



4.1 Excessive Plastic Shrinkage

Description:

Plastic shrinkage cracks occur when fresh concrete is allowed to dry before setting is complete. These cracks are usually parallel, shallow, and do not extend through joints. In general, plastic cracking is not considered a cause for distress due to strength deficiency or durability problems. Plastic cracks can be a problem when they serve as initiation for later cracking due to stresses through the life of the structure.

Data to be collected and Analyzed:

1. Review reports from original construction regarding plastic shrinkage. (FM 4.1 Exhibit 1)
2. Inspect SGR hole cut zone for visible surface cracks.

Verified Refuting Evidence:

- a) There are no reports or NCRs addressing plastic shrinkage of the containment structure.
- b) Records of construction methodology, and especially curing and form stripping records, indicate that the concrete was not exposed or allowed to dry for at least seven (7) days after pouring as recommended by concrete industry standards. (FM 4.1 Exhibit 1)
- c) Visual inspections of the SGR hole cut zone did not locate any cracks with the typical appearance of plastic shrinkage cracks.
- d) Plastic shrinkage cracks are perpendicular to the surface and would not be a factor in the observed delamination.

Conclusion: Plastic shrinkage did not contribute to the delamination.

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Verified Supporting Evidence:

Not Applicable

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May identify additional perspective on this issue as RCA related efforts proceeds

03/17/2010

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0/16