

MAR 14 1983

DISTRIBUTION
 Docket TBarnhart -4
 NRC PDR RDiggs
 L PDR JHeltemes
 NSIC
 ORB#1 Rdg
 DEisenhut
 OELD
 JMTaylor
 ELJordan
 ACRS-10
 CParrish
 PTam
 Thambach
 Gray
 LJHarmon-2
 OPA

Docket No. 50-334

Mr. J. J. Carey, Vice President
 Duquesne Light Company
 Nuclear Division
 Post Office Box 4
 Shippingport, Pennsylvania 15077

Dear Mr. Carey:

SUBJECT: BEAVER VALLEY POWER STATION, UNIT 1 - REQUEST FOR EXEMPTION
 FROM SOME REQUIREMENTS OF APPENDIX R TO 10 CFR PART 50

By letter dated June 30, 1982, you requested exemptions from the requirements of Appendix R to 10 CFR Part 50 for five fire areas. By letters dated October 22, October 28 and December 21, 1982, you provided additional information.

Based on our evaluation, we find the level of fire protection provided for the Control Room (CR-1), the Reactor Containment (RC-1), the pipe tunnel (PT-1), the cable tunnel (CV-3), and the Primary Auxiliary Building (PA-1G) provides a level of protection equivalent to the technical requirements of Section III.B.2 of Appendix R. Exemptions are granted for these areas.

You have proposed modifications to the charging pump cubicles HVAC ductwork. These do not literally comply with the requirements of Section III.G.2. Although not formally requested, we have evaluated the proposed modification as an exemption request and find that it provides a level of fire protection equivalent to the technical requirements of Section III.G.2. This exemption is therefore granted.

You proposed to use portable, gasoline-powered fans as a means of providing essential ventilation in two areas in the event of fire damage to the normal HVAC equipment. Your analysis shows that these ventilation fans would not need to be employed for some time after a fire incident. Because of this time factor, we accept the use of portable fans as backup HVAC equipment, and have also evaluated this proposal as a request for exemption from III.G.1.a. This exemption is granted.

8303290256 830314
 PDR ADOCK 05000334
 F PDR

OFFICE	.....	.....	.....	.....	.....	.....	.....
SURNAME	.....	.....	.....	.....	.....	.....	.....
DATE	.....	.....	.....	.....	.....	.....	.....

Mr. J. J. Carey

- 2 -

In addition, you indicated that in the absence of offsite power and the RHR system, you would need 127 hours to achieve cold shutdown. Subsection III.L requires that cold shutdown be achieved within 72 hours. You requested an exemption and it is also granted.

Sincerely,

Original signed by:
S. A. Varga

Steven A. Varga, Chief
Operating Reactors Branch #1
Division of Licensing

Enclosures:

- 1. Exemption
- 2. Notice of Exemption

cc w/enclosures:
See next page

OFFICE	ORB#1:DL	ORB#1:DL	ORB#5:DL	ORB#1:DL	AD/C:DL	OELD	O/DL
SURNAME	CParrish	PTam:dm	TiramiaCh	S.Varga	GLafias		DEisenhut
DATE	03/ /83	03/1/83	03/01/83	03/ /83	03/ /83	03/ /83	03/1/83

Mr. J. J. Carey
Duquesne Light Company

cc: Mr. W. S. Lacey
Station Superintendent
Duquesne Light Company
Beaver Valley Power Station
Post Office Box 4
Shippingport, Pennsylvania 15077

Mr. K. Grada, Superintendent
of Licensing and Compliance
Duquesne Light Company
Post Office Box 4
Shippingport, Pennsylvania 15077

Mr. John A. Levin
Public Utility Commission
P.O. Box 3265
Harrisburg, Pennsylvania 17120

Gerald Charnoff, Esquire
Jay E. Silberg, Esquire
Shaw, Pittman, Potts and Trowbridge
1800 M Street, N.W.
Washington, D.C. 20036

Karin Carter, Esquire
Special Assistant Attorney General
Bureau of Administrative Enforcement
5th Floor, Executive House
Harrisburg, Pennsylvania 17120

