

SEACOAST ANTI-POLLUTION LEAGUE  
5 MARKET STREET  
PORTSMOUTH, NEW HAMPSHIRE 03801

July 15, 1988

Victor Nerses, Seabrook Project Manager  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555

Dear Mr. Nerses:

Enclosed is a list of questions SAPL would pose in regard to the issue of concrete cracking at Seabrook Station. Your assistance in providing answers to the questions will be very much appreciated.

Sincerely,

*Jane Doughty*

Jane Doughty  
Field Director

JD:jsr

Enc.

*JFOI Add: Vic Nerses Ltr Encl  
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SEACOAST ANTI-POLLUTION LEAGUE QUESTIONS ON THE  
ISSUE OF CONCRETE CRACKING AT SEABROOK STATION

Cooling Tower Cracking

1. (a) What schedule of inspections was followed after the removal of forms following the pouring of concrete for the cooling tower walls. (Please provide separate answers to this and all the following questions in 1 and 2 for both the three-foot thick and two-foot thick walls.)
  - (b) What was the methodology employed in performing these inspections?
  - (c) What records were kept of each inspection? Were there drawings made of the cracking locations?
  - (d) Was the purpose of the inspections to identify shrinkage cracking, settling cracking or both?
  - (e) What were the conclusions drawn following those inspections?
  - (f) Is the NRC going to review those inspection records?
2. How does the existing cracking differ from that observed in the above-mentioned inspections? When was this cracking identified as an issue that needed further analysis by the Applicant? How and by whom was the problem identified?
3. What underlies and supports the three-foot thick wall? Do any of the cracks in the two-foot thick wall connect with the cracks in the three-foot thick wall? If there are connecting cracks, do they show differences from the other cracks? Do the locations of the cracks correlate with structural features of the building?
4. Is it not possible that some phenomenon might have occurred following the initial cracking inspections which might have initiated a settling problem with the cooling tower walls?

5. The Applicant has had Altran Corporation perform a computer analysis of the cracking patterns in the two-foot thick wall to establish whether or not they could be the result of shrinkage cracking.
  - (a) How, if at all, has the computer model Altran used been validated for use in this particular type of analysis?
  - (b) Would it not be useful for further assurance that the backfill along the three-foot thick wall be dug out at randomly selected locations to allow a visual inspection for settlement cracking?
6. Are there drawings of the actual crack patterns in the cooling tower walls? Could SAPL be provided the drawings?
7. NRC Inspection Report 50-443/87-07 mentions cracks in the containment, the waste process building and the equipment vault. What has been done to establish the cause and nature of the cracking in each of these areas? What were the results of any such efforts?