



PUBLIC MEETING

APPLICATIONS FOR NUCLEAR POWER PLANTS Regulatory Guide 1.206 [Revision]

**Division of Advanced Reactors and Rulemaking
Office of New Reactors**

October 27, 2015



Regulatory Guide (RG) 1.206 [Revision]

Public Meeting – Category 3

<http://meetings.nrc.gov/pmns/mtg?do=details&Code=20151494>

Bridge Number: 8883901827 Passcode: 36837

Purpose: Provide input to the NRC staff in the development of guidance on select topics to be included in the revised RG 1.206.

Documents:

- ❑ Agenda – ML15275A227
- ❑ Draft guidance documents – ML15247A270, ML15247A190, ML15247A283, ML15247A157
- ❑ NRC staff presentation

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AGENDA
Regulatory Guide 1.206 (revision)
October 27, 2015

<u>Time</u>	<u>Topic</u>	<u>Speaker</u>
1:00 p.m.	Opening and Introductions	NRC
1:15 p.m.	Overview: Regulatory Guide 1.206 revision	NRC
1:30 p.m.	Guidance: Design Acceptance Criteria	
	➤ Presentation	NRC
	➤ Interactive discussion	ALL
2:00 p.m.	Guidance: COL Action Items & Post-license Commitments	
	➤ Presentation	NRC
	➤ Interactive discussion	ALL
2:30 p.m.	Guidance: Information Change Processes for COL Applicants	
	➤ Presentation	NRC
	➤ Interactive discussion	ALL
3:00 p.m.	Break	ALL
3:30 p.m.	Guidance: Environmental Issue Finality for COL Applicants	
	➤ Presentation	NRC
	➤ Interactive discussion	ALL
4:00 p.m.	Guidance: Applicability of Consensus Standards	
	➤ Presentation	NRC
	➤ Interactive discussion	ALL
4:30 p.m.	Review and Action Items	NRC
5:00 p.m.	Adjourn	



Overview – RG 1.206 Revision

- ❑ RG 1.206 *Combined License Applications for Nuclear Power Plants* (2007)
- ❑ New Reactor Licensing Process Lessons Learned Review: 10 CFR 52 (ML13059A239)
- ❑ NRC staff initiated revision – summer 2014
- ❑ Public meetings – stakeholder interactions and feedback
 - ❑ September 2014
<http://meetings.nrc.gov/pmns/mtg?do=details&Code=20141402>
 - ❑ March 2015
<http://meetings.nrc.gov/pmns/mtg?do=details&Code=20150270>
 - ❑ June 2, 2015
<http://meetings.nrc.gov/pmns/mtg?do=details&Code=20150760>
- ❑ Update: revision scope, topics, and level of detail



Revision Scope, Topics, Detail

Sept 2014 – June 2015

- A. INTRODUCTION
- B. DISCUSSION
- C. GUIDANCE
 - C.1 Application Format & Content
 - C.1.1 – C.1.11
 - C.2 Application Regulatory Topics
 - C.2.1 – C.2.n
- Appendices: Safety Analysis Report Format & Content**
 - A. Combined License – Final Safety Analysis Report**
 - B. Early Site Permit – Site Safety Analysis Report**
 - C. Design Certification – FSAR (DCD)**
 - D. Combined License – FSAR if COL references a DC and/or ESP**

Alternative (proposed July 2015)

- A. INTRODUCTION
- B. DISCUSSION
- C. GUIDANCE
 - C.1 Application Format & Content
 - C.1.1 – C.1.11
 - C.2 Safety Analysis Report Format and Content**
 - C.2.1 Combined License Final Safety Analysis Report**
 - C.2.2 Early Site Permit Site Safety Analysis Report**
 - C.2.3 Design Certification Final Safety Analysis Report**
 - C.3 Application Regulatory Topics
 - C.3.1 – C.3.18
- D. IMPLEMENTATION



RG 1.206 Revision (October 2015)

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Section C.2: Application Regulatory Topics

