

September 2, 1982

Docket No. 50-237
LS05-82- 09-016

Mr. L. DelGeorge
Director of Nuclear Licensing
Commonwealth Edison Company
Post Office Box 767
Chicago, Illinois 60690

Dear Mr. DelGeorge:

SUBJECT: SEP TOPIC XV-18, RADIOLOGICAL CONSEQUENCES OF A
MAIN STEAM LINE FAILURE OUTSIDE CONTAINMENT
DRESDEN NUCLEAR POWER STATION, UNIT 2

By letter dated May 21, 1982, you provided comments on the staff safety evaluation report (SER) dated February 5, 1982 for SEP Topic XV-18. Your contention was that the staff's SER was done using very conservative assumptions and that a more detailed analysis should be performed in order to justify the staff's conclusion regarding adoption of Standard Technical Specifications.

The staff agrees that it used conservative assumptions, but does not agree with your conclusion. Each of the staff assumptions highlighted is discussed below.

Your letter stated that the ground level release atmospheric dispersion factors used by the staff are too conservative and that use of an elevated release value would have produced values less than those calculated by the staff. The ground level release value used by the staff for the exclusion area boundary was obtained from the results of the staff review of the SEP Topic II-2.C and did not account for fumigation conditions during the accident. The staff agrees that the doses following a steam line break for a boiling water reactor should assume that the release occurs at a height of 30 meters. However, Regulatory Guide 1.5 also states that fumigation conditions should be assumed present during the postulated releases. Using the methodology outlined in Regulatory Guide 1.5 and the appropriate exclusion area boundary distance, the elevated release value would actually result in an increase in the calculated radiological consequences.

SEEA Add: Gary Staley

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You also stated that the staff based their evaluation on primary coolant mass releases assuming a main steam isolation valve (MSIV) closure time of 10.5 seconds when the current Technical Specifications require closure time of 5 seconds or less. The staff agrees with this comment; however, the staff evaluation is based upon the information provided to us in your submittal dated October 15, 1981. In that submittal you assumed a mass release based upon a MSIV closure time of 10.5 seconds, even though the Technical Specification was lower. You also referenced the analysis of a main steam line break outside containment in Chapter 14 of your FSAR as being appropriate for Dresden 2. The staff values used in its evaluation are simply the values referenced by you as being acceptable values.

Lastly, you stated that the staff assumed the primary coolant concentration to be 20 μ ci/ml iodine-131 instead of the specification value of 20 μ ci/ml gross iodine. The difficulty with the current specification is that it does not identify a maximum distribution of iodine isotopes in the coolant. Without this limitation, the iodine isotopic concentrations could vary dramatically. We recognize the conservatism in the staff calculation. However, because of the uncertainty of the isotopic distribution, the staff chose a worst case value to assure that the postulated offsite consequences are conservative. Other problems associated with the present iodine specification have been previously discussed in our February 5, 1982 SER.

Since you have not provided any information regarding coolant iodine concentrations, we conclude that our conservative assumption of 20 μ ci/ml iodine-131 is still appropriate.

Therefore, we conclude that the staff SER provided in our February 5, 1982 letter is appropriate for Dresden 2 and is considered final. The need for implementation of Standard Technical Specifications will be evaluated during the Integrated Assessment for your facility.

Sincerely,

Original signed by:

Paul W. O'Connor, Project Manager
 Operating Reactors Branch No. 5
 Division of Licensing

cc:
 See next page

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DATE	8/2/82	8/2/82	8/2/82	8/2/82	8/2/82	8/2/82

Mr. L. DelGeorge

cc
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