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February 2, 1984

Docket No. 50-286

Mr. J. P. Bayne  
 Executive Vice President  
 Nuclear Generation  
 Power Authority of the State of New York  
 123 Main Street  
 White Plains, New York 10601

Dear Mr. Bayne:

Subject: Exemptions from the Requirements of 10 CFR 50, Appendix R, for  
 the Indian Point Nuclear Generating Plant, Unit No. 3 (IP-3)

By letter dated July 22, 1983, the Commission forwarded a draft Safety Evaluation Report (SER) regarding Appendix R, III.G.2, exemption requests. Therein, the Commission indicated its intention to approve 8 requests, to deny 16 requests and to delete 2 requests. With respect to the denied requests, you were afforded three options. In lieu of pursuing one of these options, you indicated, by letter dated September 26, 1983, that your response would be made after a 6 to 9 month effort given the selection of a consultant. Furthermore, you stated that your effort would encompass a re-evaluation of Sections III.O, III.J and III.L of Appendix R as well as Section III.G.

With respect to the eight approved requests, the Commission has issued the enclosed exemption from the requirements of 10 CFR 50, Appendix R, Section III.G.2. The enclosed also approves your III.G.3 Control Room exemption requested by letter dated January 12, 1983. Enclosed are exemptions for the following nine areas:

- (1) Upper Electrical Penetration Area (Fire Area 73A),
- (2) Upper Electrical Cable Tunnel (Fire Area 7A),
- (3) Lower Electrical Cable Tunnel (Fire Area 60A),
- (4) Intervening Combustible Material  
in the Cable Tunnels
- (5) Sump and Pump Room (Fire Area 36A),
- (6) Outer Annulus (Fire Area 72A),
- (7) Outer Annulus (Fire Area 76A),
- (8) Recirculation Pump and RHR Heat  
Exchanger Area (Fire Area 78A), and
- (9) Control Room (Fire Area 15)

With regard to your request for deferred action on 16 items, we find no basis for such deferral. Therefore, these 16 exemption requests are denied. You may submit exemption requests under 10 CFR 50.12 as your analysis demonstrates the need for them. The safety evaluation (SE) forwarded by letter dated July 22, 1983 now becomes the final SE for 10 CFR 50, Appendix R, Item II.G.2 The tolling provisions of 10 CFR 50.48(c)(6) are no longer in effect and the schedular requirements of 10 CFR 50.48(c) shall be satisfied.

If you have any questions regarding this matter, please contact your Indian Point 3 Project Manager.

Sincerely,

Original signed by  
Darrell G. Eisenhut

Darrell G. Eisenhut, Director  
Division of Licensing

Enclosure:  
As stated

cc w/enclosure:  
See attached list

\*\*See previous concurrences

ORB #1\*\*  
CParrish/jm  
1/19/84

ORB #1\*\*  
P Polk  
1/19/84

ORB #1\*\*  
S Varga  
1/19/84

CEB\*\*  
VBenaroya  
12/6/83

ORB#5\*\*  
TWambach  
12/16/83

OELD\*\*  
WShields  
1/20/84

~~AD:DR~~  
~~GLainas~~  
~~1/19/84~~

~~DD:DL~~  
~~RPucpte~~  
~~1/19/84~~

~~D:AK~~  
~~DEisenhut~~  
~~1/24/84~~

2/1/84

With regard to the deferral of 16 of your denied requests, exemption requests may be submitted under 10 CFR 50.12 as your analysis demonstrates a need for them. We find no basis to defer action on these requests. You are hereby notified that these 16 requests for exemption are denied. The safety evaluation (SE) forwarded by letter dated July 22, 1983 now becomes the final SE for 10 CFR 50, Appendix R, Item II.G.2. The tolling provisions of 10 CFR 50.48(c)(6) are no longer in effect and the schedular requirements of 10 CFR 50.48(c) shall be satisfied.

If you have any questions regarding this matter, please contact your Indian Point 3 Project Manager.

Sincerely,

Darrell G. Eisenhut, Director  
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GLainnes

DD/DL  
1/24/84  
RPurple

D/DL  
1/ /84  
D Eisenhut

*[Handwritten signatures and initials are present over the typed names and dates in the distribution list.]*

With regard to the deferral of 16 of your denied requests, exemptions may be submitted under 10 CFR 50.12 as your analysis demonstrates a need for them. Therefore, we find no basis for these requests to remain in a deferred state. You are hereby notified that these 16 requests for exemptions are denied. Based upon the foregoing, the safety evaluation (SE) forwarded by letter dated July 22, 1983 now becomes the final SE for 10 CFR 50, Appendix R, Item II.G.2 Therefore, the tolling provisions of 10 CFR 50, Appendix R, paragraph 48(c)(6) are no longer in effect and the appropriate schedular requirements of Appendix R shall be satisfied in accordance with the other sections of 10 CFR 50.48(c).

If you have any questions regarding this matter, please contact your Indian Point 3 Project Manager.