- ✓ C.32.1 Preapplication Activities
- ✓ C.32.2 Preapplication Readiness Assessment
- C.32.3 Application Electronic Submittal
- ✓ C.32.4 Application Acceptance Review
- ✓ C.32.5 Application Review & Requests for Additional Information
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- ✓ C.32.17 Small Modular Reactors and Design-Specific Review Standards
- C.32.18 Limited Work Authorization
 - ✓ discussed at prior public meeting



C.2.8 Design Acceptance Criteria

- ML15247A270**
- Updates RG 1.206 C.III.5 *Design Acceptance Criteria* (2007)
- Overview
 - Design acceptance criteria (DAC) used for certain areas – detailed methodology rather than complete design
 - NRC approved use of DAC if:
 1. Rapid technology changes could render design obsolete (e.g., instrumentation and controls, human factors)
 - or
 2. Design completion impractical due to unavailability of as-built, as-procured information (e.g., piping, radiation protection)



C.2.8 Design Acceptance Criteria

- Guidance – general
 - No policy change – DAC may be justified when the original intent applies
 - DAC may no longer be necessary for some designs given technology developments and construction experience
 - An approach without DAC can reduce complexity in licensing process



C.2.8 Design Acceptance Criteria

- Guidance – DC applicants
 - Engage early with NRC
 - If using DAC, describe justification
 - Design-specific
 - Condition being cited (i.e., changing technology or need for as-built as-procured information)
 - References to related information (methodologies, ITAAC, change control)
 - Technical information (see specific RG 1.206 sections)



C.2.8 Design Acceptance Criteria

- Guidance – COL applicants
 - Engage early with NRC
 - Understand construction-stage inspections, potential hearing impacts
 - Complete design in DAC areas, if practical
 - If DAC maintained, incorporate DAC information by reference and provide implementation plans
 - If no DC referenced, DC concepts apply



C.2.8 Design Acceptance Criteria

Interactive discussion



C.2.11 COL Action Items and Post-License Commitments

- ML15247A190**
- Update:
 - 1) RG 1.206 Section C.III.4 *Combined License Action or information Items* (2007)
 - 2) Final Interim Staff Guidance ESP/DC/COL-ISG-015 *Post-Combined License Commitments* (2010)
- General
 - Proposed section follows ISG-15
 - Organization
 - Content
 - Changes for clarity, not substantive
 - No change in policy



c.2.11 COL Action Items and Post-License Commitments

- Outline (follows ISG-15)
 - OVERVIEW
 - GUIDANCE
 - COL Action Items
 - COL Action Items that Cannot Be Resolved Before Issuance of a License
 - ITAAC
 - License Conditions
 - FSAR Commitments
 - FSAR information commitment included in a license condition*
 - FSAR information commitment included in routine FSAR update*



c.2.11 COL Action Items and Post-License Commitments

- Overview
 - “COL action item” – pertains to both “action” and “information”
 - COL referencing DC – Part 52 appendices (Section IV.A.2.e) require application to address COL action items
 - COL referencing ESP – application must address COL action items pertaining to deferred ESP terms and conditions
 - Resolution of COL action items for which completion is not feasible prior to issuance of COL
 - Partial closure of action items
 - Post-licensing commitments



C.2.11 COL Action Items and Post-License Commitments

- Guidance – COL Action Items
 - Identify items from DC (DCD and FSER) and/or ESP
 - Propose resolution in COL application or post-COL issuance
 - Document items in FSAR chapter 1 (cross-reference)
- Guidance – Items not resolved prior to COL issuance
 - Provide justification for non-completion of item
 - Provide information sufficient to support NRC licensing decision
 - Identify post-licensing commitments for resolution
 - Propose option for post-license completion
 - Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC)
 - License condition
 - FSAR commitment
 - In license condition
 - In FSAR update



C.2.11 COL Action Items and Post-License Commitments

- Inspections, Tests, Analyses, and Acceptance Criteria
 - Regulations: 10 CFR 52.80(a), 52.99(c), and 52.103(g)
 - Guidance: RG 1.206 (2007) – under revision
 - Three parts:
 1. Design commitment
 2. Inspections, tests, analyses
 3. Acceptance criteria
 - Focus: Ensure as-built plant complies with license
 - Must be completed prior to fuel load
 - Licensee notifies NRC of completion
 - NRC public notice of staff determination
 - Commission finding



