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MANGAN,C.V. Niagara Mohawk Power Corp.
RECIP.NAME RECIPIENT AFFILIATION
SCHWENCER,A. Licensing Branch 2

SUBJECT: Forwards info requested in 841212 telcon re design basis for roof snow loading.Info will be included in FSAR Amend 17.

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NIAGARA MOHAWK

NIAGARA MOHAWK POWER CORPORATION/300 ERIE BOULEVARD WEST, SYRACUSE, N.Y. 13202/TELEPHONE (315) 474-1511

December 14, 1984
(NMP2L 0296)

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 the information requested by your staff during a telephone conference on December 12, 1984. This material provides the design basis for the roof snow loading and will be included in Final Safety Analysis Report Amendment 17.

Very truly yours,

C. V. Mangan
Vice President
Nuclear Engineering & Licensing

DS:ja
Attachment
xc: R. A. Gramm, NRC Resident Inspector
Project File (2)

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PDR ADOCK 05000410
A PDR

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of	)	
	)	
Niagara Mohawk Power Corporation	)	Docket No. 50-410
	)	
(Nine Mile Point Unit 2)	)	

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 14 day of December, 1984.

DOMINICK T. SCAFIDI
NOTARY PUBLIC STATE OF NEW YORK
RESIDING IN Onondaga COUNTY
COMMISSION EXPIRES MARCH 30, 1986

Dominick T. Scafidi
Notary Public in and for
Onondaga County, New York

My Commission expires:

March 30, 1986

Hail

Hail storms are a relatively rare phenomenon in the region. Pautz reports that there were 49 occurrences of hail with diameters greater than or equal to 1.91 cm (0.75 in) in New York State in the 13-yr period from 1955 through 1967[17]. This converts to approximately four severe hail storms per year. However, hail frequency is not uniform throughout the state. Baldwin and Changnon, both report an annual frequency of one to two hail storms per year in north central New York[18,19]. Changnon indicates that these storms are most likely to occur in the late spring. A review of the Monthly Climatological Data for Syracuse shows four occurrences of hail during the period 1976 through 1980[20].

Ice Storms

A survey by Bennett for 1928 through 1937 indicates that ice or freezing rain may occur up to one to three times per year in the site region[21]. These occurrences are most frequent during the winter. However, glaze accumulations greater than 0.64 cm (0.25 in) could be expected only once per year. A more recent summary of glaze statistics in Baldwin indicates that during the 20-yr period (1950 through 1969), 8 to 12 days of glaze annually occur over the region[18]. Glaze has occurred on 49 days during 1976 through 1980 at the Syracuse NWS Station[20]. The longest duration of freezing rain at the Syracuse NWS Station during this period occurred for 30 hours between March 2nd and 3rd of 1976[20].

High Air Pollution Potential

Episodes of limited atmospheric dispersion in the U.S. have been studied by Holzworth in terms of urban and area pollutant source problems[22]. Holzworth has estimated approximately 10 forecast days of high potential for air pollution in a 5-yr period in the vicinity of the site. Using a pressure gradient technique to define stagnating conditions, Korshover found between 75 to 125 stagnation days in the region during the 40-yr period from 1936 through 1975[23]. This converts to 2 to 3 stagnation days per year, which agrees with Holzworth's estimate. The summer and fall experience the highest potential for stagnation days.

2.3.1.3.2 Maximum Snow Load

A conservative estimate of the 100-year recurrence interval ground-level snow load is estimated to be 45 psf. [61] Based upon this data, a roof snow load of 45 psf [62] is conservatively used in

designing the Category I structures. Additional snow loads due to drifting of snow on the building roofs due to channeling or blowing-up effects against the taller structure walls, is also considered in designing the Category I structures. The criteria used in determining additional snow loads meets or exceeds the requirements of ANSI A58.1 (61).

56. U.S. Department of Commerce. Local Climatological Data-Annual Summary With Comparative Data - Rochester, New York. Environmental Data Service, NOAA. 1982.

57. Changery, M.J. Historical Extreme Winds for the United States - Great Lakes and Adjacent Regions. National Climatic Center, NOAA, Prepared for U.S. NRC, NUREG/CR-2890, August 1982, pp. 187.

58. ANSI A58.1, pp. 100, March 1982.

59. Kramer, M.L. and Halitsky, J. Accident X/Q Values at Category I Fresh Air Intakes and Vital Area Access Zones for Releases from the Main Steam Tunnel, the Combined Radwaste/Reactor Building Vent and the Main Stack at Nine Mile Point Unit 2. Prepared for Niagara Mohawk Power Corporation, January 6, 1984.

60. Kramer, M.L. and Halitsky, J. Addendum - Accident X/Q Values at Category I Fresh Air Intakes and Vital Area Access Zones for Releases from the Main Steam Tunnel, the Combined Radwaste/Reactor Building Vent and the Main Stack at Nine Mile Point Unit 2. Prepared for Niagara Mohawk Power Corporation, May 7, 1984.

61. ANSI A58.1, American National Standard, Building Code Requirements for minimum design loads in Buildings and other structures, 1972.

62. New York State Building construction code applicable to General Building construction, State of New York, November 30, 1979.