Sincerely,

Darrell G. Eisenhut, Director  
Division of Licensing

Enclosure:  
As stated

ORB #1 *CP*  
CParrish  
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PPolk  
12/18/83

ORB#1  
S Varga  
12/ /83

CEB *W*  
VBenaroya  
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*JVM*  
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TWambach  
12/16/83

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~~Moore~~ *W. Shields*  
12/ /83

AD/OR  
GLainas  
12/ /83

DD/DL  
RPurple  
12/ /83

D/DL  
D Eisenhut  
12/ /83



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

February 2, 1984

Docket No. 50-286

Mr. J. P. Bayne  
Executive Vice President  
Nuclear Generation  
Power Authority of the State of New York  
123 Main Street  
White Plains, New York 10601

Dear Mr. Bayne:

Subject: Exemptions from the Requirements of 10 CFR 50, Appendix R, for  
the Indian Point Nuclear Generating Plant, Unit No. 3 (IP-3)

By letter dated July 22, 1983, the Commission forwarded a draft Safety Evaluation Report (SER) regarding Appendix R, III.G.2, exemption requests. Therein, the Commission indicated its intention to approve 8 requests, to deny 16 requests and to delete 2 requests. With respect to the denied requests, you were afforded three options. In lieu of pursuing one of these options, you indicated, by letter dated September 26, 1983, that your response would be made after a 6 to 9 month effort given the selection of a consultant. Furthermore, you stated that your effort would encompass a re-evaluation of Sections III.O, III.J and III.L of Appendix R as well as Section III.G.


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If you have any questions regarding this matter, please contact your Indian Point 3 Project Manager.

Sincerely,

  
Darrell G. Eisenhut, Director  
Division of Licensing

Enclosure:  
As stated

cc w/enclosure:  
See attached list

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P. Kokolakis, Director  
Nuclear Licensing  
Power Authority of the State  
of New York  
123 Main Street  
White Plains, New York 10601



## UNITED STATES NUCLEAR REGULATORY COMMISSION

In the Matter of

POWER AUTHORITY OF THE STATE  
OF NEW YORK(Indian Point Plant,  
Unit No. 3)) Docket No. 50-286  
)  
)  
)  
)

## EXEMPTION

## I.

The Power Authority of the State of New York (the licensee) is the holder of Facility Operating License No. DPR-64 which authorizes operation of the Indian Point Nuclear Plant, Unit No. 3 (the facility). This license provides, among other things, that the facility is subject to all rules, regulations and Orders of the Nuclear Regulatory Commission (the Commission) now or hereafter in effect.

The facility is a pressurized water reactor located at the licensee's site in Westchester County, New York.

## II.

Section 50.48 of 10 CFR Part 50 requires that licensed operating reactors be subject to the requirements of Appendix R of 10 CFR Part 50. Appendix R contains certain specific requirements of fire protection programs at licensed nuclear facilities. On February 17, 1981, the fire protection rule for nuclear power plants, 10 CFR 50.48 and Appendix R, became effective. This rule required all licensees of plants licensed prior to January 1, 1979 to submit: (1) plans and schedules for meeting the applicable requirements of

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Appendix R, (2) a design description of any modifications proposed to provide alternative safe shutdown capability pursuant to Paragraph III.G.3 of Appendix R, and (3) exemption requests for which the tolling provision of Section 50.48(c)(6) was to be invoked.

This exemption relates to the requirements of paragraph III.G 2 and III.G.3 of Appendix R as they apply to nine areas at Indian Point 3. Exemptions were requested by the licensee by letters dated July 1, 1982, November 22, 1982, and January 12, 1983. These nine areas are:

- |  |                 |
|--|-----------------|
| (1) Upper Electrical Penetration Area                        | (Fire Area 73A) |
| (2) Upper Electrical Cable Tunnel                            | (Fire Area 7A)  |
| (3) Lower Electrical Cable Tunnel                            | (Fire Area 60A) |
| (4) Intervening Combustible Material<br>in the Cable Tunnels |                 |
| (5) Sump and Pump Room                                       | (Fire Area 36A) |
| (6) Outer Annulus  | (Fire Area 72A) |
| (7) Outer Annulus  | (Fire Area 76A) |
| (8) Recirculation Pumps and RHR Heat<br>Exchanger Area       | (Fire Area 78A) |
| (9) Control Room   | (Fire Area 15)  |

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The technical requirements of Section III.G.2 are not met in the Upper Electrical Penetration Area and Cable Tunnels (areas 1, 2, 3 and 4 above) because redundant shutdown divisions are not separated by more than 20 feet without intervening combustibile materials. In addition, the alternate shutdown capability for the vulnerable normal shutdown systems in the lower cable tunnel is not independent of the lower cable tunnel.

The fire hazard in these areas is small. If a fire should occur, the existing fire detection system would provide reasonable assurance of early fire awareness by the plant operators and fire brigade, who would extinguish the fire with manual fire fighting equipment. If the fire propagates rapidly and room temperatures rise significantly above ambient before the arrival of the fire brigade, the automatic fire suppression system is expected to operate and limit fire damage. During the time interval between the advent of fire and the arrival of the plant fire brigade or the activation of the fire suppression system, the distance between shutdown systems, which varies between 12 feet and more than 40 feet, provides reasonable assurance that at least one shutdown division or the alternate shutdown capability cabling will remain free of fire damage.