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

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

Department of Environmental
Resources
ATTN: Director, Office of
Radiological Health
Post Office Box 2063
Harrisburg, Pennsylvania 17105

Mr. Thomas J. Czerpah
Mayor of the Borough of
Shippingport
P.O. Box 26
Shippingport, Pennsylvania 15077

Pennsylvania Power Company
Ray E. Sempler
One E. Washington Street
New Castle, Pennsylvania 16103

Ohio Environmental Protection Agency
Division of Planning
Environmental Assessment Section
P.O. Box 1049
Columbus, Ohio 43216

Office of the Governor
State of West Virginia
Charleston, West Virginia 25305

Charles A. Thomas, Esquire
Thomas and Thomas
212 Locust Street
Box 999
Harrisburg, West Virginia 17108

Mr. J. J. Carey
Duquesne Light Company

cc: Regional Radiation Representatives
EPA Region III
Curtis Building - 6th Floor
Philadelphia, Pennsylvania 19106

Governor's Office of State Planning
and Development
ATTN: Coordinator, Pennsylvania
State Clearinghouse
P.O. Box 1323
Harrisburg, Pennsylvania 17120

Mr. Joseph H. Mills, Acting Commissioner
State of West Virginia Department
of Labor
1900 Washington Street
East Charleston, West Virginia 25305

H. H. Dyer, M.D.
State Director of Health
State Department of Health
1800 Washington Street, East
Charleston, West Virginia 25305

Irwin A. Popowsky, Esquire
Office of Consumer Advocate
1425 Strawberry Square
Harrisburg, Pennsylvania 17120

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

UNITED STATES NUCLEAR REGULATORY COMMISSIONDOCKET NO. 50-334DUQUESNE LIGHT COMPANYOHIO EDISON COMPANYPENNSYLVANIA POWER COMPANYNOTICE OF EXEMPTION FROM APPENDIX R TO 10 CFR 50
FIRE PROTECTION REQUIREMENTS

The U. S. Nuclear Regulatory Commission (the Commission) has granted an Exemption from certain requirements of Appendix R to 10 CFR 50 to Duquesne Light Company, Ohio Edison Company and Pennsylvania Power Company (the licensees). The Exemption relates to the Fire Protection Program for the Beaver Valley Power Station, Unit No. 1 (the facility) located in Beaver County, Pennsylvania. The Exemption is effective as of March 14, 1983.

The Exemption waives certain requirements of Subsection III.G and III.L for this facility. Details are provided in the Exemption and are summarized as follows:

1. Control Room

The Control Room is separated from other plant areas by three-hour rated fire barriers, is manned continuously, has low combustible loading and is equipped with fire detectors and portable fire extinguishers. A remote emergency auxiliary shutdown panel and a backup instrument panel are provided away from the control room. An exemption from Subsection III.G.3.b is granted to the extent that an automatic suppression system is not needed.

2. Charging Pump Cubicles in the Primary Auxiliary Building

This area does not comply with Section III.G.2.b because an automatic suppression system is not provided. Because the combustible loading is low, partial height walls between the charging pumps,

and one-hour barriers and smoke detectors are provided, these alternative features will provide reasonable assurance that one train of charging pumps will be maintained free of fire damage for a sufficient period to enable the fire brigade to respond and manually extinguish a fire. This exemption is granted.

3. Reactor Containment

The protection for redundant trains of safe shutdown equipment inside containment does not meet the technical requirements of Section III.G.2.b because there is not 20 feet of separation between redundant power cables free of intervening combustibles. Due to their configuration and location within the containment and to the restricted access of these sub-areas during plant operations, an exposure fire involving the accumulation of significant quantities of transient combustible materials is unlikely. Because there are only a few cables in these sub-areas and all cables inside containment are qualified to a test comparable to that of IEEE Standard 383 and routed in conduit, a fire of sufficient magnitude to damage redundant cables or components is also unlikely. This exemption is granted.

4. Pipe Tunnel

This area is not provided with an automatic suppression system and 20 feet of separation free of intervening combustibles between redundant components of alternative shutdown capability. If a

fire did occur, there is approximately 1/2-hour to manually operate the necessary valves if a loss of offsite power occurs; if such a loss does not occur these valves would remain operable. Because of the time available to take manual control of the backup system, there is reasonable assurance that one train of components will be available for cooling the containment air recirculation coils. This exemption to Subsection III.G.2.b is granted.

