



SMR Workshop

NRC Licensing Experience

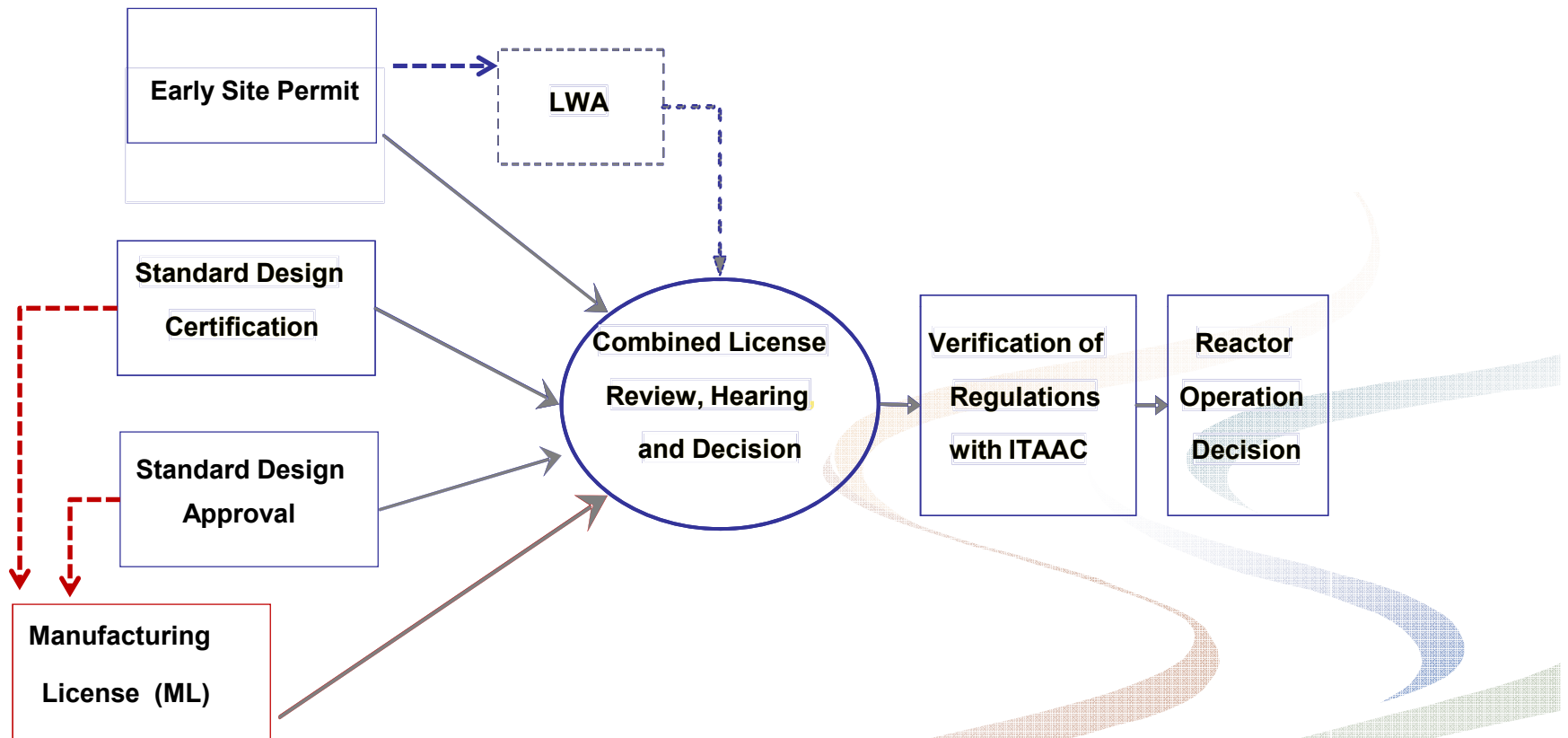
Bill Reckley, NRO/ARP

Tom Kevern, NRO/ARP

Joelle Starefos, NRO/ARP

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Manufacturing License (ML)



Manufacturing License

- Authorizes manufacture of a “nuclear power reactor” to be installed at sites not identified in the ML application
- A nuclear power reactor manufactured under a ML may only be transported to and installed at a site with either a construction permit or COL
- Limited experience with manufacturing license
 - ⊕ Offshore Power Systems
 - ⊕ Essentially complete plant manufactured at a central facility
- First Issue to resolve – allowable scope and/or combination of manufacturing & site assembly to be addressed by a ML (e.g., NSSS or total facility) and COL

