



# ***NRC Examination Processes***

## ***Proposed Changes to NUREG 1021 Rev 11***

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# Purpose

The proposed changes to the Operator Licensing Program, which include revisions to NUREG 1021 and NRC operator licensing program guidance documents, are intended to enhance the examination process, provide a fair and consistent process for evaluating excusals and waivers of examination requirements, and strengthen the guidance related to the appeal process.\*



# Background

- Following a challenging exam experience
- NRC assembled key personnel to evaluate and review lessons learned; recommend enhancements to the overall exam program
- Operator Licensing Implementation Team staffed from all 4 regions and the program office assessed the recommendations
- Five key program areas were identified and agreed upon by all 4 regions and the program office



# Five Key Focus Areas of Evaluation

1. Simulator Grading/Critical Task Definition
2. Exam Waivers (Excusals)
3. Administrative Review Process (i.e., Exam Appeal)
4. Operator Licensing Program Oversight
5. NUREG 1021 Revisions (Rev 11)



# Simulator Grading

- No longer continue with the a point back process for two non-critical errors offset by a third correct performance in the same sub-competency area
- Simulator performance scoring to be revised from a range of 1 to 3 to a range of 0 to 3.
  - Critical Task failure will result in a “0” for that sub-competency except in the Communications section.
  - Passing grade will remain at  $>1.8$  in each competency.
  - Tech Spec grading will be revised to account for 3 sub-competency rating factors to eliminate over-emphasis.
  - Performance deficiencies not limited to 2 rating factors.

	(a) or (b) N/O	= 0.28		
<b>6. Comply with and Use Technical Specifications (TS)</b>				
Rating Factors		Weighting Factors	RF Scores	RF Grades
(a) Did the applicant RECOGNIZE when conditions were covered by the TS and LOCATE the appropriate TS?	N/O	= 0	3	
	Nominal	= 0.4	2	
	(b) N/O	= 1.0	1	
(b) Did the applicant ensure correct COMPLIANCE with TS and LCO action statements?	N/O	= 0	3	
	Nominal	= 0.6	2	
	(a) N/O	= 1.0	1	

Expand Technical Specification Evaluations with three rating factors rather than just two.

This proposes an effective and equitable assessment of applicant performance in identifying, assessing and implementing the Technical Specifications.

# ES-303-r11 D.2.b

- For critical errors:
  - For all rating factors other than those under the “Communications” competency area, a missed CT is counted as 3 errors, which results in a 3-point deduction for a score of “0.”
  - For rating factors under the “Communications” competency area, a missed CT results in a 2-point deduction for a score of “1.”
  - Failing to perform one CT will not necessarily result in automatic overall exam failure. However, success on every critical task does not prevent failure if other noted deficiencies, when aggregated, justify a failure.

# Some problems were identified with applying the new grading criteria to the current ES-303-3/4 Forms

- A single critical task failure by itself in RO Rating Factor 2.(b) would result in a failure.
- While grading SRO competency 6 (Comply with and Use Technical Specifications) in accordance with ROI 14-16R, an applicant could fail the operating test due to missing the TS calls for one event.



**1. Interpret/Diagnose Events and Conditions Based on Alarms, Signals, and Readings**

Rating Factors	Weighting Factors	RF Scores	RF Grades	Comp. Grade
(a) Did the applicant RECOGNIZE and VERIFY off-normal trends and status?	N/O = 0	3		
	<b>Nominal = 0.33</b>	2		
	(b) or (c) N/O = 0.5	1		
(b) Did the applicant correctly INTERPRET/DIAGNOSE plant conditions based on control room indications?	N/O = 0	3		
	<b>Nominal = 0.34</b>	2		
	(a) or (c) N/O = 0.50	1		
(c) Did the applicant ATTEND TO annunciators, alarm signals, and instrument readings in order of importance and severity?	N/O = 0	3		
	<b>Nominal = 0.33</b>	2		
	(a) or (b) N/O = 0.50	1		

