As of: November 15, 2013
Received: November 09, 2013
Status: Pending_Post
Tracking No. 1jx-88mm-zbuf
Comments Due: November 08, 2013
Submission Type: Web

PUBLIC SUBMISSION

Docket: NRC-2013-0203
Issuance and Availability of Draft Regulatory Guide

Comment On: NRC-2013-0203-0001
Ultimate Heat Sink for Nuclear Power Plants; Draft Regulatory Guide

Document: NRC-2013-0203-DRAFT-0003
Comment on FR Doc # 2013-21847

Submitter Information

9/9/2013

Name: Anonymous Anonymous

78FR 55117

General Comment

3

Comment 1 -
Draft Guidance:
Draft Regulatory Guide 1.27, Revision 3, has removed the worst 24-hour period following the initial design specific critical time period for peak cooling water temperature.

Concern:
Revision 2 of the Regulatory Guide 1.27, required transient analysis to include the worst 24-hours following the initial critical time period. This analysis period should remain part of the design basis analysis because peak heat loads from a realistic or conservative analysis may occur several hours after the start of the initial accident.

The proposed relaxation of the transient analysis requirements would allow under prediction of the peak temperature, as the initial water mass may not reach the plant until after the first critical time period. For example, the delay in peak temperatures will occur because of the time required to the heat up of the suppression pool, following the event, before that energy is transferred to the UHS. Additionally, plant specific procedure requirement and time required to alignment plant system could delay the peak heat load (e.g. spent fuel pools cooling may not occur immediately following an event).

Suggested Revision:
Following the site specific UHS critical time period the worst 24-hour period should be maintained as a requirement for transient analysis for peak cooling water temperature.

Comment 2 -
Draft Guidance:
The draft guidance discusses that "the UHS should be able to dissipate the heat for that accident safely, permit

SUNSI Review Complete
Template = ADM-013

E-RIDS = ADM-03
Add = H. Rodriguez-Luccioni (HLR)

the concurrent safe shutdown and cooldown of the remaining units, and maintain them in a safe-shutdown condition". Furthermore, it is stated that there should be sufficient conservatism and freedom of movement.

Concern:
The existing guidance allows flexible to defer cooling of the spent fuel pools to gain transient analysis margin. Requirements discussing cooling of spent fuel pools should be clarified.

Also, the existing guidance allows for significant delays in cooling the non-accident unit to gain transient analysis margin. Emergency procedures direct operates to cool the units to ensure safety margin. Limiting the cooling capability for the UHS structure is inappropriate for a shared safety system (e.g. a cooling pond). Reducing UHS cooling capacity in this manner restricts operational flexibility and reduces plant safety margin.

These modeling approaches gain analytical margin by slowing the transfer of heat into the UHS instead of ensure that the UHS can cope with peak heat loads that may be necessary to protect the public.

Suggested Resolution:
The guidance should prescriptively discuss cooling requirements and the treatment of the associated heat loads in transient analysis to ensure that safety margin is adequately maintained.