

# **Public Meeting with the Nuclear Energy Institute Regulatory Issues Task Force**

**NOVEMBER 8, 2022**

# Agenda

Time	Topic
2:00 p.m. – 2:10 p.m.	Opening remarks by NRC and NEI
2:10 p.m. – 2:30 p.m.	Innovation/EMBARK <ul style="list-style-type: none"> <li>Update on Mission Analytics Portal External (MAP-X)</li> </ul>
2:30 p.m. – 2:40 p.m.	Discussion on risk-informed initiatives
2:40 p.m. – 3:00 p.m.	Discussion on risk-informed process for evaluations (RIPE) lessons learned from the first use
3:00 p.m. – 3:20 p.m.	Request for confirmation of information (RCI) process overview (LIC-115, “Processing Requests for Additional Information”) and discussion on best practices in communications for licensing review actions
3:20 p.m. – 3:30 p.m.	Break
3:30 p.m. – 3:45 p.m.	Discussion on staffing, budgeting, and resources
3:45 p.m. – 3:55 p.m.	NRC forthcoming process changes/updates/improvements
3:55 p.m. – 4:10 p.m.	Effort and Schedule Estimate (EASE) tool overview
4:10 p.m. – 4:25 p.m.	Status of Radioactive Source Security and Accountability Rulemaking
4:25 p.m. – 4:40 p.m.	2023 Regulatory Information Conference
4:40 p.m. – 4:50 p.m.	Opportunity for public comments
4:50 p.m. – 5:00 p.m.	Closing remarks by NRC and NEI
5:00 p.m.	Adjourn

# Opening Remarks

**Mike King**

Deputy Director for Reactor Safety  
Programs and Mission Support  
Office of Nuclear Reactor Regulation  
U. S. Nuclear Regulatory Commission

**Brett Titus**

Technical Advisor  
Nuclear Energy Institute



# MAP-X Update

NRC Public Meeting with Nuclear Energy Institute  
(NEI) Regulatory Issues Task Force (RITF)

November 8, 2022

Nicole Fields, MAP-X Lead, NRR/EMBARK  
Tim Mossman, Managing Director, NRR/EMBARK



# EMBARK

Change organization housed within the Office of Nuclear Reactor Regulation (NRR)

Facilitating innovation and data improvements across the agency

Strong partnership with program data owners and users and the Office of the Chief Information Officer (OCIO)

