



Rulemaking: Alternative Physical Security Requirements for Advanced Reactors

Public Meeting/Workshop

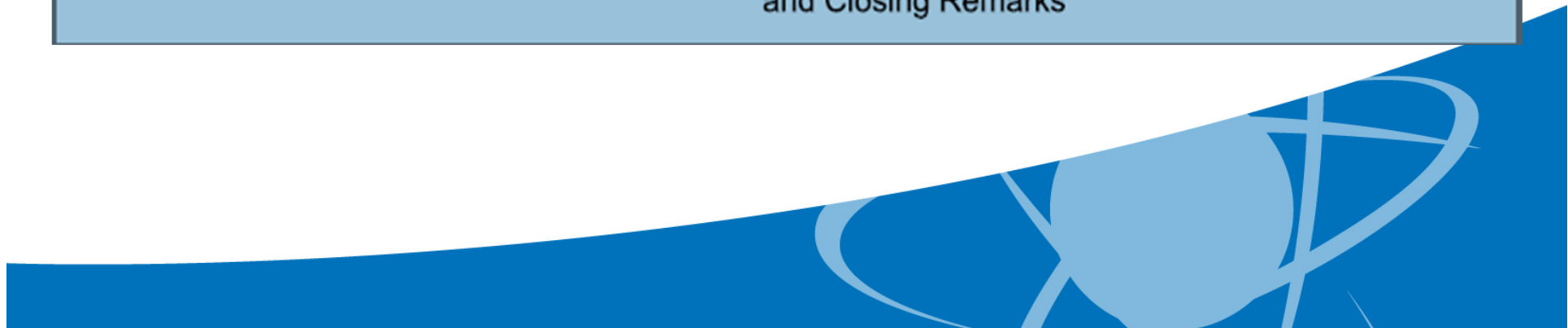
October 19, 2021



Agenda



<i>Time</i>	<i>Topic</i>	<i>Speaker</i>
12:30 PM - 12:45 PM	Meeting Logistics and Opening Remarks	NRC
12:45 PM - 2:00 PM	Discussion on Latest Preliminary Proposed Rule Language (NRC to kick-off discussions)	NRC, NEI, Public
2:00 PM – 2:15 PM	<i>BREAK</i>	<i>ALL</i>
2:15 PM – 3:45 PM	Discussion on Possible Changes to Eligibility Criteria	NRC, NEI, Public
3:45 PM – 4:00 PM	Final Questions & Answers and Closing Remarks	NRC, NEI, Public



Background



Rulemaking

- NRC is currently developing *Alternative Physical Security Requirements for Advanced Reactors* – proposed rule
- More information about this rulemaking and its supporting guidance can be found:
 - www.regulations.gov under docket ID: NRC-2017-0227

Supporting Guidance

- Implementation guidance for this proposed rulemaking will consist of DG-5071, DG-1365, and may endorse NEI 20-05.
- The NRC staff is developing DG-1365 which focuses on the physical security alternatives and will serve as the vehicle for endorsing any external implementing guidance for this rulemaking.
- The NRC staff is developing DG-5071 (a revision to RG 5.81) which focuses on target sets.
- NEI is developing NEI 20-05 which focuses on the eligibility criteria contained in the proposed rulemaking.

Schedule Extension



Commission has approved a 9-month extension

- New **Proposed Rule** Dates:
To the Commission: **06/28/2022**
- New **Final Rule** Dates:
To the Commission: **10/19/2023**



DISCUSSIONS



Preliminary Proposed Rule Language



10 CFR 73.55(b)(3)

Potential conforming change to:

- give advanced reactors an alternative
- house the offsite reference dose values



Preliminary Proposed Rule Language



- Proposed Eligibility Criteria have been condensed into a single applicability statement

(s) Alternative physical security requirements.

(1) General requirements.

(i) Applicability. A licensee of a small modular reactor, as defined in § 171.5, or non-light water reactor that is licensed under the provisions of part 50 of this chapter or a holder of a combined license for a small modular reactor or non-light water reactor under the provisions of part 52 of this chapter, may elect to meet one or more of the alternatives to certain security requirements as specified in § 73.55(s)(2), if doing so meets the performance objectives under § 73.55(b)(3).

Preliminary Proposed Rule Language



- Proposed Eligibility Criteria have been condensed into a single applicability statement

(s) Alternative physical security requirements.

(1) General requirements.

(ii) Identification. The licensee must identify the specific alternative physical security requirement(s) it intends to implement as part of its physical protection program.



Preliminary Proposed Rule Language



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(s) Alternative physical security requirements.

(1) General requirements.