5. Cable Tunnel

Subsection III.G.2.b requires 20 feet of separation free of intervening combustibles between cables. Based on our evaluation, the level of existing protection in cable tunnel CV-3 in conjunction with the proposed Halon 1301 system provides a level of fire protection equivalent to the technical requirements of Section III.G of Appendix R. Therefore, the exemption is granted.

6. HVAC Ductwork for the Charging Pump Cubicles

The licensee has proposed to install 1½-hour fire dampers in common ductwork that penetrates three-hour-rated fire barriers. We note that this does not comply with the Section III.G.2.a requirements for three-hour-rated barriers between redundant components. Because smoke detection, 1½-hour-rated fire dampers, and duct insulation are provided, there is reasonable assurance that a fire in one charging pump cubicle will be promptly detected and extinguished by the fire brigade before the redundant pumps are damaged. This exemption is granted.

7. Use of Portable Fans in Charging Pump Cubicles and Emergency Switchgear Room

These areas contain equipment essential for hot shutdown. Loss of their normal HVAC systems means that the temperature will rise rapidly, thus damaging or prematurely aging the equipment housed inside these areas. The proposed use of the gasoline-powered fans is considered a repair, which is not allowed by the requirement of III.G.1.a. Repairs which can be accomplished within 72 hours are permitted for cold-shutdown-related equipment. However, the licensee has shown, by analysis, that there is a time period of approximately 1 to 2 hours during which these fans would not need to be employed. Because of this time factor, we accept the use of portable fans as backup HVAC equipment for these areas. This exemption is granted.

8. Cold Shutdown Capability

The licensee has requested an exemption from the 72-hour requirement to achieve cold shutdown, per Section III.L of Appendix R. The licensee proposed to use the method of solid steam generator to achieve cold shutdown only when the RHR system is not available. It will need 127 hours to achieve cold shutdown. Since this method is used only when offsite power and RHR are lost, we consider the extended cold shutdown time, from 72 hours to 127 hours, acceptable. This exemption is granted.

The request for Exemption complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission has made appropriate findings as required by the Act and the Commission's rules and regulations in 10 CFR which are set forth in the Exemption.

The Commission has determined that the granting of this Exemption will not result in any significant environmental impact and that pursuant to 10 CFR 51.5(d)(4) an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with issuance of this Exemption.

For further details with respect to this action, see (1) the application for Exemption dated June 30, 1982, as revised October 28 and December 21, 1982, (2) the Commission's letter dated March 14, 1983, and (3) the Exemption. All of these items are available for public inspection at the Commission's Public Document Room, 1717 H Street, N.W., Washington, D.C. and at the B. F. Jones Memorial Library, 663 Franklin Avenue, Alliquippa, Pennsylvania, 15001. A copy of items (2) and (3) may be obtained upon request addressed to the U. S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Director, Division of Licensing.

Dated at Bethesda, Maryland, this 14th day of March, 1983.

FOR THE NUCLEAR REGULATORY COMMISSION


Robert A. Purple, Deputy Director
Division of Licensing

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of
Duquesne Light Company
(Beaver Valley Power Station,
Unit No. 1)

Docket No. 50-334

EXEMPTION

I.

Duquesne Light Company (the licensee) is the holder of Facility Operating License No. DPR-66 which authorizes the operation of the Beaver Valley Power Station, Unit No. 1 (the facility) at steady-state power levels not in excess of 2652 megawatts thermal. The facility is a pressurized water reactor (PWR) located at the licensee's site in Beaver County, Pennsylvania. The license provides, among other things, that it is subject to all rules, regulations and Orders of the Nuclear Regulatory Commission (the Commission) now or hereafter in effect.

II.

