

July 27, 1987

Docket No. 50-334

Mr. J. D. Sieber, Vice President  
Duquesne Light Company  
Nuclear Operations  
Post Office Box 4  
Shippingport, Pennsylvania 15077

DISTRIBUTION

Docket File  
NRC & Local PDRs  
PDI-4 Reading  
S. Varga  
B. Boger  
S. Norris  
P. Tam

R. Goel  
F. Orr  
OGC-Bethesda  
E. Jordan  
J. Partlow  
ACRS (10)  
[Gray File]

Dear Mr. Sieber:

SUBJECT: BEAVER VALLEY POWER STATION, UNIT NO. 1 - TRANSMITTAL OF APPENDIX R  
TECHNICAL EXEMPTION REGARDING EMERGENCY LIGHTING (TAC 60625)

By letters dated January 21, 1986 and October 21, 1986, you requested an exemption from the fire protection requirements specified in Appendix R to 10 CFR 50.

We have completed our review of your request. Enclosure 1 is the document granting the exemption you requested. The exemption permits substitution of the required 8-hour battery lighting with:

- (1) the use of security perimeter lighting in outside yard areas,
- (2) the use of portable hand-held lights to enhance fixed d-c lights in specific plant areas, and
- (3) the use of two-hour battery-powered lighting in the fire brigade room.

The Exemption is being forwarded to the Office of the Federal Register for publication.

This completes our action on your submittals. Please contact me if you have any questions.

Sincerely,

Peter S. Tam, Project Manager  
Project Directorate I-4  
Division of Reactor Projects I/II

Enclosure:  
Exemption

cc w/enclosure:  
See next page

LAPDI-4  
SNorris  
7/17/87

PDI-4  
FOrr  
7/17/87

PDI-4  
PTam;sr  
7/17/87

PDI-4  
JStolz  
7/14/87

OGC  
R. Fanner  
7/13/87

BBoger  
7/15/87

DBP  
SVarga  
7/16/87

8708070040 870727  
PDR ADOCK 05000334  
F PDR

Mr. J. D. Sieber  
Duquesne Light Company

cc:  
Mr. W. S. Lacey  
Station Superintendent  
Duquesne Light Company  
Beaver Valley Power Station  
Post Office Box 4  
Shippingport, Pennsylvania 15007

Mr. S. Sovick, Acting Supervisor  
of Licensing  
Duquesne Light Company  
Post Office Box 4  
Shippingport, Pennsylvania 15077

Mr. John A. Levin  
Public Utility Commission  
Post Office Box 3265  
Harrisburg, Pennsylvania 17120

Gerald Charnoff, Esquire  
Jay E. Silberg, Esquire  
Shaw, Pittman, Potts and Trowbridge  
2300 N Street, N.W.  
Washington, DC 20037

Charles E. Thomas, Esquire  
Thomas and Thomas  
212 Locust Street  
Box 999  
Harrisburg, Pennsylvania 17108

Marvin Fein  
Utility Counsel  
City of Pittsburgh  
313 City-County Building  
Pittsburg, Pennsylvania 15219

Resident Inspector  
U.S. Nuclear Regulatory Commission  
Post Office Box 298  
Shippingport, Pennsylvania 15077

Beaver Valley 1 Power Station

Pennsylvania Power Company  
James R. Edgerly  
Post Office Box 891  
New Castle, Pennsylvania 16103

Mr. Jess T. Shumate, Commissioner  
State of West Virginia Department  
of Labor  
1800 Washington Street, East  
Charleston, West Virginia 25305

David K. Heydinger, M.D.  
State Director of Health  
State Department of Health  
1800 Washington Street, East  
Charleston, West Virginia 25305

Regional Administrator, Region I  
U.S. Nuclear Regulatory Commission  
631 Park Avenue  
King of Prussia, Pennsylvania 19406

Mr. R. Janati  
Bureau of Radiation Protection  
Pennsylvania Department of  
Environmental Resources  
P.O. Box 2063  
Harrisburg, Pennsylvania 17120

John D. Burrows, P.E.  
Director of Utilities  
State of Ohio  
Public Utilities Commission  
180 East Broad Street  
Columbus, Ohio 43266-0573

Pennsylvania Office of Consumer  
Advocate  
ATTN: Michael Bardee  
1425 Strawberry Square  
Harrisburg, Pennsylvania 17120

UNITED STATES OF AMERICA  
 NUCLEAR REGULATORY COMMISSION

In the Matter of	)	
DUQUESNE LIGHT COMPANY, et al.	)	Docket No. 50-334
Beaver Valley Power Station,	)	
Unit No. 1	)	

EXEMPTION

I.

