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November 19, 1998

JMHLTR: #98-0292

U. S. Nuclear Regulatory Commission  
Attn.: Document Control Desk  
Washington, DC 20555

Dresden Nuclear Power Station Unit(s) [2] and [3]  
Facility Operating Licenses DPR-19 and DPR-25  
NRC Docket Nos. 50-237 and 50-249

Subject: Application for Exemption From the Requirements of Title 10,  
Code of Federal Regulation (CFR), Section 50 Appendix R, Section III.J

Pursuant to 10 CFR 50.12(a), we are requesting an exemption from the requirements of 10 CFR 50 Appendix R, Section III.J, to allow the use of portable hand-held lighting units with an 8-hour battery power for specific areas in the plant as depicted in the attached exemption request. 10 CFR 50 Appendix R, Section III.J specifies the following requirement:

"(J) Emergency lighting units with at least an 8-hour battery power supply shall be provided in all areas needed for operation of safe shutdown equipment and in access and egress routes thereto."

We have concluded that, if approved, implementation of the proposed alternative will not hinder operator manual actions of safe shutdown equipment should a fire in the main plant occur and operator actions become necessary.

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Please direct any questions you may have concerning this submittal to Frank Spangenberg  
at (815) 942-2920, extension 3800.

Respectfully,

  
J.M. Heffley  
Site Vice President  
Dresden Nuclear Power Station

Attachment

cc: Regional Administrator – Region III  
Dresden Nuclear Power Station Senior Resident Inspector

## Attachment

### Exemption Request For Outside Plant Areas

#### Requirement

In accordance with Unit 2 DPR-19 operating license condition 2D and Unit 3 DPR-25 operating license condition 3G, Dresden Nuclear Power Station Units 2 and 3 are required to comply with the emergency lighting requirements of Section III. J of 10 CFR 50 Appendix R, which states that:

"Emergency lighting units with at least an 8-hour battery power supply shall be provided in all areas needed for operation of safe shutdown equipment and in access and egress routes thereto."

#### Exemption Requested

An exemption is requested from Section III.J of Appendix R to 10 CFR 50 to allow hand-held portable lighting units to be used as the emergency lighting units for access and egress routes between the main power block and the exterior support buildings, and to periodically monitor water level in the Clean Demineralized Water Storage Tank.

#### Discussion

In accordance with the current Appendix R safe shutdown analysis, manual actions may be required in the following areas outside the main power block, dependent upon the location of the fire in the main plant and the plant systems required for safe shutdown:

- Isolation Condenser Pumphouse
- 2/3 Cribhouse
- Clean Demineralized Water Storage Tank (CDST).

With respect to the access and egress routes to these exterior areas, the plant design has not provided fixed eight-hour battery powered emergency lights. In the first two locations, this lighting would only be required for access and egress. Once inside the respective buildings, safe shutdown function lighting already exists. Additionally, fixed emergency lighting for periodic monitoring of the CDST level was not provided. Although fixed emergency lighting is not provided, portable hand-held lighting units are available to operators performing post fire shutdown tasks to illuminate the access/egress routes to these structures, as well as, the level indication for the CDST.

These hand-held units are administratively controlled and maintained near the Main Control Room. They are readily accessible for the operators who may be

assigned to perform tasks outside of the main power block. In the event that sufficient daylight, normal or security lighting are not available, these hand-held lighting units are specifically dedicated for operator use to perform required safe shutdown activities during and following plant fires. An inventory check is performed quarterly to ensure the hand-held portable lights are functional. As demonstrated in the evaluation below, there is reasonable basis for an exemption to this requirement.

## Evaluation

The Commonwealth Edison (ComEd) Company has evaluated the use of hand-held portable lighting units for periodic monitoring of CDST, as well as, the access and egress routes to the exterior plant buildings/structures. The evaluation has determined that these measures provide an adequate level of lighting which is equivalent to that required by Section III.J of 10 CFR 50 Appendix R. The exterior structures where manual actions may be required for certain Appendix R fire scenarios include:

- Isolation Condenser Pumphouse
- 2/3 Cribhouse
- Clean Demineralized Water Storage Tank (CDST).

Lighting for the access and egress routes to these exterior structures from the power block will be supplied by hand-held portable lighting units rather than fixed eight hour battery powered emergency lights, as well as, periodic monitoring of the CDST level.

The transit routes have been walked down and there are no obstructions or tripping hazards in the route of travel that might not be revealed with the beam of a hand-held portable light. The CDST level instrument is located in close proximity to the Isolation Condenser Pumphouse. The transit routes are along normally traveled and paved plant roadways surrounding the power block. These roadways are maintained clear of obstructions and snow removal is provided.