C.2.11 COL Action Items and Post-License Commitments

- License Conditions
 - Not restricted to pre-operation
 - Enforceable like a regulation
 - Not needed for commitment covered by regulation or technical specification
 - Remains in effect until:
 - Completed by licensee, and
 - Removed from license through license amendment (10 CFR 52.98(f))
 - Need not have submission requirements
 - Example uses:
 - Operational restrictions
 - Tests
 - May include implementation schedule



C.2.11 COL Action Items and Post-License Commitments

- FSAR Commitments
 - Commitment to provide specific information in the FSAR after license issuance
 - Includes other licensee-controlled licensing-basis documents such as quality assurance plans, emergency plans, and security plans
 - Commitment to provide information in routine FSAR updates after licensing
 - Two approaches
 - In a license condition
 - In FSAR (or FSAR update)



C.2.11 COL Action Items and Post-License Commitments

- FSAR Commitments – License Condition Approach
 - License condition establishes commitment to provide specific information in the FSAR after license issuance
 - Focus on ensuring that FSAR information identified during COL review process is included in a post-licensing FSAR update
 - FSAR revision tied to milestone rather than 50.71(e)
 - License condition should include a milestone schedule

- FSAR Commitments – Routine FSAR Update Approach
 - FSAR revision(s) to be submitted according to 50.71(e)



C.2.11 COL Action Items and Post-license Commitments

Interactive discussion



C.2.14 Information Change Processes for COL Applicants

- ML15247A283**
- Updates RG 1.206 C.IV.3 General Description of Change Processes (2007)

- Overview
 - Change processes can be complex
 - COL applicants should be familiar with processes and clarify information sources/types in their applications
- Guidance focused on COL applicants only
 - COL referencing ESP
 - COL referencing DC



C.2.14 Information Change Processes for COL Applicants

- COL referencing ESP
 - Finality requirements – 10 CFR 52.39
 - Application may include requests for variances during COL review stage (not after license issued) – same technically relevant criteria as original ESP
 - No ESP or site safety analysis report (SSAR) changes without license amendment



C.2.14 Information Change Processes for COL Applicants

- COL referencing DC
 - Finality requirements – 10 CFR 52.63(b)
 - Tiers of information and associated change processes in Part 52 design certification rule (DCR) appendices)
 - Short version:
 - Tier 1, Tier 2*, or generic technical specifications** – NRC approval in COL application
 - Tier 2 departure** – screening process to determine whether NRC approval needed in COL application (~10 CFR 50.59)
 - Operational requirements** – not resolved at DC stage, but can request exemption in COL application



C.2.14 Information Change Processes for COL Applicants

Table 1: COL Applicant Change Process for DC Information

Type of Information	Type of Change	Requirements for Change
Tier 1	Exemption	DCR Section VIII, Processes for Changes and Departures – VIII.A.4 10 CFR 52.63, Finality of standard design certifications – § 52.63(b)(1) 10 CFR 52.7, Specific exemptions 10 CFR 50.12, Specific exemptions – § 50.12(a)
Tier 2 or 2*	Exemption	DCR Section VIII.B.4 10 CFR 50.12(a)
Operational Requirements	Exemption	DCR Section VIII.C.4 10 CFR 52.7 10 CFR 50.12(a)
Tier 2*	Departure (Prior NRC approval required)	DCR Section VIII.B.6.a
Tier 2	Departure (Prior NRC approval required)	DCR Section VIII.B.5
Tier 2	Departure (Prior NRC approval not required)	DCR Section VIII.B.5 [Note: Departure must not involve a change to or departure from Tier 1, Tier 2*, or the generic TS, or otherwise require prior NRC approval]



C.2.14 Information Change Processes for COL Applicants

- ❑ COL licensees (for future reference)
 - ❑ Processes remain essentially the same
 - ❑ Important to understand source of information and change processes

FSAR (10 CFR 52.79)

Plant-Specific DCD

COL
FSAR

ESP
SSAR
*e.g.: Seismic,
Hydrology*

Tier 1

Tier 2

Tier 2*

Separate
Change
Control
e.g.:
*Emergency
Plan, Security
Plan*



C.2.14 Information Change Processes for COL Applicants

Interactive discussion



BREAK

3:00 – 3:30 p.m.