Current  
process with  
point back

**2. Comply with and Use Procedures, References, and Technical Specifications**

Rating Factors	Weighting Factors	RF Scores	RF Grades	Comp. Grade
(a) Did the applicant REFER TO and/or VERIFY the appropriate procedure or reference in a timely manner?	N/O	3	.9	
	<b>Nominal = 0.30</b>	2		
	(c) N/O = 0.43	1		
	(b) N/O = 0.50			
(b) Did the applicant COMPLY WITH procedures (including precautions and limitations) and references in an accurate and timely manner?	N/O	3	.8	<u>2.3</u>
	<b>Nominal = 0.57</b>	2		
	(a) or (c) N/O = 0.57	1		
(c) Did the applicant RECOGNIZE plant conditions that are addressed in technical specifications?	N/O = 0	3	.6	
	<b>Nominal = 0.43</b>	2		
	(a) N/O = 0.43	1		
	(b) N/O = 0.50			

Zero error

One error

Two errors

**1. Interpret/Diagnose Events and Conditions Based on Alarms, Signals, and Readings**

Rating Factors	Weighting Factors	RF Scores	RF Grades	Comp. Grade
(a) Did the applicant RECOGNIZE and VERIFY off-normal trends and status?	N/O = 0	3		
	<b>Nominal = 0.33</b>	2		
	(b) or (c) N/O = 0	1		
(b) Did the applicant correctly INTERPRET/DIAGNOSE plant conditions based on control room indications?	N/O = 0	3		
	<b>Nominal = 0.33</b>	2		
	(a) or (c) N/O = 0	1		
(c) Did the applicant ATTEND TO annunciators, alarm signals, and instrument readings in order of importance and severity?	N/O = 0	3		
	<b>Nominal = 0.33</b>	2		
	(a) or (b) N/O = 0	1		

New process  
with no point  
back

**2. Comply with and Use Procedures, References, and Technical Specifications**

Rating Factors	Weighting Factors	RF Scores	RF Grades	Comp. Grade
(a) Did the applicant REFER TO and/or VERIFY the appropriate procedure or reference in a timely manner?	N/O = 0	3	.9	
	<b>Nominal = 0.30</b>	2		
	(c) N/O = 0.43	1		
	(b) N/O = 0.50	0		
(b) Did the applicant COMPLY WITH procedures (including precautions and limitations) and references in an accurate and timely manner?	N/O = 0	3	.8	2.0
	<b>Nominal = 0.43</b>	2		
	(a) or (c) N/O = 0.57	1		
	(b) N/O = 0	0		
(c) Did the applicant RECOGNIZE plant conditions that are addressed in technical specifications?	N/O = 0	3	.3	
	<b>Nominal = 0.30</b>	2		
	(a) N/O = 0	1		
	(b) N/O = 0	0		

Zero error

One error

Two errors

**1. Interpret/Diagnose Events and Conditions Based on Alarms, Signals, and Readings**

Rating Factors	Weighting Factors	RF Scores	RF Grades	Comp. Grade
(a) Did the applicant RECOGNIZE and VERIFY off-normal trends and status?	N/O = 0	3		
	<b>Nominal = 0.33</b>	2		
	(b) N/O = 0.5	1		
	(c) N/O = 0.5	0		
(b) Did the applicant correctly INTERPRET/DIAGNOSE plant conditions based on control room indications?	N/O = 0	3		
	<b>Nominal = 0.34</b>	2		
	(a) N/O = 0.50	1		
	(c) N/O = 0.50	0		
(c) Did the applicant ATTEND TO annunciators, alarm signals, and instrument readings in order of importance and severity?	N/O = 0	3		
	<b>Nominal = 0.33</b>	2		
	(a) N/O = 0.50	1		
	(b) N/O = 0.50	0		

New change with  
RF score of ZERO

**2. Comply with and Use Procedures, References, and Technical Specifications**

Rating Factors		Weighting Factors	RF Scores	RF Grades	Comp. Grade
(a) Did the applicant REFER TO and/or VERIFY the appropriate procedure or reference in a timely manner?	N/O	Zero error	3	.99	<div>1.99</div>
	Nominal = 0.33	2			
	(c) N/O = 0.50	1			
	(b) N/O = 0.50	0			
(b) Did the applicant RECOGNIZE plant conditions that are addressed in technical specifications?	N/O	One error	3	.66	
	Nominal = 0.34	2			
	(a) N/O = 0.50	1			
	(c) N/O = 0.50	0			
(c) Did the applicant COMPLY WITH procedures (including precautions and limitations) and references in an accurate and timely manner?	N/O	Two errors	3	.34	
	Nominal = 0.34	2			
	(a) N/O = 0.50	1			
	(b) N/O = 0.50	0			