Duquesne Light Company, et al. are the holders of Facility Operating License No. DPR-66 which authorizes operation of the Beaver Valley Power Station, Unit No. 1. The license provides, among other things, that Beaver Valley Power Station, Unit No. 1 be subject to all rules, regulations, and Orders of the Commission now or hereafter in effect. Duquesne Light Company (the licensee) is the authorized operator of the facility.

The station is a pressurized water reactor at the licensee's site located in Shippingport, Pennsylvania.

II.

On November 19, 1980, the Commission published a revised Section 50.48 and a new Appendix R to 10 CFR Part 50 regarding fire protection features of nuclear power plants. The revised Section 50.48 and Appendix R became effective on February 17, 1981. Section III of Appendix R contains 15 subsections, lettered A through O, each of which specifies requirements for a particular aspect of the fire protection features at a nuclear power plant. One of these subsections, III.J, is the subject of the licensee's exemption request.

Subsection III.J of Appendix R requires that emergency lighting units with at least 8-hour battery power be provided in all areas needed for operation of safe shutdown equipment and in access and egress routes thereto.

### III.

The NRC has previously granted several fire-protection exemptions to the licensee. These are dated March 14, 1983, August 30, 1984 and December 4, 1986.

By letters dated January 21, 1986 and October 21, 1986, the licensee requested an exemption from the technical requirements of Section III.J of Appendix R to 10 CFR 50, concerning the need for 8-hour battery-powered lighting units in areas having safe shutdown equipment and along access/egress routes. The reason for requiring 8-hour battery powered emergency lighting is to ensure that at least minimum lighting is available for the performance of manual actions necessary for safe shutdown after a fire. The licensee requested the exemption to allow the use of:

1. Security perimeter lighting for outside yard area access/egress routes.

For a control room area fire, the operators are required to follow outdoor pathways to achieve and maintain safe shutdown from outside the control room. To provide lighting, the licensee proposed to use security perimeter lighting instead of the required 8-hour battery-powered lighting for the following access/egress routes - control room to emergency diesel generator building via the east yard area, control room to the intake structure via the north yard area and the roof-top area between the safeguard building stairway and service building (feedwater regulating valve room).

The security perimeter lighting is powered from motor control center MCC-137 (located in the security guard house), which on loss of offsite power, would be supplied from the security diesel generator. This emergency diesel generator has a fuel supply for at least 24 hours. The security perimeter lighting circuits are not routed through fire areas where safe shutdown equipment or cables are located. The transfer circuits that switch power between the normal source and the security diesel generator are routed through the fire areas TB-1 (turbine building) and NS-1 (normal switchgear). However, for fire in these two areas, a control room evacuation would not be required. The security diesel generator and transfer circuitry are independent for all other fire areas of Appendix R concern. The staff concludes that the security perimeter lighting system, including its emergency power supply, are independent of fire areas where control room evacuation may be required, and provides lighting capability equivalent to the technical requirements of Section III.J.

2. Portable, hand-held lighting units for specific plant-areas.

The licensee has requested approval of the use of portable lights to enhance the permanently installed 8-hour emergency lighting for alternate shutdown, in specified areas, based on field walkdowns: intake structure, turbine deck, primary auxiliary building, service building roof top to feedwater regulating valve room, normal 4-kv switchgear room, AE and DF emergency switchgear rooms and process rack room.

The Illuminating Engineering Society (IES) Handbook (referenced in Generic Letter 85-01) for industry standard lighting guidance accepts the use

of portable lighting to supplement fixed d-c units. The staff concludes that the use of portable hand-held lights to supplement the permanently installed 8-hour battery-powered units is acceptable.