The isolation condenser is assumed to be used to control reactor pressure during the safe shutdown fire. The CDST is used to provide makeup water to the isolation condenser shell. Although the Fire Hazards Analysis assumes that the CDST water supply is available until after the eight-hour time frame, the CDST level is periodically monitored to ensure that CDST level does not decrease below approximately 12 percent tank level. Upon the CDST level reaching 12 percent, operator personnel are required to place the backup water supply in service. This ensures that adequate water supply is available for operation of the isolation condenser.

The portable hand-held lighting units designated for use in outside areas can provide a adequate level of lighting equivalent the requirements of Section III.J

of 10 CFR 50 Appendix R. Additionally, the use of the portable lights unit will not hamper completion of operator actions.

Outdoor lighting powered by an offsite source, security lighting, or sufficient daylight may be available in the event of a fire in the power block. In the event that these lights source are not available, the portable lights are available for use by personnel to perform safe shutdown activities.

Portable hand-held lighting units are available to the operators performing the post fire shutdown tasks. These portable hand-held lighting units are part of a periodic surveillance program to ensure equipment required for safe shutdown is available. These hand-held units are dedicated for operator use and are maintained readily accessible to the main control room operators who may be required to transit to exterior buildings.

It is therefore, our position that a level of lighting equivalent to Section III.J of Appendix R to 10 CFR 50 is provided by the hand-held portable units for outdoor areas. The addition of eight-hour battery powered lighting units would not significantly enhance the level of safety.

### **Applicable Special Circumstances**

We have determined that the requested exemption conforms to the applicable exemption criteria of 10 CFR 50.12 (a). There are no prohibitions of law to preclude the activities that would be authorized by the requested exemption, and the requested exemption, if granted, would have no impact on the common defense and security. Additionally, the requested exemption does not present an undue risk to the public health and safety since an equivalent level of lighting as required by Section III.J of Appendix R is provided as described above.

Special circumstances are applicable to the requested exemption in accordance with 10 CFR 50.12 (a) (2) (ii) in that application of the regulation for these particular circumstances is not necessary to achieve the underlying purpose of the rule. Section III.J of 10 CFR 50, Appendix R specifies self-contained emergency lighting units with at least eight-hour battery power supply to provide lighting for access and egress routes and operation of safe shutdown equipment. The underlying purpose of the rule is satisfied by the requested exemption since use of hand-held portable lighting units for outside use as described above provides a level of lighting that is equivalent to that required by Section III.J of 10 CFR 50, Appendix R. Thus, the completion of a design change to satisfy the method specified by Appendix R would not provide additional benefit.

Additional special circumstances are applicable to the requested exemption in accordance with 10 CFR 50.12 (a) (2)(iii) in that the application of the regulation would represent an unwarranted burden on our resources and the cost may be in excess of those incurred by other utilities similarly situated as Dresden. The implementation of outdoor battery powered lighting units would result in expenditure of engineering, construction, and plant resources for their installation, maintenance, and operation. The associated costs would include engineering and installation additional lighting units and supporting structures, and increased surveillance and maintenance of the additional lighting units. The costs associated with the design change to provide additional battery powered lighting units would represent an unwarranted burden on our resources considering the negligible safety benefit and the alternative lighting method as described above. Additionally, other nuclear plants, which we believe are similarly situated as Dresden, have been granted comparable exemptions by the NRC. These exemptions included:

Point Beach Nuclear Plant, Units 1 and 2, exemption dated May 7, 1998.

H.B. Robinson Steam Electric Plant, Unit 2, exemption dated October 8, 1992.

Calvert Cliffs Nuclear Power Plant, Units 1 and 2, exemption dated August 22, 1990.

Beaver Valley Power Station, Unit 1, exemption dated July 27, 1987

In conclusion, we believe that special circumstances in accordance with 10 CFR 50.12 (a) (2) (ii) are present to justify the requested exemption. The completion of an additional design change to satisfy the emergency lighting requirements for the areas presented in this request is not necessary to satisfy the underlying purpose of the rule. The hand-held portable lighting units in the outside areas provide sufficient light to complete manual actions required for post fire safe shutdown as required by Section III.J of 10 CFR 50, Appendix R. Additionally the completion of design changes to satisfy the requirements of Appendix R of 10 CFR 50 in these areas represents an unwarranted burden on our resources while providing negligible safety benefit.