**1. Interpret/Diagnose Events and Conditions Based on Alarms, Signals, and Readings**

Rating Factors	Weighting Factors	RF Scores	RF Grades	Comp. Grade
(a) Did the applicant RECOGNIZE and VERIFY off-normal trends and status?	N/O = 0	3		
	<b>Nominal = 0.33</b>	2		
	(b) N/O = 0.5	1		
	(c) N/O = 0.5	0		
(b) Did the applicant correctly INTERPRET/DIAGNOSE plant conditions based on control room indications?	N/O = 0	3		
	<b>Nominal = 0.34</b>	2		
	(a) N/O = 0.50	1		
	(c) N/O = 0.50	0		
(c) Did the applicant ATTEND TO annunciators, alarm signals, and instrument readings in order of importance and severity?	N/O = 0	3		
	<b>Nominal = 0.33</b>	2		
	(a) N/O = 0.50	1		
	(b) N/O = 0.50	0		

New change with  
RF score of ZERO

**2. Comply with and Use Procedures, References, and Technical Specifications**

Rating Factors		Weighting Factors	RF Scores	RF Grades	Comp. Grade
(a) Did the applicant REFER TO and/or VERIFY the appropriate procedure or reference in a timely manner?	N/O	Zero error	3	.99	<div>1.65</div>
	Nominal	= 0.33	2		
	(c) N/O	= 0.50	1		
	(b) N/O	= 0.50	0		
(b) Did the applicant RECOGNIZE plant conditions that are addressed in technical specifications?	N/O	One error	3	.66	
	Nominal	= 0.34	2		
	(a) N/O	= 0.50	1		
	(c) N/O	= 0.50	0		
(c) Did the applicant COMPLY WITH procedures (including precautions and limitations) and references in an accurate and timely manner?	N/O	Three errors	3	.00	
	Nominal	= 0.34	2		
	(a) N/O	= 0.50	1		
	(b) N/O	= 0.50	0		

Zero error

One error

Three errors

**1. Interpret/Diagnose Events and Conditions Based on Alarms, Signals, and Readings**

Rating Factors	Weighting Factors	RF Scores	RF Grades	Comp. Grade
(a) Did the applicant RECOGNIZE and VERIFY off-normal trends and status?	N/O = 0	3		
	<b>Nominal = 0.33</b>	2		
	(b) N/O = 0.5	1		
	(c) N/O = 0.5	0		
(b) Did the applicant correctly INTERPRET/DIAGNOSE plant conditions based on control room indications?	N/O = 0	3		
	<b>Nominal = 0.34</b>			
	(a) N/O = 0.50			
	(c) N/O = 0.50			
(c) Did the applicant ATTEND TO annunciators, alarm signals, and instrument readings in order of importance and severity?	N/O = 0			
	<b>Nominal = 0.33</b>	2		
	(a) N/O = 0.50	1		
	(b) N/O = 0.50	0		

New change with  
RF score of ZERO  
NO single missed  
CT should not  
result in a failure

**2. Comply with and Use Procedures, References, and Technical Specifications**

Rating Factors		Weighting Factors	RF Scores	RF Grades	Comp. Grade
(a) Did the applicant REFER TO and/or VERIFY the appropriate procedure or reference in a timely manner?	N/O	Zero error	3	.99	<u>1.98</u>
	Nominal	= 0.33	2		
	(c) N/O	= 0.50	1		
	(b) N/O	= 0.50	0		
(b) Did the applicant RECOGNIZE plant conditions that are addressed in technical specifications?	N/O	Zero error	3	.99	
	Nominal	= 0.33	2		
	(a) N/O	= 0.50	1		
	(c) N/O	= 0.50	0		
(c) Did the applicant COMPLY WITH procedures (including precautions and limitations) and references in an accurate and timely manner?	N/O	= 0	3	.00	
	Nominal	= 0.34	2		
	(a) N/O	Missed CT	1		
	(b) N/O	= 0	0		