On November 19, 1980, the Commission published a revised Section 10 CFR 50.48 and a new Appendix R to 10 CFR 50 regarding fire protection features of nuclear power plants (45 FR 76602). The revised Section 50.48 and Appendix R became effective on February 17, 1981. Section III of Appendix R contains fifteen subsections, lettered A through O, each of which specifies requirements for a particular aspect of the fire protection features at a nuclear power plant. Two of those fifteen subsections, III.G and III.L, are the subject of this Exemption.

Subsection III.G specifies detailed requirements for fire protection of the equipment used for safe shutdown by means of separation and barriers (III.G.2). If the requirements for separation and barriers can not be met in an area, alternative safe shutdown capability, independent of that area and equipment in that area, is required (III.G.3).

Subsection III.L specifies, in part, that the plant can achieve cold shutdown conditions within 72 hours.

By letter dated June 30, 1982 and supplemented by letters dated October 22, October 28 and December 21, 1982, Duquesne Light Company requested exemptions from the requirements of Subsection III.G and III.L of Appendix R.

We have reviewed the licensee's exemption requests and our evaluation of these requests is as follows:

1. Control Room (CR-1)

The Control Room is separated from other plant areas by three-hour rated fire barriers. It is manned continuously. All controls, instrumentation, displays and alarms required for the safe operation and safe shutdown of the station are located in this area.

The combustibles in this area include electrical cable and wire insulation, a quantity of Class A combustibles such as log books, operating procedures, recorder chart paper, combustible file storage boxes and a limited quantity of Class A combustibles associated with the adjoining kitchen area.

A remote emergency auxiliary shutdown panel located in the process instrument and rod position room (CR-4) is provided for control of essential equipment required for attaining a cold shutdown.

The licensee also proposes to permanently install and hardwire a backup instrumentation panel for one train of equipment.

The control room and the auxiliary shutdown panel are physically separated by a 3-hour-rated fire barrier, but both rooms are served by a common HVAC system with fire dampers in the ductwork. Although the remote shutdown panel is not electrically isolated from the control room, however, the new backup indicating panel is to be electrically isolated.

Portable CO₂ extinguishers and a portable water extinguisher are provided for manual fire suppression capability. Detection consists of ionization coverage with control room and local alarm.

This area does not comply with Section III.G, because the control room is not provided with fixed suppression.

The fire protection features currently installed in the control room and the continuous manning of the control room provide adequate defense-in-depth fire fighting capability for these areas. The control room is equipped with area fire detectors. The control room is provided with both a hose station and fire extinguishers for manual fire fighting. The fire load in the area is low.

In addition, the new proposed backup indicating panel is an alternate shutdown system which provides remote control capabilities for those systems necessary to maintain safe-shutdown capability from outside the main control room.

Plant Technical Specifications require continuous occupancy of the control room by the operators. Because the operators constitute a continuous fire watch, manual fire suppression in event of a fire would be prompt and effective and, thus, a fixed suppression system is not necessary to achieve adequate fire protection in this area.

Based on the above evaluation, the existing fire protection program for the control room provides a level of fire protection equivalent to the technical requirements of Section III.G. The exemption should, therefore, be granted.

2. Primary Auxiliary Building - PA-1G

This fire area is located at the 722 foot - 6 inch elevation and is separated from other fire areas by 3-hour rated fire barriers. The area contains the three charging pumps and redundant motor operated valves used to perform several essential shutdown functions, i.e., containment ventilation, pressurizer level control, reactor coolant pump seal injection, backup water supply to the auxiliary feedwater pumps, RWST water supply to the charging pumps.

The licensee has analyzed the equipment in this area that is required for safe shutdown and has concluded that only the charging pumps are needed.

The charging pumps are installed in separate cubicles. The cables for one of the charging pumps is separated from the cables for the other two by at least 20 feet. In other cases, the separation between redundant trains is generally less than 20 feet and in some cases is only several inches. These conduits are separated by only a few inches from the cable tray in the area. The in-situ combustible loading in this area consists of approximately 5,500 pounds of cable insulation installed in cable trays.

Smoke detection is provided for that portion of the fire area that includes the charging pump cubicles. A temperature monitoring system is installed in the area to notify the control room of potential line breaks, but this system is not an approved fire detection system.