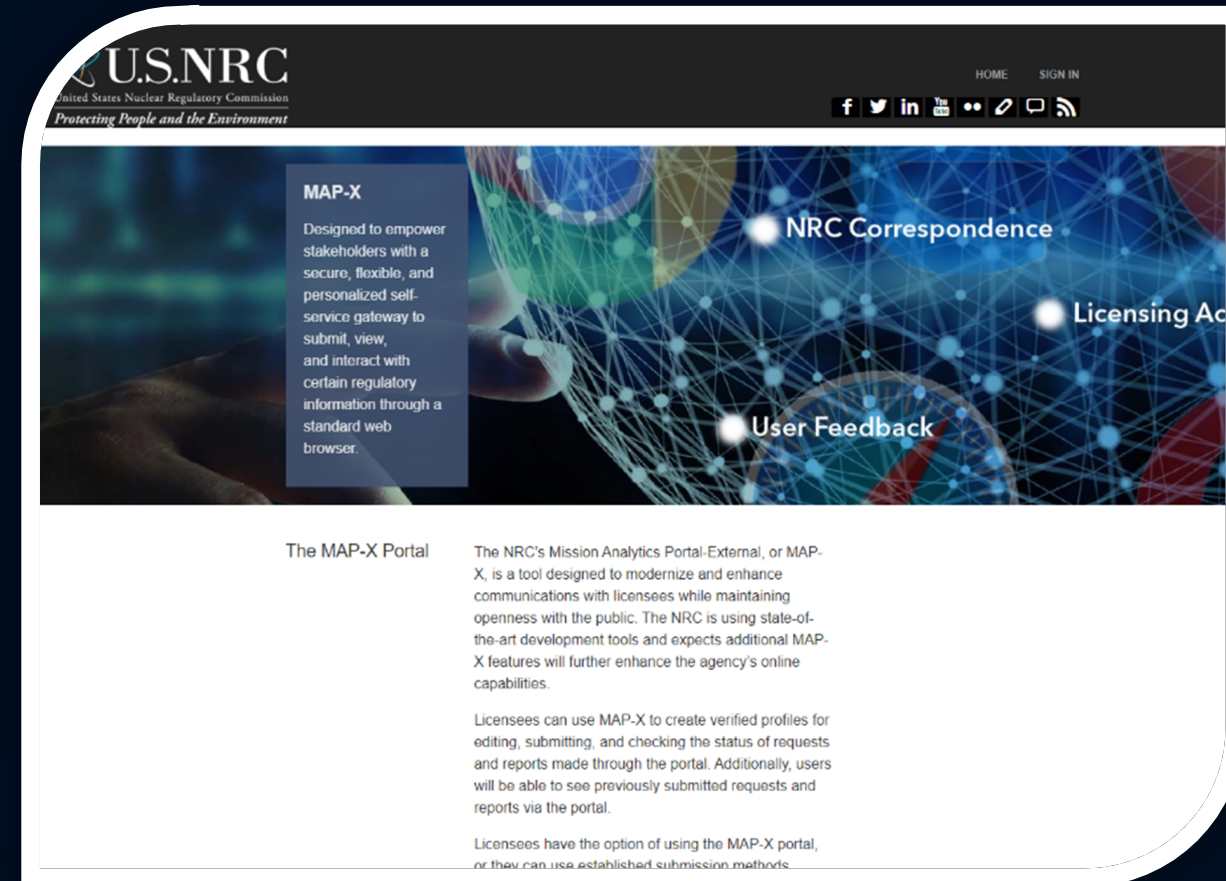
# MAP-X

A user-authenticated web portal that improves the way that the agency can exchange data and information with our external stakeholders



# MAP-X Status

- Active MAP-X Modules
  - Web-Based Relief Requests (WRR) for proposed alternative under 10 CFR 50.55a(z) (integrated into MAP-X as a module)
  - Event Notification (Form 361: Power Reactors, Form 361A: Fuel Cycle and Materials, Form 361N: Non-power Reactors)
- MAP-X Modules under Development
  - Licensee Event Reports (Form 366)
  - General Submission (Similar to EIE General Form)





# Potential MAP-X Benefits

## External Users

- Individual access from anywhere - not tied to a specific computer/physical location
- Due to user credentialling and authentication, portal access and submission viewing is secure – can share sensitive or curated information
- Email record/proof of submission
- Form field validation / auto-populated fields
- View/clone previous submissions