Future Discussions

- Begin with likely (or desired) scenario in terms of what items/systems are fabricated for transport to the facility site, what is constructed on site, etc.
- Identify licensing hurdles or possible licensing improvements between current process (stick built model) and new model (increased fabrication and onsite assembly of major modules)
- Identify possible approaches to bridge the gap and determine feasibility/desirability to initiate changes in licensing approach

Licensing Experience

Pre-application Activities

Familiarization with NRC regulatory processes



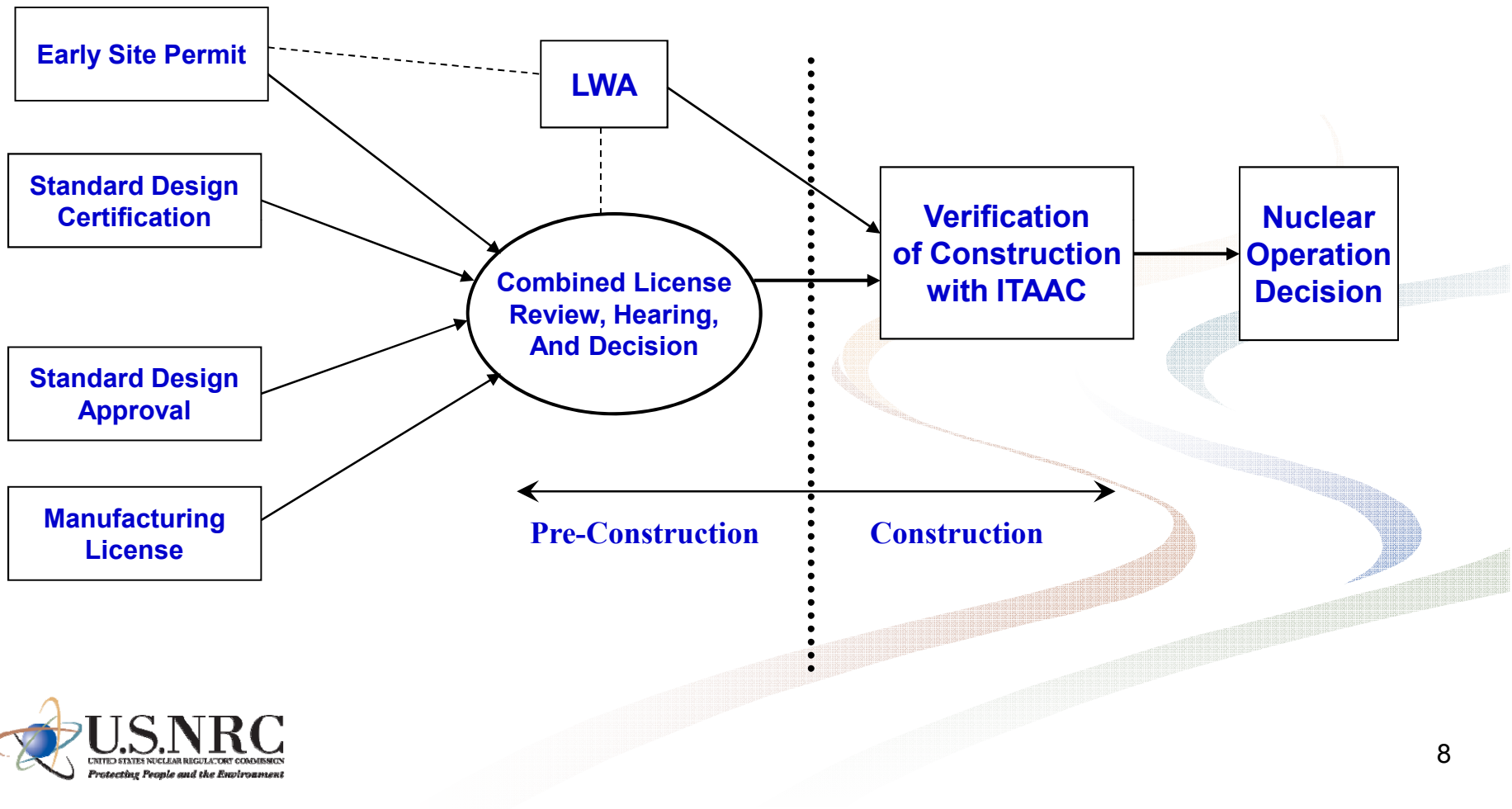
NRC Website (nrc.gov)