The licensee states that:

- (a) all cables are in conduit;
- (b) the in-situ combustible loading is low;
- (c) one set of charging pump cables are separated from the other two by at least 20 feet;
- (d) the partial smoke detection system will detect any fire in the area;
- (e) conduit for the charging pumps and RWST suction valves is located 11 feet above the floor and would not be damaged from an exposure fire equivalent to one gallon of acetone (one minute duration);

- (f) alternate shutdown sequences are being developed for the charging pump suctions;
- (g) motor operated valves in the area serve only as a backup to other equipment.

The licensee proposes to enclose the raceways for one charging pump in a one-hour rated fire barrier.

This area does not comply with Section III.G because an automatic suppression system is not provided. Because the combustible loading is low, partial height walls separate the charging pumps, and one-hour barriers and smoke detectors are provided, it is our opinion that these alternative features will provide reasonable assurance that one train of charging pumps will be maintained free of fire damage for a sufficient period to enable the fire brigade to respond and manually extinguish a fire.

Based on our evaluation, the protection provided for the primary auxiliary building provides a level of fire protection equivalent to Section III.G. Therefore, the exemption should be granted.

3. Reactor Containment - RC-1

This fire area includes the entire area inside containment. The redundant trains of safe shutdown components in this area include the containment ventilation, pressurizer pressure controls, pressurizer power operated relief valves, pressurizer relief blocking valves, pressurizer heaters, steam generator level transmitters, pressurizer level transmitters, reactor coolant hot and cold leg temperature instrumentation, pressurizer and reactor vessel vents, and associated cables.

The combustible loading in this area consists of approximately 48,000 pounds of cable insulation, 265 gallons of lubricating oil for each of three reactor coolant pumps, and 200 pounds of charcoal in the containment air filter cubicles.

All cable insulation is qualified to a test comparable to IEEE Standard 383. The reactor coolant pumps are fitted with an oil collection system.

Smoke detection systems and water deluge systems are provided only in the cable penetration area and in the residual heat removal pump area. Portable fire extinguishers and manual hose stations are provided throughout the fire area.

Separation of redundant cables is as follows:

1. Pressurizer Power Operated Relief Valves

The Train A and Train B control cables are run from the valves (located above the pressurizer cubicle) in conduit, to points just outside the crane wall.

Outside the crane wall, the control cables enter trays approximately 20 feet above the floor which run to the penetration area on either side of column 10½. The control cables then drop down at the penetration area and are separated by approximately 25 feet. The cables are also separated by a fire barrier and a fire detection and suppression system at the penetration area.

2. Pressurizer Relief Blocking Valves

The power cables for both Train A and Train B are run in conduit approximately 20 feet above the floor and from the motor operated valves located in the pressurizer cubicles to the penetration area at column 10½. In the penetration area, the cables enter vertical cable trays which drop down to the next level. The cable trays are separated by a fire barrier and are protected by automatic suppression and detection systems.

3. Pressurizer Heaters

The power cables of both trains are run entirely in tray from the pressurizer cubicle to either side of column 10½. The trays run parallel to each other at a height of 20 feet, in close proximity until they reach either side of column 10½. At this point, the cables turn down into four trays which run vertically, and are separated by 18 feet. The traverse runs of tray above the operating floor are covered trays.

4. Steam Generator Level

The instrument cables for Channels I, II and III are run in separate conduits from the penetration area where the trays are protected by suppression and detection. The conduit runs around the containment and returns to the penetration area from opposite directions; Channels I and III from the north and Channel II from the south.

5. Pressurizer Level Transmitters

The instrument cables for the two level transmitters are in close proximity at elevation 642' 11". The cables are enclosed in conduit and continue in conduit with increasing separation. The cables eventually enter trays in the penetration areas which are separated by a fire barrier at column 10½, and are protected by a fire detection and suppression system.

6. Reactor Coolant Hot and Cold Leg Temperature

Hot leg instruments comprise Channel I while cold leg instruments comprise Channel II. The conduit system for each channel approaches the penetration area from a different direction. The individual channels run around the containment to local pull boxes. From these boxes separate conduits continue to the temperature detectors.