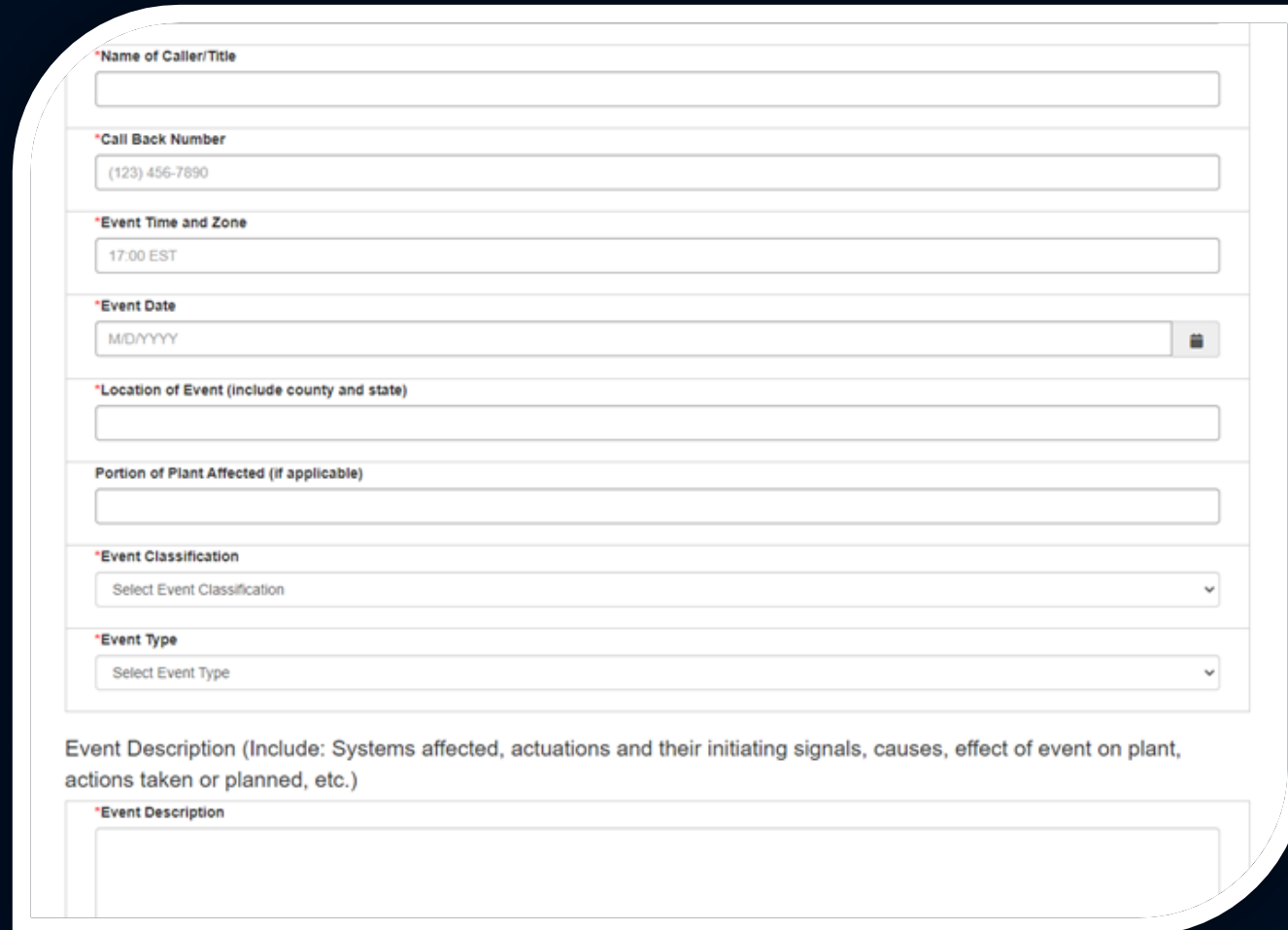
## NRC

- Receives information as structured data rather than narrative text or attachments (as applicable)
- Can support streamlining and monitoring incoming data processes
- Routing and availability of information within the NRC is enhanced



# Building a Smarter Web Form

- Clone function for forms
- Drop down lists
- Required fields
- Validation of data field formatting (dates, phone numbers)
- Conditional input fields
- Ghost text to show expected input
- Autopopulation of fields based on user information
- Ability to expand/minimize parts of forms



The form is titled "Name of Caller/Title" and includes a text input field. Below it is a "Call Back Number" field with a placeholder "(123) 456-7890". The "Event Time and Zone" field shows "17:00 EST". The "Event Date" field has a placeholder "MM/YYYY" and a calendar icon. The "Location of Event (include county and state)" field is a text input. Below it is a "Portion of Plant Affected (if applicable)" field. The "Event Classification" field is a dropdown menu with "Select Event Classification" as the placeholder. The "Event Type" field is a dropdown menu with "Select Event Type" as the placeholder. At the bottom, there is a text area for "Event Description (Include: Systems affected, actuations and their initiating signals, causes, effect of event on plant, actions taken or planned, etc.)".

# Recent MAP-X Progress

- Revised Relief Request/Proposed Alternative form approved by OMB and now available for use
- Upgrades to improve the user experience with complex text inputs based on user feedback
- Deployment of Form 361N for Non-Power Reactors
- Upgrades to Form 361, 361A, and 361N made and screen shots were submitted to OMB for approval
- Transitioned to a new MAP-X application development contractor
- Revision 3 of MAP-X User Guide and MAP-X FAQ now available
- User Warning Banner added for information security



# MAP-X Upgrades On The Horizon

- Finish development of Licensee Event Report module and request OMB clearance
- Develop and deploy General Submission module
- Continued MAP-X User Experience Improvements
- Adapt application to be scalable to more forms/processes and more groups of external users, especially considering the Administrator functionality
- More reporting/interactive functionality within the application for NRC users
- Upgrading MAP-X to intake sensitive (but not SGI or classified) information
- Continue to explore possible future MAP-X modules
  - Reactor Operating Licensing, Fitness for Duty, Radioactive Material Shipments



