



Xe-100 Training Programs Methodology

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September 22, 2022



Meeting Agenda

Topic	Time (60 minutes)	Presenter
Opening Remarks	5 minutes	Travis Chapman – X-energy Operator Licensing Branch Chief - NRC
Introductions and Safety Moment	5 minutes	Brandon Hartle – X-energy
Xe-100 Training Programs Topical Report	15 minutes	Brandon Hartle/Gregg Crannick – X-energy
Submittal Schedule and Desired Outcomes	5 minutes	Brandon Hartle
NRC Questions and Feedback	25 minutes	NRC Staff
Closing Remarks	5 minutes	Brandon Hartle & Operator Licensing Branch Chief – NRC



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Xe-100 Operations Training Manager

- Provides the training methodology for Xe-100 plant staff
 - Demonstrate compliance with 10 CFR 50.120
 - Description of the Systems Approach to Training process
 - Provides for initial training and continuing training
- Provides the methodology for the Xe-100 Training Program Implementation
 - Demonstrate compliance with 10 CFR 50.120(b)(1)
 - Provides X-energy's interpretation of "18 month prior to fuel load" requirement
- Attachment A provides the Xe-100 PSAR Chapter 11, *Conduct of Operations*, content for
 - Chapter 11.4, Operator Training
 - Chapter 11.5, Site Staff Training



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- SAT Methodology Procedure Series
 - Analysis Phase – draft complete
 - Design Phase – draft complete
 - Development Phase – draft complete
 - Implementation Phase – in progress, expected by Q1 2023
 - Evaluation Phase – in progress, expected by Q1 2023
- Procedure series provides training programs compliant to industry standards and NRC requirements
 - Uses Phase 1 / Phase 2 approach to address:
 - Initial development
 - Lifetime maintenance
 - Xe-100 being a non-LWR advanced reactor
 - Phase 1 addresses constructing new training programs for the reference plant
 - Control Room Operator fundamentals lesson plans in Development Phase
 - Production Field Technician training development in Analysis Phase
 - Phase 2 addresses maintaining Phase 1 training programs for the actual plant
 - Transition from Phase 1 to Phase 2 when plant staff begin performing tasks in their job positions
- References
 - NISP-TR-01, *Systematic Approach to Training Process*
 - NUREG-0800, *Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants*

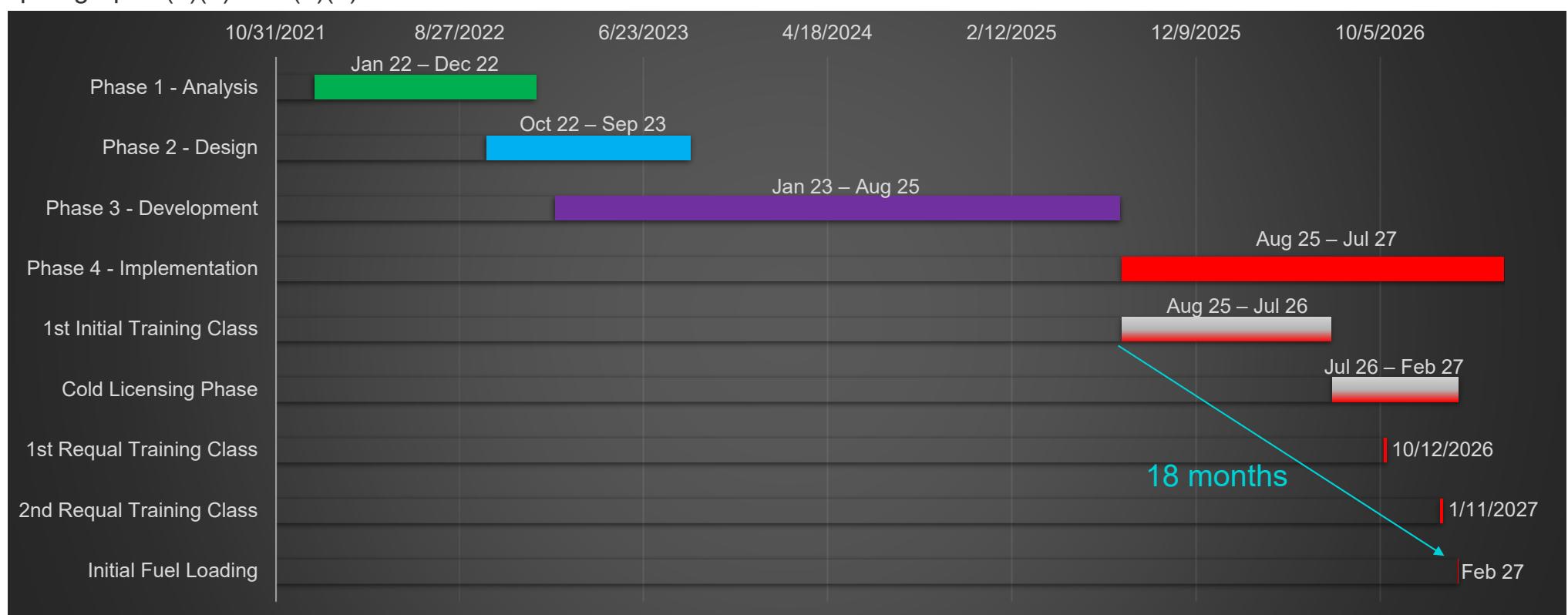


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10 CFR 50.120

(b) *Requirements.* (1)(i) Each nuclear power plant operating license applicant, by **18 months prior to fuel load**, and each holder of an operating license **shall establish, implement, and maintain a training program** that meets the requirements of paragraphs (b)(2) and (b)(3) of this section.





Submittal Schedule and Desired Outcomes

- Xe-100 Training Programs Methodology Topical Report
 - Scheduled submission on 10/28/2022
- X-energy is requesting the following from the review:
 - 12 month review time
 - Safety evaluation approving X-energy's Training Program Methodology on training Xe-100 plant staff
 - Draft safety evaluation for the Xe-100 PSAR Chapter 11, Conduct of Operations, sections 11.4 and 11.5
- The safety evaluations will accomplish the following:
 - Enable NRC review efficiency of the Xe-100 Training Programs when they are completed during the OL stage
 - Allow for expedited NRC review of Chapter 11 of the Xe-100 PSAR during the CP stage

Questions and Feedback





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