C.2.15 Environmental Issue Finality for COL Applicants

- ML15247A157**
- Update RG 1.206 C.III.3 *Finality of Environmental Issues*
- Overview
 - §52.39 – An ESP referenced in a COL has regulatory finality regarding the site
 - §52.63 – A DC referenced in a COL has regulatory finality associated with the design
 - New and significant information – may cause supplement to ESP EIS or has to be addressed in COL Environmental Report (ER)
 - DC has finality unless the Commission determines, in a rulemaking, that a change to the DC information is required (§52.63)



C.2.15 Environmental Issue Finality for COL Applicants

- Guidance – COLs referencing an ESP
 - Info must be sufficient for staff to develop its independent analysis (§51.45)
 - Info must also demonstrate that the design of the facility falls within the site characteristics and design parameters specified in the ESP (§51.50)
 - COL ER must also contain any “new and significant” information (N&SI)
 - Staff will perform an audit of the applicant’s N&SI (required by §51.50)
 - If “significant “ info is determined to have become known since issuance of the ESP EIS, the COL applicant must determine the impact level



C.2.15 Environmental Issue Finality for COL Applicants

- Guidance – COLs Referencing a DC
 - The Environmental Report (ER) for a DC is required to address costs and benefits of severe accident mitigation design alternatives (SAMDA) and the bases for not incorporating SAMDA in the design to be certified (§51.55)
 - The staff develops an Environmental Assessment based on the applicant's DC ER
 - Commission may not modify an authorized DC unless it is determined in a rulemaking that the DC does not meet applicable regulations, is necessary to provide adequate protection to public health and safety or the common defense or security, or due to other conditions as set forth in §52.63.



C.2.15 Environmental Issue Finality for COL Applicants

Interactive discussion



C.2.10 Applicability of Consensus Standards

- New topic** not addressed in RG 1.206 (2007)
- Potential scope
 - Executive Order (OMB Circular No. A-119 Revised)
 - NRC Management Directive 6.5
 - Other topics
 - Codes and code cases
 - RIS 2007-06
 - Trial use standards



C.2.10 Applicability of Consensus Standards

- OMB Circular No. A-119 Revised, “Federal Participation in the Development and Use of Voluntary Consensus Standards and n Conformity Assessment Activities”
 - Directs government agencies to use voluntary consensus standards
 - Agencies to use consensus standards in place of government-unique standards
 - Two exceptions to use of voluntary consensus standards
 - Inconsistent with law
 - Impractical
 - Policy does not preempt or restrict agencies’ authorities and responsibilities



C.2.10 Applicability of Consensus Standards

- A consensus standard is defined in Management Directive 6.5, "NRC Participation in the Development and Use of Consensus Standards" (ML100600460)
 - NRC position on OMB Circular No. A-119:
 - Circular not binding on NRC
 - NRC voluntarily follows the guidance
 - NRC endorsement of standards
 - Incorporating by reference in regulations **AND**
 - Referencing in documents such as regulatory guides, NUREGs, and standard review plans



C.2.10 Applicability of Consensus Standards

- Other topics to potentially address
 - Codes and code cases
 - RIS 2007-06, “Regulatory Guide 1.200 Implementation”
 - How to address revisions to PRA standards
 - Trial use standards



C.2.10 Applicability of Consensus Standards

Interactive discussion



MEETING FEEDBACK & REVIEW



THANK YOU!

**Regulatory Guide 1.206 (revision)
“Applications for Nuclear Power Plants”**

Public Meeting October 27, 2015



BACKUP

Application Conformance with NUREG-0800

10 CFR 52

Early Site Permits

- 52.17(a)(1)(xii) ... evaluation against the SRP ...

Design Certifications

- 52.47(a)(9) ... evaluation against the SRP ...

COLs

- 52.79(a)(41) ... evaluation against the SRP ...

10 CFR 50

Operating Licenses & Construction Permits

- 50.34(h) ... evaluation against the SRP ...