# Advice for MAP-X Users

- If you may have a near-term use for MAP-X, sign up for a user account today!
- MAP-X User Guide and FAQ Rev. 3 available at <https://www.nrc.gov/docs/ML2229/ML22290A105.html>
- Be prepared to go through ICAM Level Gold credentialling to use MAP-X
  - Requires both a recent photo and a photo ID (State Driver's License is acceptable)
  - <https://pki.nrc.gov/ecs/apps/gold/dcc-gold-wrr.html> to apply for credentialling
- Telling your NRC project manager that you want to use MAP-X will help ensure the process goes smoothly; you can also contact [MAP-X.resource@nrc.gov](mailto:MAP-X.resource@nrc.gov) with any issues or questions
- Once you are credentialled, login to the portal <https://mapx.nrc-gateway.gov/> to become familiar with the application, your roles/permissions, and the forms
- We also have a test environment for credentialled users, if you want to explore and test out the system <https://mapx-preprod.powerappsportals.us/>

# MAP-X Looking Forward




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# Discussion on risk-informed initiatives



# Discussion on risk-informed process for evaluations (RIPE) lessons learned from the first use



ONE  
WHITE FLINT  
NORTH



**EMBARC**  
VENTURE STUDIO



# Risk-informed Process for Evaluations

Antonios M. Zoulis, NRR/DRA

# RIPE Leverages Previous Risk-Informed Initiatives

Integrated Decision-making  
Panel (IDP) Reviews Key  
Engineering Principles

IDP



Demonstrated Probabilistic  
Risk Assessment  
Acceptability

PRA

RIPE

(using existing  
regulations)





# 1<sup>st</sup> Application Submitted Under RIPE

- First RIPE exemption request submitted by APS for review January 2021
  - Exemption from 10 CFR 50.62(c)(1) (ATWS Rule) for Palo Verde
  - The ATWS Rule includes the following three requirements in 50.62(c): (1) the diverse auxiliary feedwater actuation, (2) diverse turbine trip, (3) diverse reactor scram as well as the existing safety related actuation of AFS (AFAS) and the reactor protection system reactor/turbine trip under the conditions of an ATWS
- The RIPE submittal requested a partial exemption to eliminate the Diverse Auxiliary Feedwater Actuation System (DAFAS) requirement only
- Acceptance review did require request for clarifying information
- SE completed and issued on March 23, 2022, within 8½ weeks
  - PVNGS RIPE Exemption SE (ML22054A005)
  - PVNGS RIPE Exemption (ML22054A006)

# NRC Lessons Learned – Training



- ✓ Just In Time (JIT) Training
- ✓ Risk-Informed Decision Making (RIDM) Workshops
- ✓ ET/LT Briefings

# NRC Lessons Learned - Process

- Staff to create SE template
- Encourage/recommend that licensee requests pre-submittal meeting for applications submitted under RIPE
- Encourage licensees to streamline applications submitted under RIPE
- Encourage licensees to make IDP available for review by staff (via portal is acceptable)
  - Defense-in-depth
  - Safety margins





# NRC Lessons Learned - Guidance

Revise NRR guidance to:

- Provide additional information regarding defense-in-depth and safety margins review for very low safety significant issues
- Clarify purpose and scope of the no technical objection review



# Recent Accomplishments and Future Work

- Expanded RIPE to allow Technical Specifications changes - guidance issued June 2022 (ADAMS Accession No. [ML22088A140](#))
- Will implement initial lessons learned based on recommendations from first RIPE review
- Continue working with the PWROG on Risk Assessment Process for Topical Reports (RAPTR), a generic process for topical reports
- Other RIDM/RIPE opportunities/next steps?



