

Comments on NESCC-CTG report Comments from all NESCC members

Return Comments to Clarissa Ferraris ([clarissa@nist.gov](mailto:clarissa@nist.gov)) by: **April 15, 2011**

NESCC 11-024

**Please provide the list of P/E comments in the table below (use as many pages as needed)- Be very specific**

**Note: Primary (P)** comments identify technical issues **Editorial (E)** comments identify editorial issues.

All CTG members will be invited to comments and resolve the P comments. The Chair will address the E comments directly

No.	Last Name	Pg #	Line #	P/E	Comment	CTG Response (only P comments will be discussed)
1.	U.S.NRC	9	15-17	P	<p>After a careful study among the committee members and with input from reinforced concrete authorities during the development stage of the ACI 359 and ACI 349 codes, it was a deliberate decision to use the allowable strain criterion for the design of concrete containment structures—the most important structures among nuclear power plant structures that require leak tightness—and the ultimate strength criterion for less important structures. That deliberate decision is logical and well reasoned with respect to safety because the ultimate strength criterion does not provide information on strain values in steel reinforcement and crack width in concrete sections while the strain criterion does.</p> <p>Therefore, the staff recommends that CTG carefully study this subject prior to recommending changes of the design criterion to a less conservative one for concrete containment structures.</p>	
2.	U.S.NRC	11	26-36	P	<p>The staff understands the importance of the design and detailing provisions in ACI 349 and ACI 318 codes, which provide ductility to structures in resisting seismic and impact loads, and these provisions account for unforeseen circumstances and unexpected loadings that are not factored into the design. These design and detailing provisions are logical because they were derived from structural failure or collapses data resulting from earthquakes, laboratory tests, and theoretical analyses.</p> <p>Therefore, the staff recommends that CTG perform a careful study on the history and basis of the design and detailing provisions in the ACI 349 and ACI 318 codes prior to making recommendations for deleting them.</p>	
3.	U.S.NRC	38	-	P	<p>There is no mention in the document for research on NDE testing for concrete. NDE data is needed in particular for parts of the structure that are inaccessible or below ground as input to predictive concrete service life models. This is important</p>	

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					for life-extension licensing of NPP.	
4.	U.S.NRC	38		P	No mention is made of advanced field testing of concrete (e.g., rheology) and QA/QC requirements.	
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