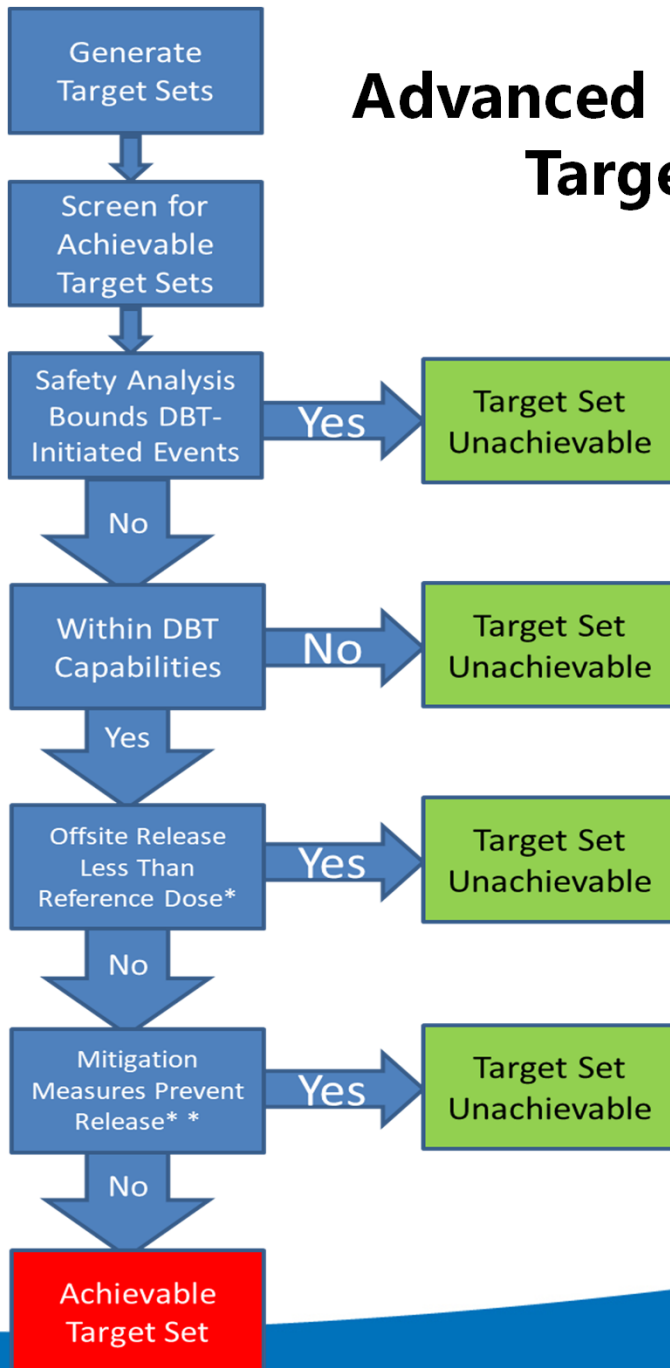
(iii) Analysis. A site-specific analysis must be performed to evaluate the potential offsite radiological consequences and demonstrate how the licensee meets the requirements set forth in § 73.55(b). Each licensee must maintain the analysis required by paragraph (s)(1) of this section until the permanent cessation of operations under § 50.82 or § 52.110(a) of this chapter.



Revised Process Flowchart



Advanced Reactors: Proposed Target Set Process



NOTES

- APSR = Alternative Physical Security Requirements
- Consequence analysis determines the time offsite release greater than reference values occurs, assuming target set is lost at $t=0$.

