

April 3, 1968AEC-R 131/8ATOMIC ENERGY COMMISSIONCONTAINMENT VESSEL PENETRATION INSERT CRACKS AT  
QUAD CITIES I AND MONTICELLO REACTORSNote by the Secretary

The Director of Regulation has requested that the attached report by the Director of Compliance, be circulated for the information of the Commission.

W. B. McCool

Secretary

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ATOMIC ENERGY COMMISSION

CONTAINMENT VESSEL PENETRATION INSERT CRACKS  
COMMONWEALTH EDISON COMPANY (QUAD CITIES 1)  
NORTHERN STATES POWER COMPANY (MONTICELLO) - 282

Report to the Director of Regulation  
by the Director of Compliance

A significant amount of surface cracking was detected in welds of large penetration insert plates in the containment structures of the Quad Cities 1 and Monticello reactors currently under construction. The surface cracks, which have been detected on internal and external surfaces, have a maximum depth of  $3/16$  of an inch. The thickness of the plates in the area of the cracks is approximately  $1\frac{1}{4}$  inches.

Investigations and tests conducted by the applicants, and the fabricator of the containment vessels, Chicago Bridge and Iron Company, identified the cause of the cracking and indicated that satisfactory repairs have been effected. Compliance and Reactor Licensing personnel have evaluated the results of the investigations, the tests and the repairs and concur with these findings. The principal cause of the cracking was improper preheat and preparations for welding under cold weather conditions.

We are satisfied that acceptable repairs have been completed on the

Quad Cities 1 and Monticello containment structures. However, this problem may have applicability to other containment structures of similar design and construction. In view of this, Compliance will obtain information from two similar facilities. These facilities, Commonwealth Edison Company's Dresden 3 facility and Connecticut Light and Power Company's Millstone facility, have been selected because their containment structures also were fabricated by the Chicago Bridge and Iron Company under cold weather conditions and, as such, are considered to be the most likely to have experienced this type of cracking.

We will inform you of any significant findings.

The staff of the JCAE is being informed. There has been no press release.