

Docket Nos. 50-325  
and 50-324

DEC 29 1983

Mr. E. E. Utley  
Executive Vice President  
Carolina Power & Light Company  
P. O. Box 1551  
Raleigh, North Carolina 27602

Dear Mr. Utley:

SUBJECT: EXEMPTION REQUEST FROM CERTAIN REQUIREMENTS OF 10 CFR  
50.44(c) INVOLVING COMBUSTIBLE GAS CONTROL

Re: Brunswick Steam Electric Plant, Units 1 and 2

The Commission has issued the enclosed Exemption from certain requirements of Section 50.44(c)(3)(ii) of 10 CFR Part 50 in response to your letter dated October 27, 1983. This Exemption which is being forwarded to the Office of the Federal Register for publication, permits an extension in the date of compliance with the requirements of 10 CFR 50.44(c)(3)(ii) through June 30, 1984.

In your letter of March 16, 1983 you requested permanent exemption from the requirements of 10 CFR 50.44(c)(3)(ii) based on BWR Owners Group studies of combustible gas control submitted for NRC review by letter dated June 21, 1982. We have very nearly completed our review of those studies, and will be able to consider your request following our completion of that review.

Sincerely,

Original signed by RAHermann for/

Domenic B. Vassallo, Chief  
Operating Reactors Branch #2  
Division of Licensing

Enclosure:  
Exemption

cc w/enclosure:  
See next page

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Mr. E. E. Utley  
Carolina Power & Light Company  
Brunswick Steam Electric Plant, Units 1 and 2.

cc:

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UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

In the Matter of  CAROLINA POWER & LIGHT COMPANY  (Brunswick Steam Electric Plant, Units 1 and 2)	) ) ) ) ) )	Docket Nos. 50-325 and 50-324
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EXEMPTION

I.

The Carolina Power & Light Company (the licensee) is the holder of Facility Operating License Nos. DPR-71 and DPR-62 (the licenses) which authorize operation of the Brunswick Steam Electric Plant, Units 1 and 2 located in Brunswick County, North Carolina at steady state reactor core power levels each not in excess of 2436 megawatts thermal. This license provides, among other things, that it is subject to all rules, regulations and Orders of the Commission now or hereafter in effect.

II.

On October 2, 1980, the Commission proposed rulemaking on "Interim Requirements Related to Hydrogen Control and Certain Degraded Core Considerations." The proposed amendments to 10 CFR Part 50 would improve hydrogen management in light-water reactor facilities and provide specific design and other requirements to mitigate the consequences of accidents.

On January 4, 1982, the proposed rule became effective and as part of the amendments, it required hydrogen recombiner capability to reduce the likelihood of venting radioactive gases following an accident. The hydrogen recombiner capability applies to light-water nuclear power reactors that rely upon purge/repressurization systems as the primary means of hydrogen control.

Section 50.44(c)(3)(ii) of 10 CFR Part 50 requires that by the end of the first scheduled outage after July 5, 1982 and of sufficient duration to permit required modifications, each light-water power reactor, that relies upon a purge/repressurization system as the primary means for controlling combustible gases following a Loss-of-Coolant Accident, shall be provided with either an internal recombiner or the capability to install an external recombiner following the start of an accident.

### III.

In a March 16, 1983 submittal, the licensee requested an exemption from the requirement of Section 50.44(c)(3)(ii) for provision of either an internal recombiner or the capability to install an external recombiner following the start of an accident. The request was based on BWR Owners Group studies of combustible gas control submitted for NRC review by letter dated June 21, 1982. In the event that the Commission is unable to issue promptly its decision on request for exemption from the equipment requirements of 50.44(c)(3)(ii), the licensee requested an extension of the schedule requirements of 10 CFR 50.44(c)(3)(ii). By letter dated June 21, 1983 the Commission granted an extension

of the schedular requirements through December 31, 1983. By letter dated October 27, 1983 the licensee requested a further extension to June 30, 1984 in the event that the NRC had not completed its review.

We are nearing completion of our review of the BWR Owners Group studies on which the licensee's exemption request was based. We will be able to consider the licensee's request for permanent exemption following completion of that review.

During the interim period, with respect to combustible gas control in the event of a loss-of-coolant accident, the Brunswick units can use the existing containment atmosphere control systems, in conjunction with the standby gas control systems, to avoid unacceptable combustible gas concentrations. The containment atmosphere control system maintains an inert atmosphere during normal operation and the Containment Atmosphere Dilution (CAD) system is used to control combustible gas concentrations after an accident. By means of the CAD system, hydrogen and oxygen concentrations are monitored as nitrogen is added to the containment atmosphere to dilute combustible gases. In the unlikely prospect of high containment vessel pressure, the pressure may be relieved by venting through the standby gas control system. A detailed procedure has been developed by the licensee, with operating personnel trained to use these systems in the control of combustible gases. We find these means of combustible gas control acceptable for interim operation of the Brunswick Steam Electric Plant, Units 1 and 2 through June 30, 1984.


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 or the common defense and security and is otherwise in the public interest. Therefore, the Commission hereby approves the following exemption request.

Exemption is granted from the schedular requirement of Section 50.44 (c)(3)(ii) to extend the required date from "the end of the first scheduled outage beginning after July 5, 1982 and of sufficient duration to permit modifications" to no later than June 30, 1984, or, if the plant is shutdown on that date, before the resumption of operation thereafter.

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  
Office of Nuclear Reactor Regulation

Dated at Bethesda, Maryland  
this 29th day of December 1983.