**5. Direct Shift Operations**

Rating Factors	Weighting Factors	RF Scores	RF Grades	Comp. Grade
(a) Did the applicant take TIMELY AND DECISIVE ACTION that demonstrated appropriate CONCERN for the SAFETY of the plant, staff, and public?	N/O = 0	3		
	Nominal = 0.30	2		
	(c) or (d) N/O = 0.38	1		
	(b) N/O = 0.43			
(b) Did the applicant remain ATTENTIVE to control room indications, stay in a position of OVERSIGHT, and provide an APPROPRIATE AMOUNT of DIRECTION and GUIDANCE that facilitated CREW PERFORMANCE?	N/O = 0	3		
	Nominal = 0.30	2		
	(c) or (d) N/O = 0.37	1		
	(a) N/O = 0.43			
(c) Did the applicant SOLICIT and INCORPORATE FEEDBACK from the crew to foster an effective, team-oriented approach to problem solving and decision-making?	N/O = 0	3		
	Nominal = 0.20	2		
	(d) N/O = 0.25	1		
	(a) or (b) N/O = 0.29			
(d) Did the applicant ensure that CORRECT AND TIMELY ACTIVITIES (including diagnosis, procedural implementation, and operate the control boards) were carried out BY THE CREW?	N/O = 0	3		
	Nominal = 0.20	2		
	(c) N/O = 0.25	1		
	(a) or (b) N/O = 0.28			

**6. Comply with and Use Technical Specifications (TS)**

Rating Factors		Weighting Factors		RF Scores	RF Grades	Comp. Grade
(a)	Did the applicant RECOGNIZE when conditions were covered by the TS and LOCATE the appropriate TS?	N/O	= 0	3		<hr/>
		Nominal	= 0.4	2		
		(b) N/O	= 1.0	1		
(b)	Did the applicant ensure correct COMPLIANCE with TS and LCO action statements?	N/O	= 0	3		
		Nominal	= 0.6	2		
		(a) N/O	= 1.0	1		



# Simulator Grading

- Critical Tasks – Enhanced guidance for pre-identifying CTs, now have EOP-based CTs and Total number of CTs as a “target” rather than a “limit.”
  - Still have option to identify post-scenario critical tasks.
  - So called emergent critical task, is currently in Rev 10.
- Added criteria to ES-501 to hold licenses in abeyance if there are operating test failures.
  - If applicant fails JPM portion of exam then anyone who passed with an 80% on JPMs would be held in abeyance.
  - If applicant fails simulator portion of exam then anyone who passed the simulator portion but has comments related to the “same scenario-same event” then the license would be held in abeyance.



# Exam Waivers/Excusals

- Waiver requests and decisions via formal correspondence.
  - Submit as early in the process as possible (normally 60 days).
  - There may be additional issues for consideration
- Excusal justification criteria for passed portion of exam has been added to the NUREG.
  - Based on the systematic approach to training.
  - Must remediate to 100%.
  - Primarily focuses on failure retakes





# Exam Waivers/Excusals

- Additional examiner restrictions added for retake exams.
  - Any examiner who observed the applicant's initial exam is prohibited from participating in the retake exam (JPMs or Simulator).
  - Licensing decision made by a different person.
  - Inform NRC of potential retake applicants as soon as possible.



# Administrative Review - Appeals

- Appeal review changes
  - Review panel can identify critical tasks but must be related to contested item.
  - Simulator scenario failures require 3 person panel, independent of the affected region.
  - Enhanced guidance to ensure impartiality of appeal member(s).
  - Appeal review focus to be limited to contested items only, not to re-grade entire exam.



# Administrative Review - Appeals

- Appeal review changes
  - New errors may be identified as a direct result of the contested item review.
  - If appeal review results in a change to the applicant's score then other license denials should be reviewed.
  - If appeal panel overturns the proposed license denial, affected region may submit a formal response for additional consideration.



# OL Program Oversight

- A re-examination following an allegation of conflicts of interest shall be observed by a Branch Chief or other management official.
- Claims of bias/prejudice
  - Provided guidance in OLMC 0500 that we will follow our internal process for “Licensee complaints against NRC employees” with the option that the Regional Administrator may offer a re-examination.



