routed less than the minimum separation distance away from safety-related open ladder trays, only the nonsafety cables are enclosed in rigid steel conduits. NMP2 will show by mathematical analysis and/or testing that lesser distances can be permitted without exceeding the operating design limits of the Safety Related cables. However, if this analysis is not conclusive, NMP2 will provide tray covers for any Safety Related cable trays where high energy (greater than 125 volts) Non-Safety Related conduits pass closer to open trays than permitted by Regulatory Guide 1.75. The minimum separation distance between the non-safety rigid steel conduit and the safety-related trays is 1 in.

This condition does not involve cables of redundant Class 1E systems. It involves one Class 1E and non-class 1E systems. The concern here is the effect of electrical failure or faults in the nonsafety cables in rigid steel conduit, on the safety related cables in open trays.

All cables used in Unit 2 are flame-retardant. The cable trays are not filled above the side rails. The hazard, in this case, is limited to failure or faults internal to the nonsafety cables in rigid steel conduit. An internally generated fire in the non-Class 1E cables in rigid steel



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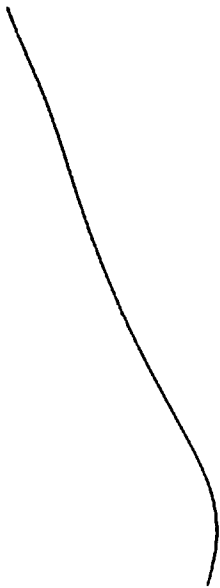


TABLE 1.8-1 (Cont)

Regulatory Guide 1.75, Revision 2 (September 1978)

Physical Independence of Electric Systems

conduit will be contained in the rigid steel conduit and cannot spread to the Class 1E trays. The heat generated due to the fire will be dissipated in the surrounding air. The effects of this heat on the safety-related cables in open ladder trays will not be more severe than what it would be if the trays were enclosed due to free air movement.

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