# Potential Benefits of RIPE

- Focus NRC and licensee resources on the most safety significant issues
- Address low safety significance compliance issues in an efficient and predictable manner consistent with NRC's Principles of Good Regulation
- Leverage existing regulations and risk insights
- Incentivize the further development and use of probabilistic risk assessment models and applications





# Questions/Feedback?



**Request for confirmation of  
information (RCI) process overview  
(LIC-115, “Processing Requests for  
Additional Information”) and  
discussion on best practices in  
communications for licensing review  
actions**

# NRR Office Instruction LIC-115 and Request for Confirmation of Information (RCI) Process Overview

## **Samson Lee**

Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

## **Brian Harris**

Division of New and Renewed Licenses  
Office of Nuclear Reactor Regulation



# LIC-115, Revision 1, “Processing Requests for Additional Information”

- Requests for Additional Information (RAIs) enable the NRC staff to obtain information needed to make a regulatory decision on a licensing action.
- LIC-115, Revision 1, added a Request for Confirmation of Information (RCI) process.
  - RCI is a type of RAI.
- LIC-115, Revision 1, became effective on August 9, 2021 (ADAMS Accession No. ML21141A238).

# Request for Confirmation of Information (RCI)

- RCI originated from NRC staff's license renewal audits.
- NRC staff identifies detailed licensee's information that the NRC staff needs to make a regulatory decision.
- RCI is an efficient means to place that information on the licensee's docket for the NRC staff to rely on in its decision.

# RCI

## RCI Characteristics:

- Low complexity
- High confidence
- Factual information

NRC staff has already  
identified the likely  
answer

Licensees can typically  
respond with a short  
“yes-or-no” to confirm the  
accuracy



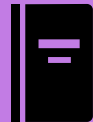
## RAI/RCI Structure



Regulatory Basis



Technical or Regulatory Issue



Information Needed

RAI example: "Provide analysis or justification ..."

RCI example: "Confirm ..."



Note: Not necessary to specifically refer to an information request as an RCI.

## RCI Example from the NRC Staff Audit

- Based on the review of Procedure X during an audit, the NRC staff noted that this procedure contains aspects of the erosion management program.
- Confirm that the requirements in this procedure also apply to the licensee's erosion program.

# RCI Example from the NRC Staff Review

- The licensee referenced a technical report, which identifies 12 events described in Chapter 15 of the Updated Final Safety Analysis Report (UFSAR) that credit a certain system.
- Confirm that the events described in the UFSAR that credit the system are limited to those 12 events.



# RCI Example of Potential Inconsistency

- The licensee's license amendment request describes a certain pump as Class 1E. However, the UFSAR describes this pump as neither Class 1E nor seismically qualified.
- Confirm that the pump is Class 1E.

# RCI Potential Efficiencies

- NRC staff perspective:
  - Confirmation of NRC staff-identified low complexity, high confidence, and factual information
  - Efficient process for docketing licensee's information to support a regulatory decision
  - Opportunity for reducing response time from typical RAI response time (30 days).
- Licensee perspective:
  - Typical "yes" or "no" response
  - Option for detailed response similar to an RAI, if appropriate.

**Break**





## Discussion on staffing, budgeting, and resources

# Discussion on NRC forthcoming process changes/updates/improvements



# Data Driven Licensing Tools Effort And Schedule Estimator (EASE)

**Doug Broaddus**  
Senior Project Manager for  
Workload Management & Data Analysis Tools  
Division of Operating Reactor Licensing





