REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR:8412050181 DOC.DATE: 84/11/30 NOTARIZED: YES DOCKET #
FACIL:50-410 Nine Mile Point Nuclear Station, Unit 2, Niagara Moha 05000410
AUTH.NAME AUTHOR AFFILIATION
MANGAN,C.V. Niagara Mohawk Power Corp.
RECIP.NAME RECIPIENT AFFILIATION
SCHWENCER,A. Licensing Branch 2

SUBJECT: Forwards updated info re essential lighting sys as suppl to previous responses to Question F430.47.Info will be incorporated in Amend 17 to FSAR.All vital areas provided w/emergency lighting or 8 h battery packs.

DISTRIBUTION CODE: B001D COPIES RECEIVED:LTR L ENCL L SIZE: 6
TITLE: Licensing Submittal: PSAR/FSAR Amdts & Related Correspondence

NOTES:PNL 1cy FSAR'S & AMDTS ONLY. 05000410

	RECIPIENT ID CODE/NAME	COPIES LTTR	COPIES ENCL	RECIPIENT ID CODE/NAME	COPIES LTTR	COPIES ENCL
	NRR/DL/ADL	1	0	NRR LB2 BC	1	0
	NRR LB2 LA	1	0	HAUGHEY,M 01	1	1
INTERNAL:	ACRS 41	6	6	ADM/LFMB	1	0
	ELD/HDS3	1	0	IE FILE	1	1
	IE/DEPER/EPB 36	1	1	IE/DEPER/IRB 35	1	1
	IE/DQASIP/QAB21	1	1	NRR ROE,M.L	1	1
	NRR/DE/AEAB	1	0	NRR/DE/CEB 11	1	1
	NRR/DE/EHEB	1	1	NRR/DE/EQB 13	2	2
	NRR/DE/GB 28	2	2	NRR/DE/MEB 18	1	1
	NRR/DE/MTEB 17	1	1	NRR/DE/SAB 24	1	1
	NRR/DE/SGEB 25	1	1	NRR/DHFS/HFEB40	1	1
	NRR/DHFS/LQB 32	1	1	NRR/DHFS/PSRB	1	1
	NRR/DL/SSPB	1	0	NRR/DSI/AEB 26	1	1
	NRR/DSI/ASB	1	1	NRR/DSI/CPB 10	1	1
	NRR/DSI/CSB 09	1	1	NRR/DSI/ICSB 16	1	1
	NRR/DSI/METB 12	1	1	NRR/DSI/PSB 19	1	1
	NRR/DSI/RAB 22	1	1	NRR/DSI/RSB 23	1	1
	REG FILE 04	1	1	RGN1	3	3
	RM/DDAMI/MIB	1	0			
EXTERNAL:	BNL(AMDTS ONLY)	1	1	DMB/DSS (AMDTS)	1	1
	FEMA-REP DIV 39	1	1	LPDR 03	1	1
	NRC PDR 02	1	1	NSIC 05	1	1
	NTIS	1	1	PNL GRUEL,R	1	1
NOTES:		1	1			

TOTAL NUMBER OF COPIES REQUIRED: LTTR 55 ENCL 47

NIAGARA MOHAWK

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

November 30, 1984
(NMP2L 0272)

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

Enclosed is updated information relating to the essential lighting system for Nine Mile Point Unit 2. This supplements our previous responses to Nuclear Regulatory Commission Question F430.47.

This information will be incorporated in FSAR Amendment No. 17.

Very truly yours,

C. V. Mangan
Vice President
Nuclear Engineering & Licensing

NLR:ja
Enclosure
xc: R. Gramm, NRC Resident Inspector

Project File (2)

B001
1/1

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 30th day of November, 1984.

Christine Austin
Notary Public in and for
Onondaga County, New York

My Commission expires:

CHRISTINE AUSTIN
Notary Public in the State of New York
Qualified in Onondaga Co. No. 4787687
My Commission Expires March 30, 19[illegible]

CHRISTINE AUSTIN
Notary Public in the State of New York
Qualified in Onondaga Co. No. 4787247
My Commission Expires March 30, 19__

The Nine Mile Point Unit 2 lighting systems provide an integrated design that provides adequate station lighting in plant areas for normal, transient and accident conditions. The emergency lighting system is supplied power by the emergency diesel generators and provides adequate emergency station lighting in all critical areas that need to be accessed for transient and accident conditions. The essential lighting system (which can also be supplied power from the diesel generators except during LOCA) provides a backup to the normal lighting system in plant areas during certain transients and those areas necessary for equipment control, maintenance and access routes to these areas. A combination of the essential lighting, emergency lighting and eight hour battery pack lights are used for fire fighting. The electrical equipment for the essential lighting system (except for the UPS and qualification documentation) is identical in all significant respects to the Class 1E equipment used in the emergency lighting system. Equipment (except UPS) was purchased from the same vendor and utilizes the same fabrication methods as the Class 1E equipment, although there may be dimensional or rating differences. Main and distribution lighting panels for both essential and emergency lighting are identical in terms of material specifications, fabrication methods and are seismically mounted in safety related areas. Both the emergency and essential lighting circuit breakers and terminal connectors are identical or are the vendors equivalent of breakers/connectors which are manufactured to the same criteria and are mounted identically. Cable and conduit for both the essential and emergency lighting systems are identical and mounted the same in safety related areas. The station normal UPS (located in the normal switchgear building) for essential lighting are 75 KVA manufactured by Exide, Inc. and are not seismically mounted. The Class 1E UPS are 25 KVA manufactured by Algar Corporation, are seismically mounted in the control building. The normal lighting system is used for normal operations, maintenance and access routes to these areas. The following discussion provides more details on the integration of the lighting design.

