



Joint NRC-DOE Advanced Reactor Licensing Initiative

Anna Bradford

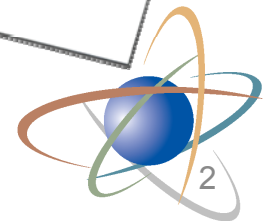
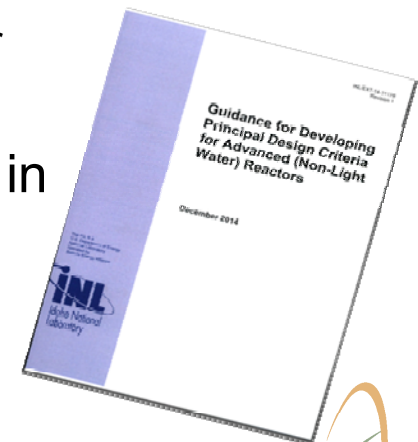
Chief, Advanced Reactor and Policy
Branch

September 1, 2015

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Phase 2

- NRC began implementing phase 2 of the initiative to develop general design criteria (GDC) for non-Light Water Reactors (non-LWRs) in December 2014
 - NRC conducted a public meeting in January 2015 to discuss the DOE report and NRC's plans for developing regulatory guidance
 - NRC presented background and overview of the initiative
 - DOE provided information on how the advanced reactor design criteria were developed
 - Two DOE workshops were provided to the NRC in February 2015:
 - Modular High Temperature Gas Reactors (mHTGRs)
 - Sodium-Cooled Fast Reactors (SFRs)



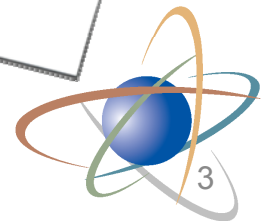
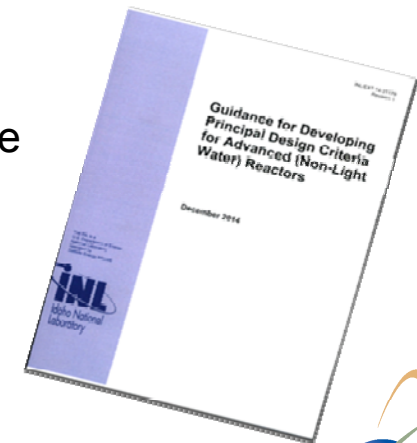
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Phase 2

- NRC team from across the agency has been assembled and is reviewing each set of proposed GDCs
- NRC issued two sets of questions to DOE to clarify certain aspects of DOE report. DOE responded to the first set on July 15, 2015, and is working on responses to the second set.

General topics of NRC staff's questions included:

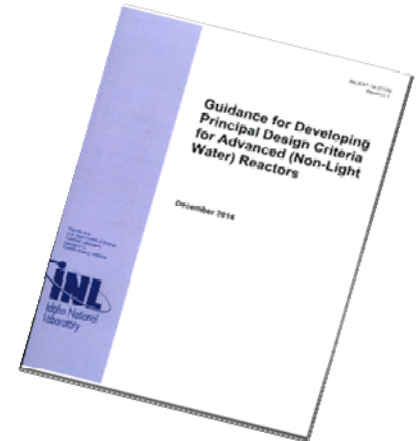
- Use of specified acceptable core radionuclide release design limits for mHTGRs
- Clarification on inventory control for mHTGRs
- Clarification of the necessity and safety function of the intermediate heat exchanger for SFRs
- Requirements for offsite electric power for non-LWRs and protective measures against grid transients



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Phase 2 cont'd

- NRC plans to issue proposed NRC GDCs for non-LWRs for informal public comment in late 2015
 - The proposed NRC GDCs will be posted on the NRC's public non-LWR website and subscribers to NRC's GovDelivery service will be notified
 - There will be a 30 day informal public comment period
- NRC will complete the draft regulatory guide in early 2016 and move forward with the normal regulatory guide approval process, which includes a formal 60 day public comment period
- Goal is to issue the final regulatory guide by the end of 2016



NRC-DOE Joint Initiative References

Date	Description
07/09/13	NRC Letter to DOE, "Initiative Regarding U.S. Nuclear Regulatory Commission Licensing Strategy for Advanced Reactor Technologies." (ML13141A276)
12/08/14	DOE Letter to NRC, "Joint Initiative Regarding U.S. Nuclear Regulatory Commission Licensing Strategy for Advanced (Non-Light Water) Reactor Technologies." (ML14353A245)
12/08/14	DOE Report INL/EXT-14-31179, Rev. 1, "Guidance for Developing Principal Design Criteria for Advanced (Non-Light Water) Reactors." (ML14353A246, ML14353A248)
01/15/15	NRC Letter to DOE, "Initiative Regarding U.S. Nuclear Regulatory Commission Licensing Strategy for Advanced Reactor Technologies." (ML15005A147)
06/05/15	NRC Staff Questions on the U.S. Department of Energy Report, "Guidance for Developing Principal Design Criteria for Advanced (Non-Light Water) Reactors." (ML15154B575)
07/15/15	Response to NRC Staff Questions on the U.S. Department of Energy Report, "Guidance for Developing Principal Design Criteria for Advanced (Non-Light Water) Reactors." (ML15204A579)
08/17/15	Questions on the U.S. Department of Energy Report, "Guidance for Developing Principal Design Criteria for Advanced (Non-Light Water) Reactors." (ML15223B331)