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Because of the glass and asbestos braid construction of the cables in these areas, fire is not expected to propagate along the cable to any significant degree. A series of tests were conducted on the cables. These tests were referenced in the licensee's letter of November 22, 1982. They included: A vertical flame spread test in accordance with ASTM D-470-59T, "Tests for Rubber and Thermoplastic Insulated Wire and Cable"; a five minute vertical flame test made with cable held in a vertical position and a 1750°F flame applied for 5 minutes; and a bonfire test which consists of exposing for 5 minutes bundles of three and six cables to a flame produced by igniting transformer oil in a 12-inch pail with the cable supported horizontally over the center of the pail and the lowest cable 3 inches above the top of the pail. The results of these tests indicate that a postulated fire commensurate with the transient fire hazard would not cause flame propagation along the cables to a significant degree.

Based on our evaluation, we conclude that the existing fire protection for the configuration inside the cable tunnels and electrical penetration area provides an acceptable level of fire protection equivalent to that provided by Section III.G.2, and therefore the request for this exemption is granted.

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The technical requirements of Section III.G.2 are not met in the Sump and Pump Room, Outer Annulus and RHR Heat Exchanger Area (areas 5, 6, 7 and 8 above) because fire detection and fixed fire suppression systems have not been provided throughout the areas. Our concern with the level of fire safety is that a fire may occur, propagate and damage both normal and alternate shutdown systems before being discovered and extinguished by the plant fire brigade.

The licensee has identified an alternate or redundant shutdown capability for all of the safe shutdown systems located in the fire areas. The adequacy of the capability is dependent on fire damage not occurring beyond the boundary of the fire area.

In the sump and pump room (Fire Area 36A) the boundary walls, floor and ceiling are 3-hour fire rated. This fire-resistive construction, coupled with the limited fire loading, provides reasonable assurance that fire damage will be limited to the confines of the room.

In the three fire areas on elevation 46 feet of the containment building, no significant fire hazard exists within the principal fire zones. Because of the negligible amount of combustible material in these zones, smoke generation and elevated temperatures from any credible fire will not be extensive. In addition, because of the height of the ceiling in the outer annulus and the size of the total fire area, the damaging effects from a fire would be mitigated.

- 6 -

Based on our evaluation, we conclude that the licensee's alternate fire protection configuration, will achieve an acceptable level of fire protection equivalent to that provided by Section III.G.2. Therefore, the licensee's request for exemptions for the areas identified in this Section is granted.

The technical requirements of Section III.G.3 are not met in the Control Room (area 9 above) because of the absence of an area-wide, fixed fire suppression system. The fire hazard in this area is low. Because of the dispersion of the combustible materials that may ignite, a potential fire would tend to develop slowly. Because of the smoke detection system and the continuous manning in the control room, a fire would be detected in its initial state and extinguished before serious damage occurred.

If serious damage should occur before the arrival of the plant fire brigade, an alternate shutdown capability exists that is independent of the control room. Therefore, safe shutdown could be achieved and maintained.

These exemptions are contingent upon the licensee's maintenance of administrative control over transient combustibles which are equivalent to those specified in 10 CFR 50, Appendix R, Section III.K.1 through III.K.8 and any specific characterization of transient combustibles or design features related thereto that are specifically discussed in our SER.

- 7 -

Based on its evaluation, the staff concludes that the existing fire protection provides an acceptable level of safety equivalent to that achieved by compliance with Section III.G.2 and, therefore, the licensee's request for an exemption is approved.

Based on our evaluation, we find that the level of fire safety in the areas listed below is equivalent to that achieved by compliance with the technical requirements of Section III.G.2 and III.G.3 of Appendix R and, therefore, the licensee's request for exemption in these areas is granted:

1. Fire Area 73A (Electrical Penetration Area (Upper))
2. Fire Area 7A (Upper Electrical Cable Tunnel)
3. Fire Area 60A (Lower Electrical Cable Tunnel)
4. Intervening Combustible Material in the Cable Tunnels
5. Fire Area 36A (Sump and Pump Room)
6. Fire Area 72A (Outer Annulus)
7. Fire Area 76A (Outer Annulus)
8. Fire Area 78A (Recirc. Pumps and RHR Heat Exchanger Area), and
9. Fire Area 152 (Control Room)

Accordingly, the Commission has determined that, pursuant to 10 CFR 50.12, these exemptions are authorized by law and will not endanger life or

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property or the common defense and security, and are otherwise in the public interest. The Commission hereby approves the requested exemptions from Appendix R of 10 CFR Part 50 paragraph III.G.2 and III.G.3.

We have 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.

This exemption is effective upon issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Darrell G. Eisenhut, Director  
Division of Licensing  
Office of Nuclear Reactor Regulation

Dated at Bethesda, Maryland,  
this 2nd day of February 1984.