# Data Tools to Improve Review Estimates

Increased availability  
of data and analytic  
tools



Effectively visualize and  
assess current and  
historical results



Enhance information  
available to internal and  
external stakeholders

# Effort And Schedule Estimator (EASE) Interactive Tool

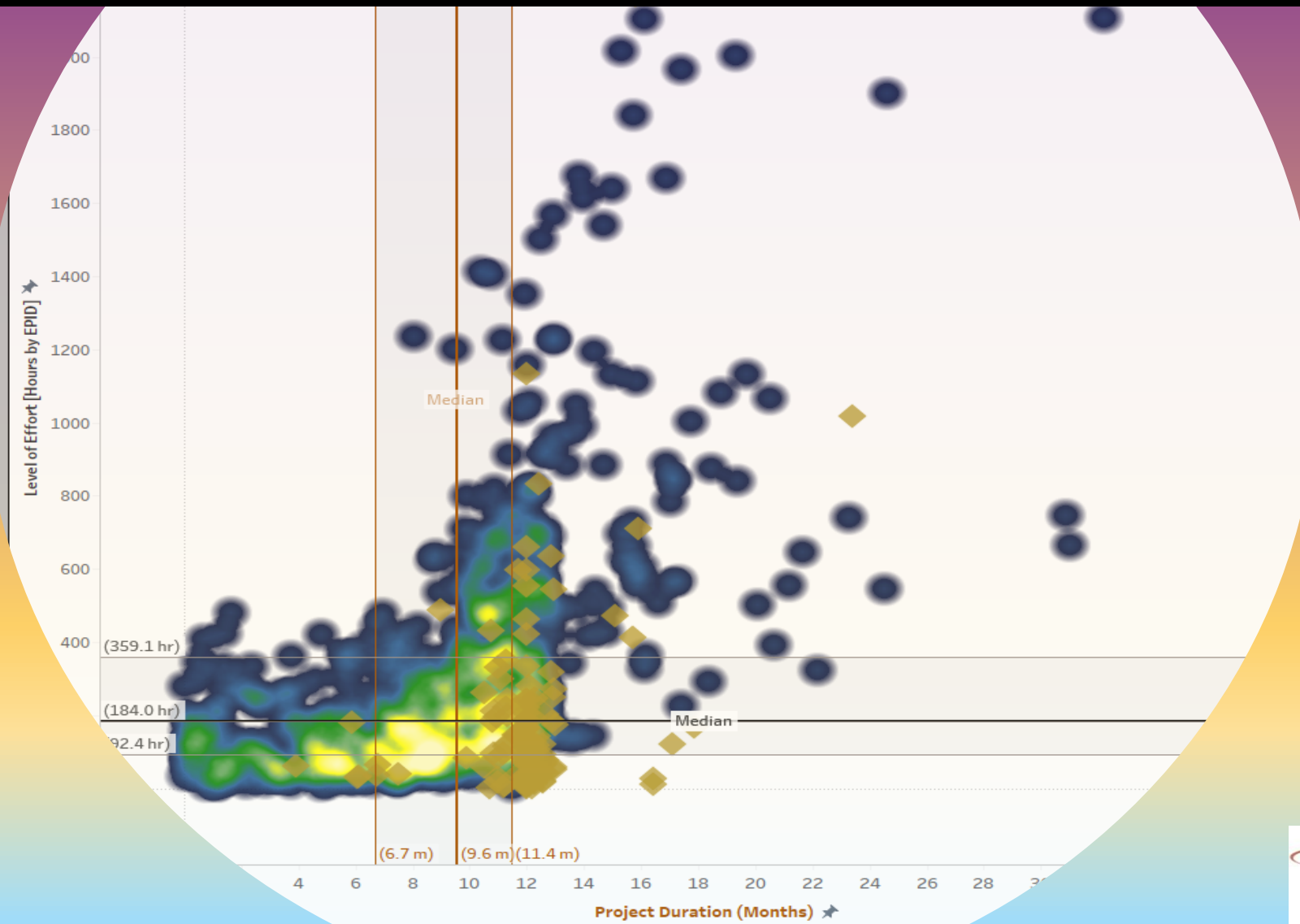
Provide staff data  
needed to develop more  
accurate estimates

Rapid access to licensing data  
to respond to internal and  
external requests

More meaningful  
information available\* to  
applicants

\*[www.nrc.gov/reactors/operating/licensing/resource-estimator.html](http://www.nrc.gov/reactors/operating/licensing/resource-estimator.html)

# Effort And Schedule Estimator (EASE) Demo



# RADIOACTIVE SOURCE SECURITY AND ACCOUNTABILITY RULEMAKING

**Andrew Carrera**

Office of Nuclear Material Safety and Safeguards



# Key Messages



- Consistent with the Commission's direction in SRM-SECY-17-0083, the staff is conducting a rulemaking to revise the radioactive source security and accountability (RSSA) regulations in 10 CFR
- The RSSA rulemaking would require:
  - Safety and security equipment and facilities to be in place for certain applicants before NRC would issue a license
  - License verification for licensees transferring category 3 quantities of radioactive material through the License Verification System (LVS) or by contacting the license-issuing authority for the licensee

# Key Messages



- The rulemaking would affect applicants for a radioactive material license and licensees who transfer category 3 quantities of radioactive material.
- The rulemaking would address recommendations from several U.S. Government Accountability Office reports and would further deter someone with malicious intent from purchasing category 3 quantities of radioactive material.
- The staff intends to submit a draft proposed rule to the Commission for approval by December 2022. Assuming approval by the Commission, the NRC plans to publish the proposed rule in the *Federal Register* in early 2023.