Additionally, the remaining neutral temperature indication from the temperature detector bypass manifold is routed in conduit from each loop to the penetration area.

The protection for redundant trains of safe shutdown equipment inside containment does not meet the technical requirements of Section III.6 because there is not twenty feet of separation between redundant power cables free of intervening combustibles. Due to their configuration and location within the containment and to the restricted access of these sub-areas during plant operations, an exposure fire involving the accumulation of significant quantities of transient combustible materials is unlikely. Because there are only a few cables in these sub-areas and all cables inside containment are qualified to a test comparable to that of IEEE Standard 383 and routed in conduit, a fire of sufficient magnitude to damage redundant cables or components is also unlikely.

Based on the above evaluation, the existing protection for the containment area provides a level of fire protection equivalent to the technical requirements of Section III.6 of Appendix R. Therefore, the exemption should be granted.

4. Pipe Tunnel - PT-1

This area is located at the 722 foot - 6 inch elevation and is separated from the containment area by 3-hour rated fire barriers. The redundant equipment in this area consists of air operated trip valves associated with supplying a backup cooling medium to the containment air recirculation coils. This equipment is needed to be operable about 1/2-hour after a fire in this area if the primary equipment for supplying a cooling medium is rendered inoperative upon loss of offsite power. The containment cooling system is needed for instrumentation associated with safe shutdown.

The air operated trip valves are located within 20 feet of each other (approximately 7 foot separation). There are no in-situ combustibles in the area. A detection system is provided in the ventilation system for the area.

The licensee states that the probability of a fire in this area is low.

This area is not provided with an automatic suppression system and 20 feet of separation free of intervening combustibles between redundant components or alternative shutdown capability. If a fire did occur, there is approximately 1/2-hour to manually operate the necessary valves if a loss of offsite power occurs; if such a loss does not occur these valves would remain operable.

Because of the time available to take manual control of the backup system, there is reasonable assurance that one train of components will be available for cooling the containment air recirculation coils.

Based on our evaluation, the existing level of protection provided for pipe tunnel PT-1 provides a level of fire protection equivalent to the technical requirements of Section III.G of Appendix R. Therefore, the exemption should be granted.

5. Cable Tunnel - CV-3

This area is separated from other areas of the plant by walls, floor and ceiling assemblies of 3-hour rated concrete barriers. The cable tunnel functions primarily as a transition area for cables routed from the service building to the electrical underground ductbanks in the north yard.

The redundant cables routed within the tunnel area include the Class 1E power and control cable associated with the river water pumps, the essential support equipment located in the intake structure, the alternate intake structure, and the emergency diesel generators.

The separation distance between redundant cables in some cases is less than 1 foot.

The significant combustibles in this area consist of electrical cable insulation in the three horizontal cable trays and conduits. The fire loading from the 1311 pounds of insulation is 24,000 BTU/ft².

All cables are qualified to a test comparable to IEEE Standard 383. Each redundant function has at least one train of cables installed in conduit. Access to the area is restricted via a metal hatch and vertical ladder. A smoke detection system is provided in the cable tunnel.

The licensee proposes to install a total flooding Halon 1301 system.

The licensee states that restricted access to the area minimizes the potential for the accumulation of transient combustible materials, and that one train of cables for each redundant function is routed in conduit, therefore, the probability of both trains sustaining fire damage from an exposure fire is reduced to a level equivalent to that provided by the protective features of Section III.G.

This fire area with the proposed modifications does not comply with the technical requirement of Section III.G.

The 1-hour rated fire barrier or twenty feet of separation free of intervening combustibles required by Section III.G provides the benefit of a protective feature to prevent cable damage until the automatic suppression system extinguishes the fire. In this fire area, the restricted access minimizes the probability of a severe exposure fire, due to accumulated transient combustibles. In addition, the metal conduit will delay the onset of cable damage for a limited time period for small exposure fires. The proposed Halon 1301 system should promptly extinguish a fire in this area. Because of the restricted access, low in-situ combustibles and automatic suppression, there is reasonable assurance that one train of cables will remain free of fire damage.

