

From: nobody@www.nrc.gov
To: [AdvancedRxDCComments Resource](#)
Subject: Public Comments for the "Advanced Non-Light Water Reactor Design Criteria"
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Below is the result of your feedback form. It was submitted by

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through the IP 209.170.118.134

using the form at <http://www.nrc.gov/reactors/advanced/non-lwr-activities/dc-comment-form.html>

and resulted in this email to advancedrxdccomments.resource@nrc.gov

GDCNo: GDC 16, mHTGR GDC 70-72

GDCTopic_mHTGR: mHTGR selected

TypeOfChange: Technical

Comment: The mHTGR portion of GDC 16 requires that the functional containment control the "release of radioactivity to the environment." However, the Rationale for GDC 16 mentions that traditional containments also provide "protection against accidents related to external hazards (turbine missiles, flooding, aircraft, etc.)." The reader is directed to mHTGR-specific GDCs 70-72 for the external events function. However, reading (relevant) mHTGR GDC 71 on the reactor building, no specific mention of external events is provided. The GDC requires that the reactor building function during "depressurization accidents." The rationale for mHTGR GDC 71 also does not help, since it only discusses reactor building function during line breaks (depressurization events). Contrary to what was advertised in the Rationale for GDC 16, mHTGR GDCs 70-72 do not seem to cover external events, and to do so, one must infer that external events are somehow covered under the umbrella of "depressurization accidents." In addition, one must assume the reactor building is somehow related to the functional containment (which it probably, but not necessarily, is).

The mHTGR reactor building/functional containment design criteria should be revised and clarified to distinguish between accidents, depressurization accidents and external events, and should cover the function of control of radiation release to the environment as well as the function of maintaining core cooling after an internal (e.g. line break) or external (e.g. airplane impact) event. From a terminology standpoint, GDC 16 and mHTGR GDC 71 must distinguish what is meant by the reactor building and the functional containment.

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