



# 01-16 DOE Authorization Strategy

May 2024

*Changing the World's Energy Future*

Jason P Andrus, Alison Wells



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NRIC

National Reactor  
Innovation Center

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# Nuclear Safety and DOE Authorization

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A decorative graphic in the bottom right corner featuring a large teal triangle pointing upwards and a smaller blue triangle pointing downwards, both overlapping.

# Nuclear Safety Overview

Organizational Mission  
to Assist in the  
Development and  
Deployment of Reactor  
Experiments in a Safe  
and Compliant Manner

Engage with Reactor  
Designers to Support  
Design Interfaces and  
Develop Safety Basis  
Documents



# Role of Safety and Authorization

- DOE-STD-1189-2016
  - Process Standard – Stage Gates
  - Establishment of Regulatory Requirements
  - Clarity of Path Forward
  - Integration of Safety and Design
  - Reduce Project Risk by Establishing Regulatory Certainty through formal regulatory approvals.
- Flexibility in risk analysis and presentation methods.
  - ANSI/ANS 15.21, DOE-STD-3009, LMP/TICAP



# Major Updates

## Long Lead Procurement Tailoring

- DOE Letter Allows for Applying a Graded Approach
  - QA Program Implementation
  - DOE Safety Submittals
- MFC-ADM-0200 Provides Details

## DOE Guidance on Autonomous Controls

## DOE Clarifying Guidance on SSC Classifications



# Best Practices



Communications and Briefings



Regular Touch-ups at All Appropriate Levels



Early Identification and Collaborative Resolution of Challenges



Clear Definition of Boundaries and Transferal of Roles



QA Program Implementation





# Lessons Learned



Intentional use of Digital Tools



Early Identification and Alignment on Specific Technical Challenges and Resolution Pathways



Level of Maturity for Deliverables



Establishment of Detailed Schedules and Visibility to All Affected Stakeholders



Early Alignment and Expectations for Design Phases



Interface Details Have to be Thought Through and Documented Well



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