Fire Fighting Activities

Based on Appendix 9A and 9B, it has been determined that the plant can be safely shut down in the event of any single fire. Control of safe shutdown equipment is performed in the control room or remote shutdown rooms for any postulated fire, except as discussed below.

1. In the event of a control room or relay room fire, equipment is operated from the diesel generator rooms, other areas of the control building, the reactor building and the service water pump rooms.

2. In the event of a reactor building fire on elevation 289 feet (Fire Area FA 87), some manual valve operations need to be performed in the reactor building to initiate cooling utilizing RHR heat exchangers, if the spent fuel pool cooling system were inoperable.

The activities listed in items 1 and 2 above are performed within eight hours. Once these activities are initiated (e.g., valve lineups), safe shutdown equipment is controlled from the remote shutdown room, control room or diesel generator rooms which utilize emergency lights (Table 9.5-1). Areas in access routes to perform activities in items 1 and 2 above are provided

lighting by a combination of essential lighting and eight hour battery pack lights. Note that the battery pack lights provide backup lighting to the essential and emergency lighting in the event of fire damage to electrical circuits.

Most fire fighting activities are controlled from the main control room. Automatic suppression systems or manually initiated suppression systems (such as foam water sprays) can be initiated from the control room or local panels. Additionally, backup hose stations are provided throughout the plant. The fire protection panels in the control room are provided lighting via either the emergency or the essential lighting system or both.

Summary

Since fire fighting activities, including safe shutdown, can be accomplished with emergency lighting or essential lighting or both, these systems conform to Standard Review Plan 9.5.3.

Control and Maintenance of Safety Related Equipment

Lighting for control and maintenance of safety related equipment in safety related buildings and access routes are listed in Table 9.5-1. Safety related equipment will be maintained in accordance with maintenance procedures. Certain designated areas within the plant, such as the instrument shop on elevation 306' in the control building and the machine shop on elevation 261' in the Radwaste Building are used to supplement in-place maintenance or "local" maintenance activities. All of the above-listed areas are provided lighting from the emergency or essential lighting systems or both.

Control of almost all safety related equipment is normally performed from the control room. Other safety related equipment controls can be performed outside the main control room. These areas include:

1. Diesel generator control rooms
2. Remote shutdown rooms
3. Standby switchgear rooms
4. Reactor Building and auxiliary bays
5. Service water pump rooms

All of the above-listed areas and access routes are provided lighting from the emergency or essential lighting systems or both.

Summary

Since areas needed for control and maintenance of safety related equipment and their access routes are provided emergency or essential lighting or both, these systems conform to the Standard Review Plan Section 9.5.3.

Transients

Plant transients are described in Section 15. During plant transients, including loss of offsite power, all equipment operations to achieve safe shutdown are normally performed from the control room. The control room is provided with emergency lights.

However, local controls are provided for certain equipment if it is desirable to operate equipment locally. As shown on Table 9.5-1, the essential lighting system is generally provided throughout the plant, which ensures adequate lighting for local control panels.

Summary

Since plant transients can be successfully accommodated by equipment operations to achieve safe shutdown from the control room and since emergency and essential lighting is provided in the control room, the lighting systems conform to Standard Review Plan Section 9.5.3.

Shutdown From Outside of Control Room (Without a Fire)

The operation of the remote shutdown panel is described in Section 7. In the event that operators were required to leave the control room (for an unspecified reason) without a fire in the control room, safe shutdown can be achieved from the remote shutdown room except as discussed below.

1. The shutdown cooling valves need to be energized at the motor control centers.

The remote shutdown room and access routes are provided with emergency lights. Essential lighting is provided for other areas which are needed to achieve shutdown from outside of the Control Room.

Summary

Since remote shutdown room and access routes utilize emergency or essential lighting or both, the possibility of a shutdown from outside the control room (without a fire) is in conformance to Standard Review Plan 9.5.3.

Accidents

Plant accidents are described in Section 15. In the event of an accident, safety related controls are provided in the control room to safely shutdown. During accidents (and accidents with seismic events), the Reactor Building is considered uninhabitable for some time due to high radiation. Other areas (except the control and relay rooms) of the plant may also be uninhabitable depending on the severity and type (LOCA, fuel handling accident, etc.) of accident. Safety related equipment is qualified for accident scenarios and necessary safe shutdown equipment and controls to mitigate the consequences of the accident are located in the control room. The control room is provided with emergency lighting.

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

Certain other activities may be required to be performed outside of the control room. Such activities include performing functions in accordance with the emergency plan (Section 13.3). Such activities are generally used to assess the accident releases and provide Operations personnel with information about the accident. Such activities have been reviewed, and these areas have been determined to be vital areas in accordance with NUREG 0737 requirements. These areas are described in Chapter 12 including access routes. All of these areas within Nine Mile 2 described as vital areas are provided with emergency or essential lighting and/or eight-hour battery packs. Additionally, the Technical Support Center will be provided with a normal offsite and emergency diesel generator supply from Nine Mile Point Unit 1.

Summary

Since accidents are mitigated through actions in the control room which is provided with emergency lighting, this design is in conformance with Standard Review Plan Section 9.5.3.

Conclusion

The normal, essential and emergency lighting systems include all components necessary to provide adequate lighting during normal and emergency plant operating conditions. The integrated Unit 2 lighting system provides adequate station lighting for vital areas within Unit 2 and access routes from onsite sources during the full spectrum of accident, or transient conditions.

[illegible]

[illegible]

[illegible]