OPPD's Fort Calhoun Station Driving to Excellence

Public Meeting with the U.S. Nuclear Regulatory Commission
License Amendment Request (LAR) for use of ANSI/ANS 58.14

April 23, 2015

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Agenda

- Overall Goal of the LAR
- Amendment Request
- FCS Licensing Basis
- Why ANSI/ANS 58.14
- ANSI/ANS 58.14 Methodology
- Applicable Requirements
- Current Guidance
- Conclusion

Overall Goal of the LAR

- Adopt the latest industry guidance on equipment classification
- Provide a clear, concise, repeatable, objective methodology to classify equipment

Amendment Request

- OPPD is currently performing an equipment classification project at FCS which necessitates a suitable classification methodology
  - Allow use of an objective methodology (i.e., ANSI/ANS 58.14-2011) to classify equipment
  - Allow the use of the latest industry guidance to classify equipment at FCS

FCS Licensing Basis

- **Original FSAR – Appendix N**
  - Per the guidelines of ANSI N18.2
- **Current USAR - Appendix N**
  - Regulatory Guide 1.26, Rev 3
  - Uses ANSI/ANS 51.1 as guidance
    - Classification terminology: Critical Quality Element (CQE), Limited CQE, Non-safety-related
- **Proposed USAR Change**
  - Use methodology of ANSI/ANS 58.14-2011 for equipment classification
    - Classification terminology: Safety-related (SR), Augmented Quality (AQ) and Non-safety-related (NSR)
  - Associated with NRC URI 2013008-22

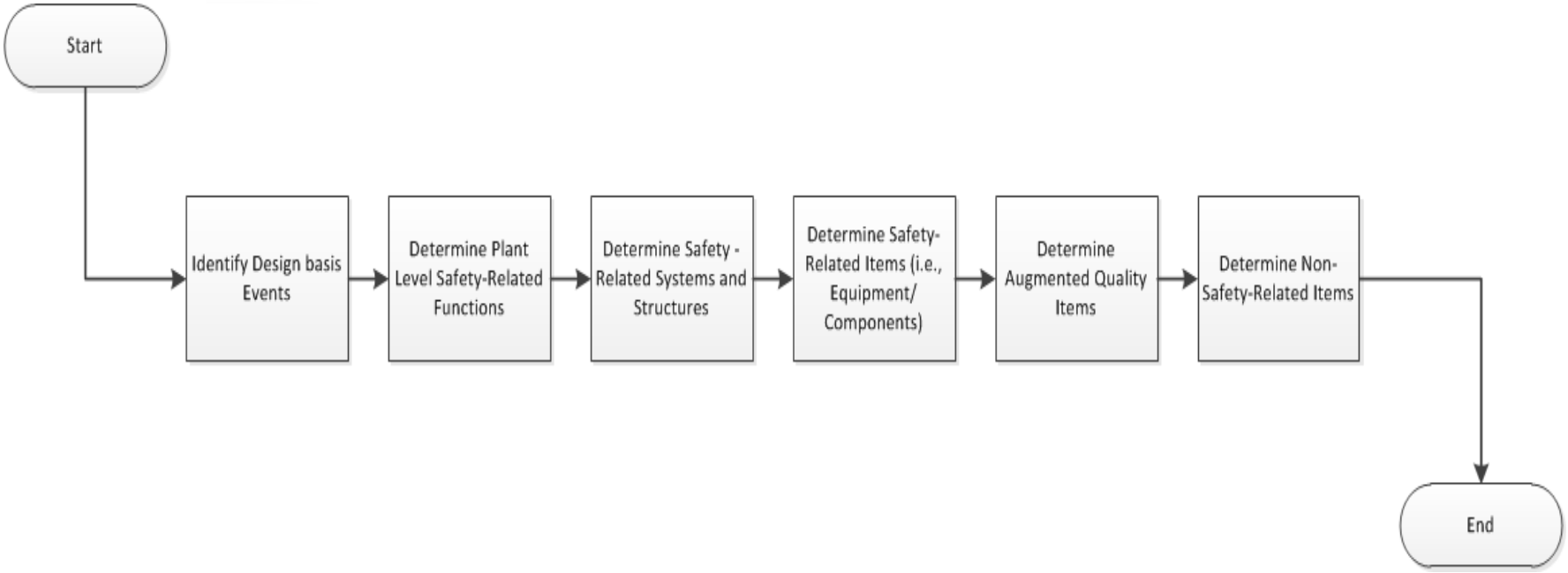
Why ANSI/ANS 58.14?