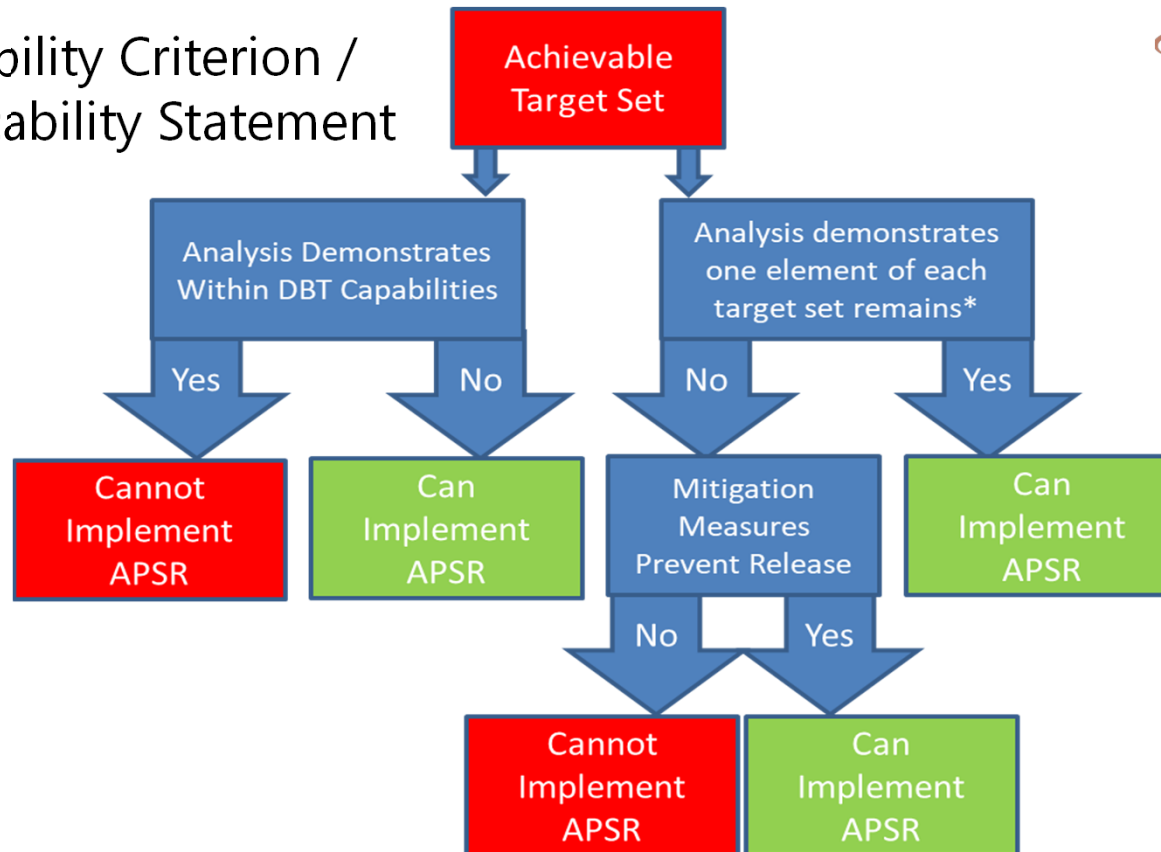
LEGEND

GREEN Boxes → APSR can be implemented
BLUE Boxes → Process and/or analysis
RED Boxes → Cannot implement APSR

* At a bounding time

** After a bounding time and before offsite release greater than reference values occurs.

Eligibility Criterion / Applicability Statement



LEGEND

GREEN Boxes → APSR can be implemented
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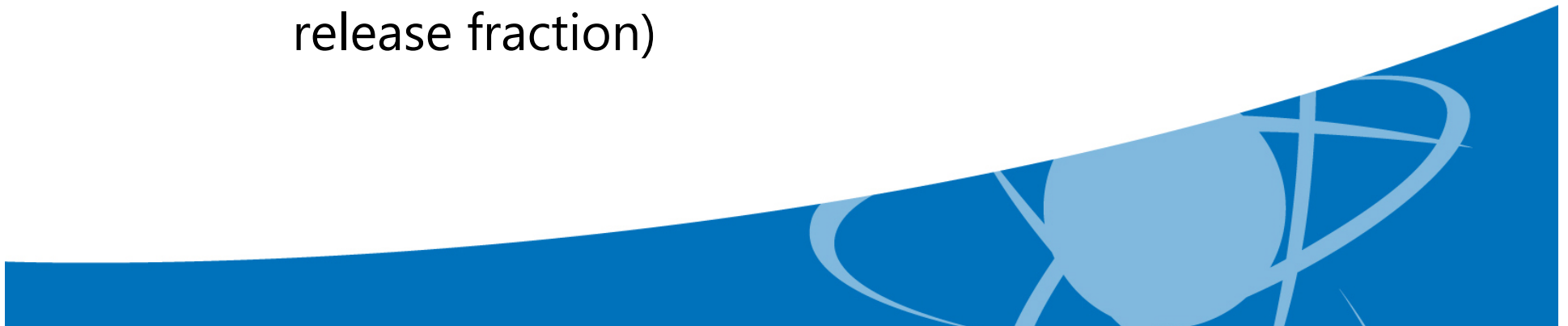
NOTES

- APSR = Alternative Physical Security Requirements
- Analysis is specific to the ability of the credited features of a facility design to: (1) prevent the DBT from compromising a full target set within a bounding time or, (2) identify a time to compromise full target set.
- Mitigative measures occur after a bounding time and before an offsite release greater than reference values occurs.
- Time when an offsite release occurs for mitigation measures = time identified in target set for offsite release + time identified to compromise the full target set.

Focus Areas



- Finalize proposed rule language
- Complete Draft Guidance
 - DG-5071
 - DG-1365 & NEI 20-05
 - Path forward to refine eligibility criteria guidance and establish guidance to assess design basis threat impact on potential release (i.e., determine release fraction)



Thank You!



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Regulations.gov docket ID: [NRC-2017-0227](#)

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