Based on our evaluation, the level of existing protection in cable tunnel CV-3 in conjunction with the proposed Halon 1301 system provides a level of fire protection equivalent to the technical requirements of Section III.G of Appendix R. Therefore, the exemption should be granted.

6. HVAC Ductwork for the Charging Pump Cubicles

The licensee has proposed to install 1½-hour fire dampers in common ductwork that penetrates 3-hour-rated fire barriers.

We note that this does not comply with the Section III.G requirements for 3-hour-rated fire barriers between redundant components. The licensee has not formally requested an exemption for this area, however, we have evaluated this proposal as such. Because smoke detection, 1½-hour-rated fire dampers, and duct insulation are provided, there is reasonable assurance that a fire in one charging pump cubicle will be promptly detected and extinguished by the fire brigade before the redundant pumps are damaged. The licensee's proposed modification, therefore, provides a level of fire protection equivalent to the technical requirements of Section III.G.2.

This exemption should be granted.

7. Charging Pump Cubicle and Emergency Switchgear Room

- The licensee proposes to use portable gasoline-powered fans as a redundant means of supplying essential ventilation to the charging pump cubicles and the emergency switchgear rooms. The portable fans will be placed in position and operated by the plant fire brigade.

These areas contain equipment essential for hot shutdown. Loss of their normal HVAC systems means that the temperature will rise rapidly, thus damaging or prematurely aging the equipment housed inside these areas. The proposed use of the gasoline-powered fans is considered a repair, which is not allowed by the requirement of III.G.1.a. Repairs which can be accomplished within 72 hours are permitted for cold-shutdown-related equipment. However, the licensee has shown, by analysis, that there is a time period of approximately 1 to 2 hours during which these fans would not need to be employed. Because of this time factor, we accept the use of portable fans as backup HVAC equipment for these areas.

This exemption should be granted.

8. Cold Shutdown Capability

The licensee stated that the plant can achieve cold shutdown without offsite power, but not necessarily within 72 hours, as required by Section III.L of Appendix R. With the residual heat removal (RHR) system operational, the 72-hour criterion can be met; with the RHR lost, the licensee calculated that the capability exists to achieve cold shutdown within 127 hours. A backup source of makeup water from the river is available for this function to continue indefinitely.

The licensee has requested an exemption from the 72-hour requirement to achieve cold shutdown, per Section III.L of Appendix R. The licensee proposed to use the method of solid steam generator to achieve cold shutdown only when the RHR system is not available. It will need 127 hours to achieve cold shutdown. Since this method is used only when offsite power and RHR are lost, we consider the extended cold shutdown time, from 72 hours to 127 hours, acceptable.

This exemption should be granted.

IV.

Accordingly, the Commission has determined that, pursuant to 10 CFR 50.12, an exemption is authorized by law and will not endanger life or property of common defense and security and is otherwise in the public interest and hereby grants an exemption from the requirements of Subsections III.G and III.L of Appendix R to 10 CFR 50 to the extent they require:

1. An automatic suppression system be installed in the Control Room (III.G.2.b),
2. An automatic suppression system be installed in the area of the Primary Auxiliary Building where the charging pumps are located (III.G.2.b),
3. For redundant trains of safe shutdown equipment inside containment, 20 feet of separation between redundant power cables free of intervening combustibles (III.G.2.b),
4. An automatic suppression system be installed, and 20 feet of separation free of intervening combustibles between redundant components, in the pipe tunnel (III.G.2.b),
5. Twenty feet of separation free of intervening combustibles between cables in the cable tunnel (III.G.2.b),
6. Three-hour-rated fire barriers be installed in common ductwork in the HVAC system in the charging pump cubicles (III.G.2.a),
7. Features be installed to protect the charging pump cubicle and the emergency switchgear room ventilation from fire damage (III.G.1.a)
8. Alternative shutdown capability be able to achieve cold shutdown within 72 hours (III.L).

The Commission has determined that the granting of this Exemption will not result in any significant environmental impact and that pursuant to 10 CFR 51.5(d)(4) an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with this action.

FOR THE NUCLEAR REGULATORY COMMISSION


Darrell G. Eisenhut, Director
Division of Licensing

Dated at Bethesda, Maryland
this 14th day of March, 1983.