- **Compliance issues with ANSI N18.2**
  - Includes four generic event conditions which do not align precisely with USAR chapter 14 events
  - Written to help define criteria for the design of new plants in 1973
    - These criteria are not directly applicable to FCS because the applicable criteria is specified in the USAR, Appendix F and the applicable codes.
    - Invokes ASME III, Class 1, 2, 3 and MC for containment. FCS is mostly a USAS B31.7 plant and containment is not an ASME MC design.
    - Invokes IEEE 308-1971
      - FCS is not generically committed to IEEE 308-1971 because it did not exist at the time of the design

Why ANSI/ANS 58.14?

- **Compliance issues with ANSI/ANS 51.1**
  - Includes five "probability based" generic event criteria that do not align precisely with USAR chapter 14 events
  - Written to help define criteria for the design of new plants in 1983
    - Invokes ASME III, Class 1, 2, 3, NF and MC for containment. FCS is mostly a USAS B31.7 plant with supports designed to AISC. Containment is not an ASME MC design.
    - Invokes Structural standards that did not exist at the time of FCS design and have not been committed to
    - Invokes multiple IEEE requirements that did not exist at the time of FCS design
      - FCS is not generically committed to these IEEE requirements

ANSI/ANS 58.14 Methodology



ANSI/ANS 58.14 Methodology

- **Once a structure, system, or component is categorized by Safety Class, the Pressure Integrity Class, Seismic Class and Electrical Class will be specified as follows:**

Safety	Pressure Integrity	Electrical	Seismic
Q (i.e., SR)	C-1, C-2, or C-3*	IE (i.e., SR Electrical)	Category I
AQ	C-4	Non-IE	Category II or N/A
NSR	C-5	Non-IE	N/A

* Equivalent to R.G. 1.26 classifications

Applicable Requirements

- USAR Appendix G, Criterion 1, Quality Standards,
  - *"Those systems and components of reactor facilities which are essential to the prevention of accidents which could affect the public health and safety or to mitigation of their consequences shall be identified and then designed, fabricated, and erected to quality standards that reflect the importance of the safety function to be performed."*
- 10 CFR Part 50, Section 50.55a, Codes and Standards
- NRC Regulatory Guide 1.26, Quality Group Classifications

Current Guidance

- Regulatory Guide 1.206 indicates:
  - *"An acceptable method to implement safety and pressure integrity classification of ECCS components is to use ANSI/ANS-58.14-1993 (or later version)"*
    - Note also; in current Draft Regulatory Guide DG-1314 (Proposed Revision 5 of Regulatory Guide 1.26)

Conclusion

- ANSI/ANS 58.14 provides an acceptable methodology to identify and classify SR Systems
  - Regulatory Guide 1.206 recognizes the use of ANSI/ANS 58.14 for Equipment Classification
    - The code requirements specified in 10 CFR 50.55a, RG 1.26 for Quality Group A, B & C are equivalent to ANSI/ANS 58.14 Pressure Integrity Class
  - ANSI/ANS 58.14 classification criteria allow for a precise classification
    - The methodology in ANSI/ANS 58.14 classifies systems and associated equipment based on the plant unique Licensing Basis
    - ANSI/ANS 58.14 provides additional guidance on handling Safety, Seismic, Pressure Integrity and Electrical boundaries

Conclusion

- LAR Submittal Schedule
  - Submittal: May 2015
  - Requested Approval: 2nd quarter 2016
  - Project Implementation:
    - Equipment classification in progress- AT RISK
      - Target Completion: Early 2017
    - Reconciliation of deficiencies: November 2018
      - May result in additional submittals or plant modifications