The operator actions are hands-free activities (access/egress, observe a gauge, etc.), or require one hand (operate switch, etc.), which would facilitate the use of flash lights.

3. Two-hour battery-powered emergency lighting in the fire brigade room.

The licensee requested approval of the use of 2-hour battery-powered lighting units in the fire brigade room, which were installed instead of 8-hour battery-powered lighting. The brigade room is located on the turbine deck adjacent to the control room main entrance/exit area. It is used as a staging area for alternate shutdown procedures. In this room the operators are briefed on job assignments, and provided key rings, procedure packets and extra flash lights. The expected time duration at this staging area would be less than 30 minutes. The turbine deck has 8-hour battery-powered lighting units installed for access/egress around the brigade room.

#### IV.

Accordingly, the Commission has determined that pursuant to 10 CFR 50.12(a), the exemption as described in Section III is authorized by law and will not present an undue risk to the public health and safety and are consistent with common defense and security, and special circumstances are present for the exemptions in that application of the regulation in these particular circumstances is not necessary to achieve the underlying purposes of Appendix R to 10 CFR Part 50. Therefore, the Commission hereby grants the

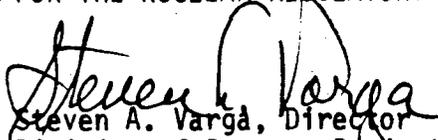
following exemption for the items mentioned in Section III above from the requirements of Section III.J of Appendix R to 10 CFR Part 50 concerning the need for 8-hour battery-powered lighting units in areas having safe shutdown equipment and along access/egress routes as follows:

1. Security perimeter lighting for outside yard area access/egress routes may be used,
2. Portable, hand-held lighting units may be used for plant areas as specified in the licensee's submittal provided the licensee provide the hand-held lights as part of the dedicated supplies required for alternate safe shutdown, and
3. Two-hour battery-powered emergency lighting in the fire brigade room may be used.

Pursuant to 10 CFR 51.32, the Commission has determined that the granting of the exemption will have no significant impact on the environment (52 FR 27892).

This Exemption is effective upon issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

  
Steven A. Varga, Director  
Division of Reactor Projects I/II  
Office of Nuclear Reactor Regulations

Dated at Bethesda, Maryland this 27th day of July 1987.

DCR  
016

July 29, 1987

DOCKET NO. 50-334

MEMORANDUM FOR: Rules and Procedures Branch  
Division of Rules and Records  
Office of Administration

FROM: Office of Nuclear Reactor Regulation

SUBJECT: BEAVER VALLEY POWER STATION, UNIT NO. 1

One signed original of the *Federal Register* Notice identified below is enclosed for your transmittal to the Office of the Federal Register for publication. Additional conformed copies ( 5 ) of the Notice are enclosed for your use.

- Notice of Receipt of Application for Construction Permit(s) and Operating License(s).
- Notice of Receipt of Partial Application for Construction Permit(s) and Facility License(s); Time for Submission of Views on Antitrust Matters.
- Notice of Consideration of Issuance of Amendment to Facility Operating License.
- Notice of Receipt of Application for Facility License(s); Notice of Availability of Applicant's Environmental Report; and Notice of Consideration of Issuance of Facility License(s) and Notice of Opportunity for Hearing.
- Notice of Availability of NRC Draft/Final Environmental Statement.
- Notice of Limited Work Authorization.
- Notice of Availability of Safety Evaluation Report.
- Notice of Issuance of Construction Permit(s).
- Notice of Issuance of Facility Operating License(s) or Amendment(s).
- Order.
- Exemption.
- Notice of Granting Exemption.
- Environmental Assessment.
- Notice of Preparation of Environmental Assessment.
- Other: Please publish in the next FEDERAL REGISTER

Office of Nuclear Reactor Regulation  
Project Directorate I-4, DRP I/II

Enclosure:  
As stated

Contact: SNorris  
Phone: 27837

OFFICE ▶	PDI-4					
IRNAME ▶	SNorris					
DATE ▶	7/30/87					