

May 15, 1985

Docket No. 50-298

Mr. J. M. Pilant, Technical
Staff Manager
Nuclear Power Group
Nebraska Public Power District
Post Office Box 499
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Dear Mr. Pilant:

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION -
HYDROGEN RECOMBINER CAPABILITY

Re: Cooper Nuclear Station

We have reviewed your submittals dated June 29, 1984 and July 20, 1984 responding to Generic Letter 84-09, "Recombiner Capability Requirements of 10 CFR 50.44(c)(3)(ii)." We find that additional information is required to permit completion of our review. Our Request for Additional Information (RAI) is enclosed. Please respond to the RAI within 45 days of receipt of this letter.

The reporting and/or recordkeeping requirements of this letter affect fewer than ten respondents; therefore, OMB clearance is not required under P.L. 96-511.

Sincerely,

Original signed by/

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

Enclosure:
As stated

cc:
See next page

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Mr. J. M. Pilant
Nebraska Public Power District

Cooper Nuclear Station

cc:

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ENCLOSURE

REQUEST FOR ADDITIONAL INFORMATION

HYDROGEN RECOMBINER CAPABILITY

COOPER NUCLEAR STATION

1. Provide a list of all pressurized systems within the containment using atmospheric air. Include the volumes and flowrates of air that could be released into the containment in case of system failure. Also, describe the isolation provisions for these systems and provide a reference to relevant drawings. In general, justify the use of atmospheric air within the containment.
2. In case of a pressure drop in the normal Nitrogen Supply System for the drywell pneumatic system, the check valve between the Nitrogen Supply System and Instrument Air System would automatically open and inject atmospheric air into the drywell piping. We do not find automatic actuation of a back-up air system to be in compliance with the criteria provided in Generic Letter 84-09. To be acceptable, the system should be designed such that an inadvertent inleakage of air can be prevented and adequate administrative controls should be developed to prevent the use of the back-up air system during power operation and during post-accident situations. If the air supply is used during cold shutdown modes, give the procedures preventing start-up of the plant whenever the drywell accumulators are filled with air.
3. Plants such as Cooper are required by 10 CFR 50.44(g) to be provided with a post-accident combustible gas control system. In meeting this requirement, the staff requires that the hydrogen generation rates stipulated in Regulatory Guide 1.7 be used in evaluating the adequacy of those systems which were a part of the original design basis accident (DBA) analysis. Consequently, you are requested to show how Cooper meets the requirements of 10 CFR 50.44(g) and show that the hydrogen generation rates used in the combustible gas control analysis comply with Regulatory Guide 1.7.
4. If it is your intention to obtain approval for the currently-designed air CAD system as a means of compliance with 10 CFR 50.44(g), note that this CAD system would be a potential source of oxygen to the containment following a LOCA. As such, it would not meet Criterion 3 of Generic Letter 84-09. It is necessary that Cooper meet all three criteria of Generic Letter 84-09 to demonstrate that the facility does not rely primarily on purge/repressurization for post-LOCA combustible gas control. Plants that rely on purge/repressurization as the primary means of post-LOCA combustible gas control are required by 10 CFR 50.44(c)(3)(ii) to be provided with the capability for hydrogen-oxygen recombination. Therefore, if you conclude in response to Item 3 above that a CAD system is required to meet 10 CFR 50.44(g), please discuss how you intend to comply with 10 CFR 50.44(c)(3)(ii) without either converting your air CAD system to a nitrogen CAD system or adding recombiner capability.