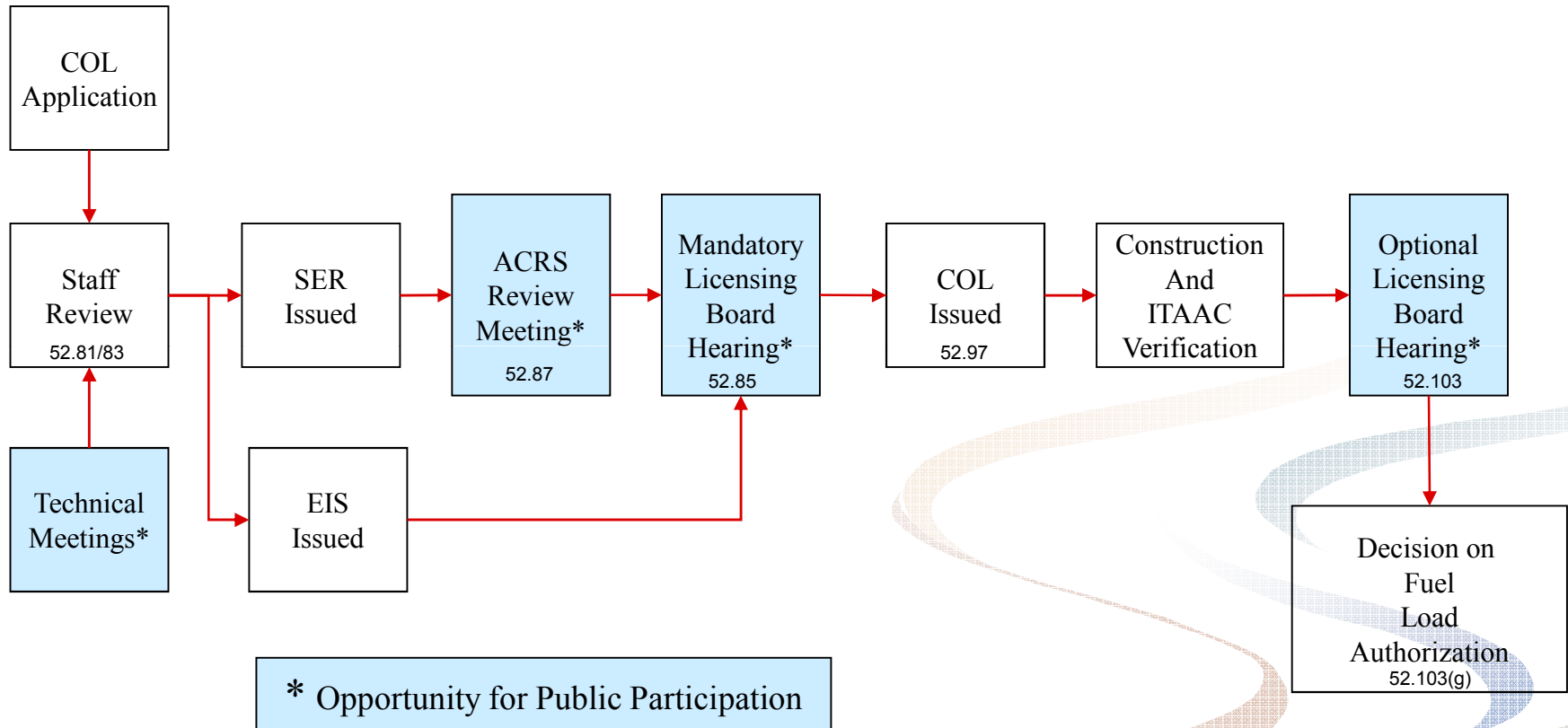
<http://www.nrc.gov/reactors/advanced.html>