# OL Program Oversight

- Regional Differences Database/Audit Peer review
  - Database tracks all identified regional differences along with the current status, i.e., open, closed, in-progress, etc.
  - OLMC 0310 will be revised to review regional implementation of a sample of items on the list.
  - Program for cross regional examiner participation aimed at identifying best practices and regional differences.
- Training
  - Coordinate with TTC to update initial Examiner training with results from case studies, IOLB audits, appeal process, and Industry input.



# OL Program Oversight

- Handling of Documentation
  - Follow NRCs process for retaining documentation associated with appeals and hearings, Management Directive 3.53, “NRC Records and Document Management Program.”

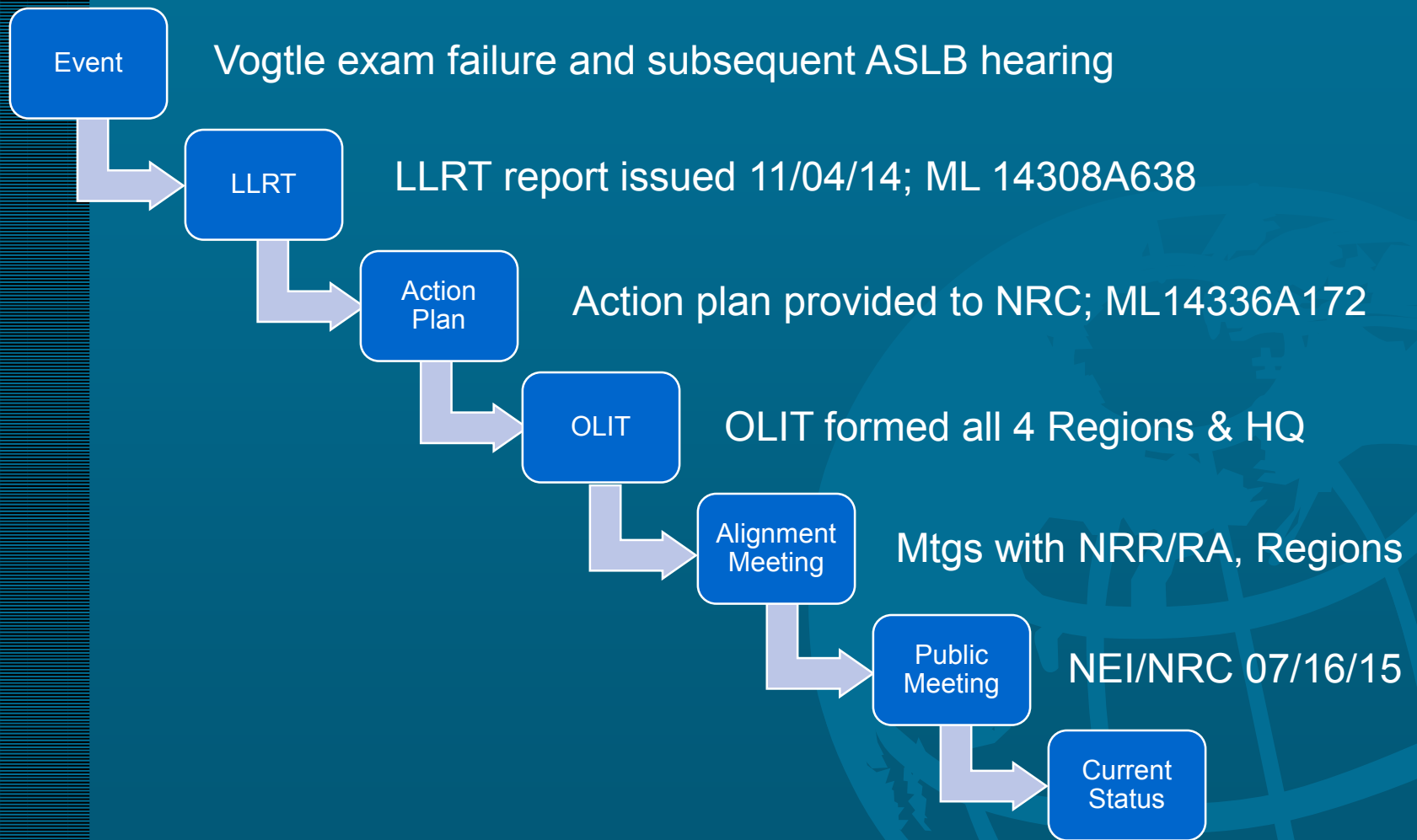


# NUREG 1021 Changes, Rev 11

- Examination Waivers and Excusals
  - Clarified all guidance documents and NUREG 1021 guidance to reflect consistent use of “waiver” and “excusal” as defined in the regulations.
- Incorporating all current FAQs and ROIs into Rev.11
  - Should be mostly verification for FAQs – intend to sunset current FAQs.
  - Most ROIs are related to deferral of requirements for eligibility.
  - Includes creating a basis document going forward for all changes to NUREG 1021.



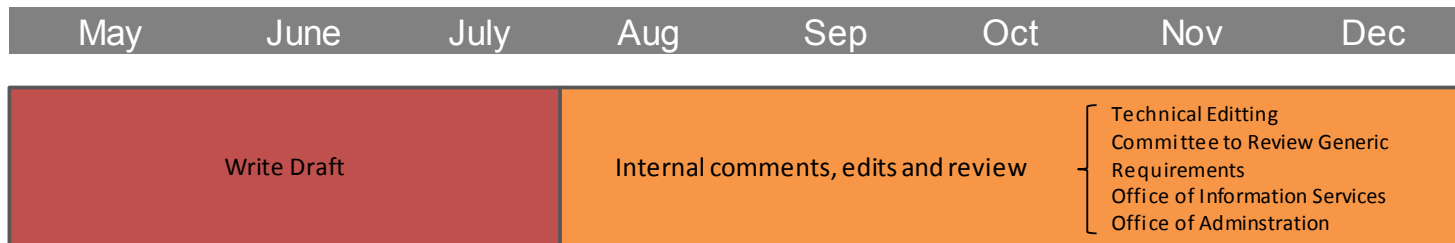
# Lessons Learned Implementation



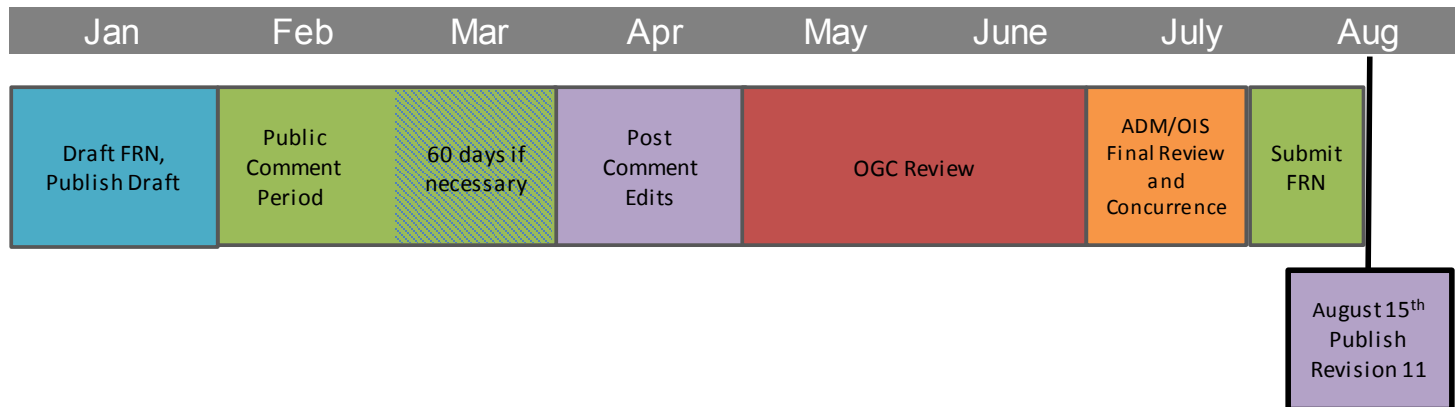


# Action Plan Timeline

**2015**



**2016**



NUREG 1021

545 pages

23 sections, 6 appendices



# ***Questions***