# RSSA Rulemaking Background



- [SRM-COMJMB-16-0001](#) – Directed NRC staff to evaluate the NRC regulations governing source protection and accountability for category 3 quantities of radioactive material
- [SECY-17-0083](#) – Recommended rulemaking to enhance the security and accountability of category 3 quantities of radioactive material
- [SRM-SECY-17-0083](#) – Approved to initiate rulemaking

# Proposed RSSA Revisions: Safety and Security Equipment and Facilities



Requirements for the safety and security equipment and facilities to be in place before NRC issues a license for certain applicants:

- 10 CFR 30.33(a), 40.32(c), and 70.23(a)
- Help address the concern related to individuals using a fictitious company or providing false information to obtain a valid license or radioactive materials



# Proposed RSSA Revisions: License Verification



Requirements for license verification for transfers of category 3 quantities of radioactive materials:

- License Verification System (LVS) or by contacting the license-issuing authority
- 10 CFR 30.41(d), 40.51(d), and 70.42(d)
- Help address the concerns:
  - altering a valid license
  - use of counterfeit license

# Proposed RSSA Revisions: License Verification (continued)



- Provide new definition
- Provide new Appendix F to 10 CFR Part 30
- Revise recordkeeping requirements

# Proposed RSSA Revisions: Other Changes



- Remove obsolete verification method
- Administrative, clarifying and conforming changes to various provisions in 10 CFR

# Proposed RSSA Revisions: Guidance



- Website with frequently asked questions (FAQ) to provide guidance
  - Safety and security equipment and facilities requirements
  - License verification requirements
- Provide accelerated guidance update to licensees



# Next Steps



- Submit RSSA proposed rule to Commission (December 2022)
- Publish in the *Federal Register* in 2023 (assuming approval by the Commission)
- Conduct further stakeholder engagements

# Have Questions?



Please contact:

- Andrew Carrera, 301-415-1078,  
[Andrew.Carrera@nrc.gov](mailto:Andrew.Carrera@nrc.gov), or
- Anita Gray, 301-415-7036,  
[Anita.Gray@nrc.gov](mailto:Anita.Gray@nrc.gov).

# 2023 Regulatory Information Conference

**Holly Cruz, RIC Co-Champion**

Division of Advanced Reactors and Non-power Production and Utilization  
Facilities

Office of Nuclear Reactor Regulation

**Luis Betancourt, RIC Co-Champion**

Division of Systems Analysis

Office of Nuclear Regulatory Research

**MARCH 14-16, 2023**

WWW.NRC.GOV #NRCRIC2023



# NAVIGATING the NUCLEAR FUTURE



- The 2023 RIC will be in person, with virtual components
- Presenters and panelists are expected to attend in person
- Preliminary Agenda
  - Tuesday, March 14, 8:00 am to 5:00 pm (ET)
  - Wednesday, March 15, 9:00 am to 5:00 pm (ET)
  - Thursday, March 16, 8:30 am to 12:00 pm (ET)
- 6-7 plenary sessions, 24 technical sessions, 17 digital exhibits
- Conference agenda and technical program currently being finalized
- Registration to open in January





# Opportunity for Public Comments



# Closing Remarks

**Mike King**  
Deputy Director for Reactor Safety  
Programs and Mission Support  
Office of Nuclear Reactor Regulation  
U. S. Nuclear Regulatory Commission

**Brett Titus**  
Technical Advisor  
Nuclear Energy Institute

# Acronyms

ADAMS	Agencywide Documents Access and Management System
CFR	Code of Federal Regulations
EIE	Electronic Information Exchange
FAQ	Frequently Asked Questions
NEI	Nuclear Energy Institute
NRC	U.S. Nuclear Regulatory Commission
NRR	Office of Nuclear Reactor Regulation
OMB	Office of Management and Budget
PRA	Probabilistic Risk Assessment
PWROG	Pressurized Water Reactor Owners Group
RAIs	Requests for Additional Information
SE	Safety Evaluation