<http://www.nrc.gov/reactors/advanced/public-meetings.html>

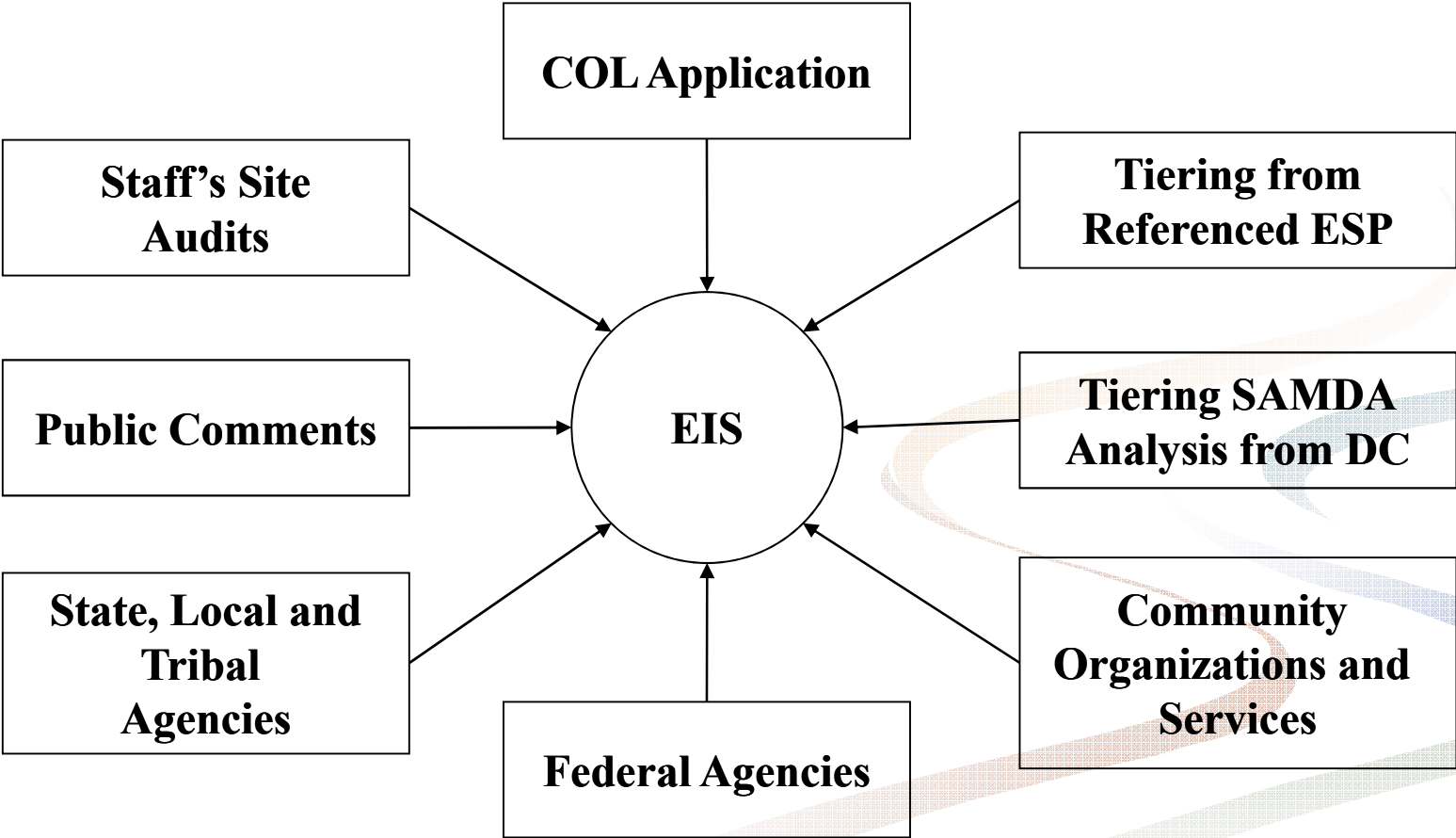
Part 52 Licensing Process



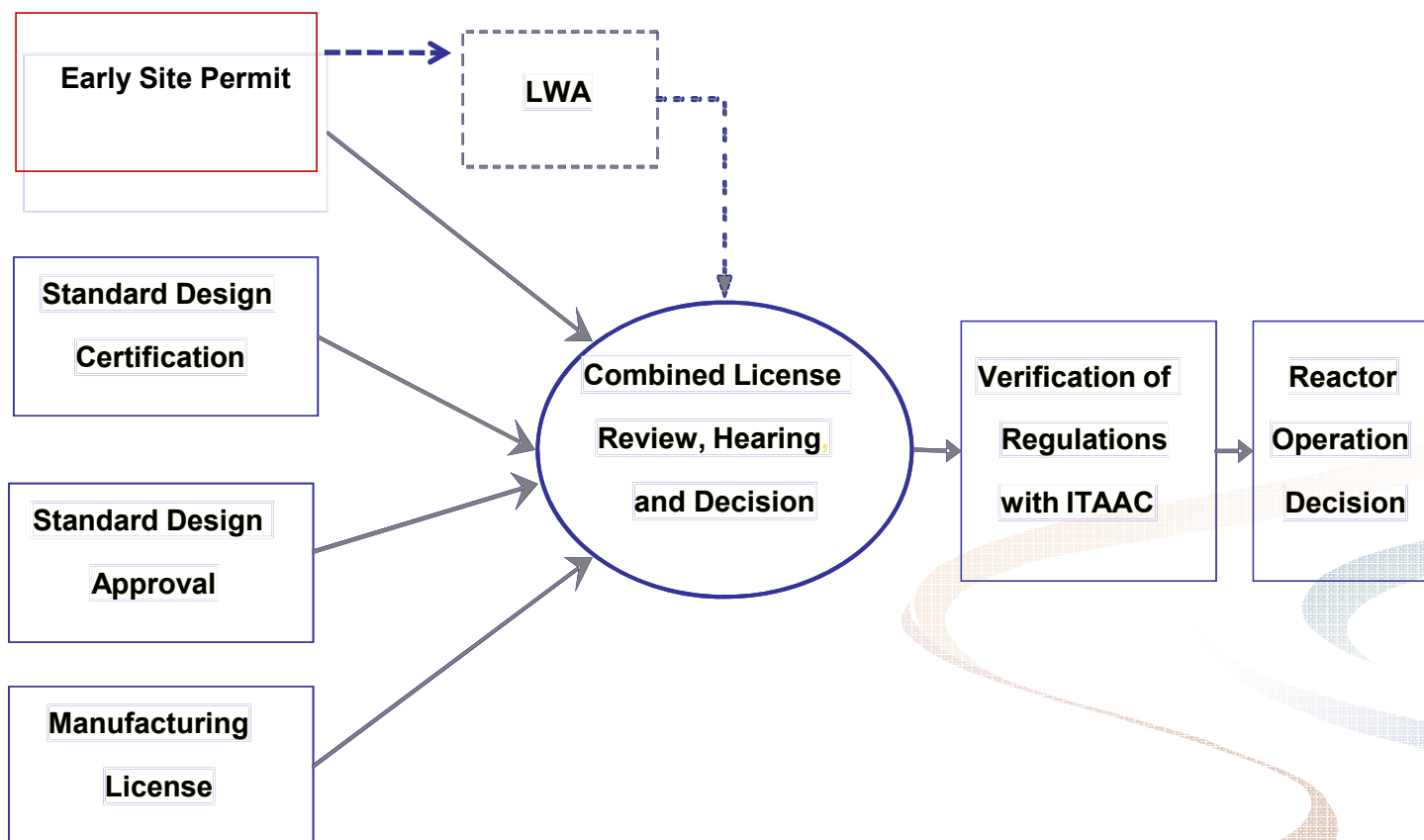
COL Review Process



COL EIS Development

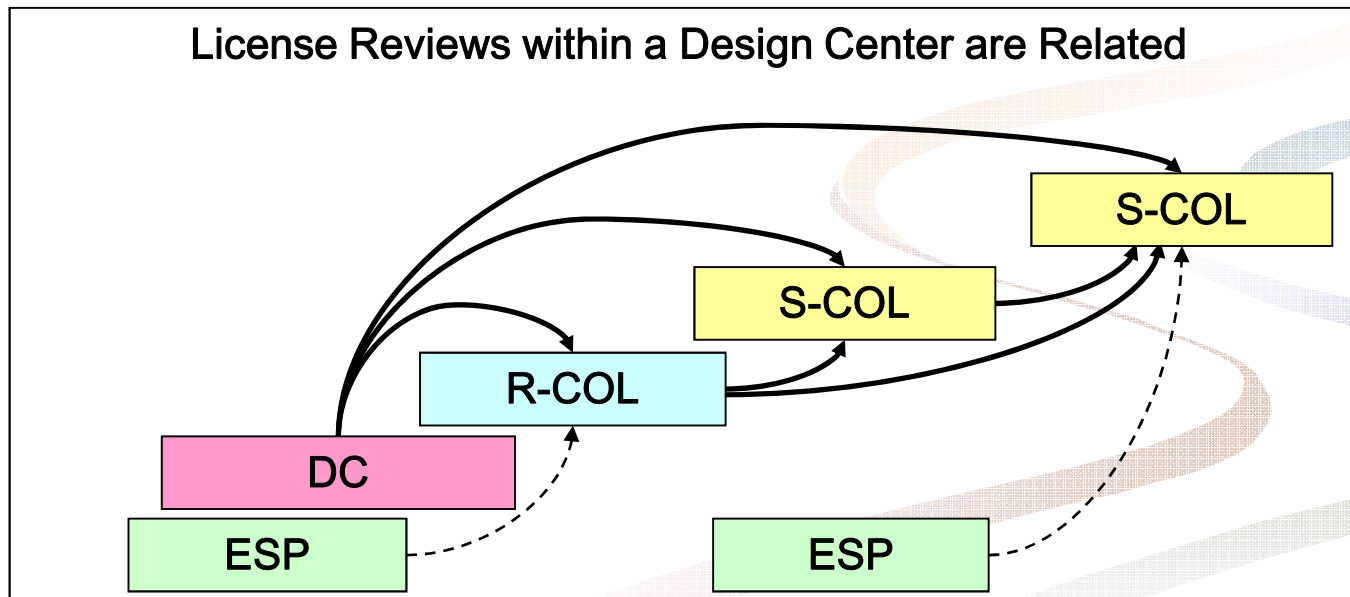


Early Site Permits



Review Process - DCRA

- Design-centered review approach
 - ⊕ Reviews organized into design centers based on reactor design (e.g., ESBWR, EPR, AP1000)
 - ⊕ Decisions, experience, and lessons-learned from earlier reviews will be applied, where appropriate, to later reviews in the same design center



Licensing Guidance Documents – RG 1.206

Regulatory Guide 1.206, “Combined License Applications for Nuclear Power Plants (LWR Edition)”

- Purpose
 - ⊕ Provides guidance **to applicants** on information to be submitted in combined license (COL) application.
 - ⊕ Addresses many of application options allowed by Title 10, Part 52.
- RG 1.206 available on external web

<http://www.nrc.gov/reading-rm/doc-collections/reg-guides/power-reactors/active/01-206/>

Licensing Guidance Documents – Standard Review Plans

- NUREG-0800, “Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants” – safety review
- NUREG-1555, “Standard Review Plans for Environmental Reviews for Nuclear Power Plants”

Licensing Experience

Lessons Learned ...



Lessons Learned – NRC

Preparation for Applications

- Infrastructure
 - ⊕ Guidance – RG 1.206
 - ⊕ NUREG-0800
 - ⊕ Issues – e.g., Passive Design Features
- Expectations – Design-centered review approach
 - ⊕ Design Certification – R-COL – S-COL
 - ⊕ Recognition of Concurrent versus Sequential

Lessons Learned – Industry

DCRA – one issue, one review, one decision

- Mutually beneficial – staff & industry
- Regulatory Issue Summary 2010-03, et. al.
- Issue resolution – “generic” versus application-specific
- Coordination across design centers – alignment / consistency
- Coordination within design centers – consolidated single position
- DC & COL applicants – feasible / practical
- DC applicant – recognition that “non-nuclear” utility companies likely to be future COL applicants

Lessons Learned – Industry

- **NRC Public Meeting Process**
 - ⊕ Routine – licensing and technical topics
 - ⊕ “Closed Meetings” – proprietary information
- **NRC-Industry Meetings**
 - ⊕ Participation by “appropriate” representatives
 - ⊕ Licensing & technical staff
(contractors – e.g., electronic submittal)
- **Reasonable assurance process –**
e.g., “inherently safe” requires substantiating technical documentation for staff verification
(passive features – AP1000, ESBWR)
- **Quality Assurance – early program implementation**

Licensing Experience

Pre-application interactions ...



Topical / Technical Reports

- Importance / Significance of documentation
- Type of staff review
- Completeness / level of detail
- Formal Process –
 - ⊕ Acceptance review
 - ⊕ RAIs
 - ⊕ Staff Interactions
 - ⊕ SER

Requests for Additional Information (RAIs)

- Information needed to support design review or licensing decisions
- Means to gather additional details about proposed designs/approaches in application
- Early indicator of possible issues and/or obstacles in the review process
- Communication is key to keeping review process moving forward

Correspondence

- Written communications (10 CFR 52.3)
 - ⊕ Address to: ATTN: Document Control Desk
 - ⊕ cc: Project Manager
- Electronic Submittals
- Sensitive Information (10 CFR 2.390)
- Completeness and Accuracy of Information (10 CFR 52.6)
- Oath or Affirmation (10 CFR 50.30(b), design approvals and licenses)

? QUESTIONS ?

- Feedback, Suggestions ?
- New Topics ?
- NEI Planning

- Parking Lot
- Future Meetings

