



United States Nuclear Regulatory Commission

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*Protecting People and the Environment*

# **Discussion of EPRI Commercial Grade Item Dedication Guidance Revision**

Construction Inspection Program (CIP) Public Meeting  
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# Revision to EPRI Dedication Guidance

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- EPRI 3002002982 was developed to supersede NP-5652 and TR102260
- Also incorporated
  - Staff guidance from Generic Letter 89-02 & 91-05
  - NRC Inspection Procedure 38703 & 43004
  - Nuclear Energy Institute (NEI) 14-05
- Diverse Technical Team
  - Licensees
  - Suppliers
  - Regulators
  - Construction

# Updates/Consolidates Guidance

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- Updates the guidance to align with current dedication practices
  - Provides guidance tailored to specific end-use (suppliers, utility, dedicating entity)
  - Describes how to determine if in the dedication or Appendix B process
  - Provides guidance on the dedication of various commercial services

# Updates/Consolidates Guidance

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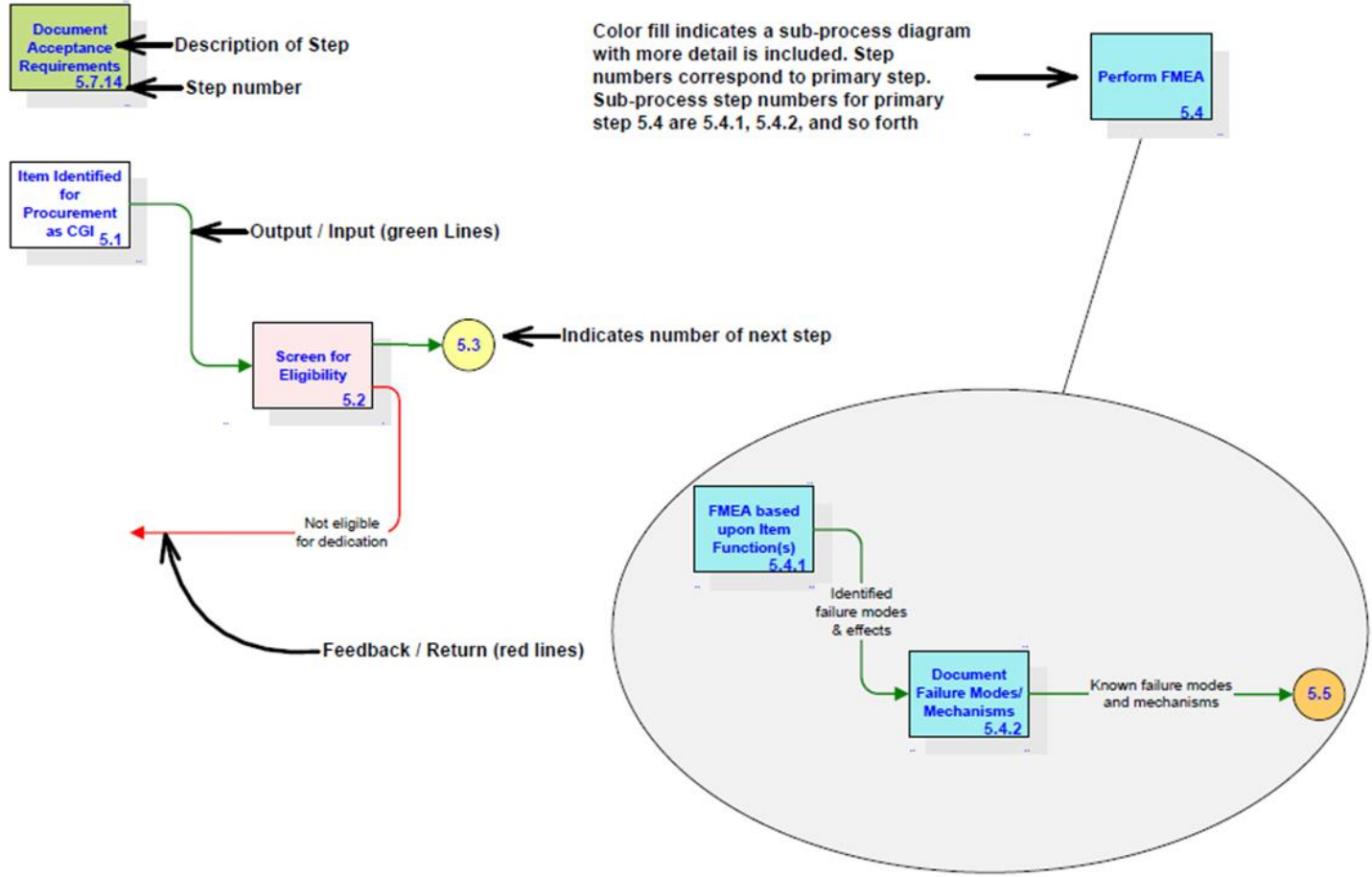
- Updates the guidance to align with current dedication practices (continued)
  - Discusses that design must be complete prior to initiating the dedication processes
  - Describes how failure modes and effects analysis (FMEA) process can be implemented when design information is unavailable
  - Moves away from “critical characteristics for acceptance and design”
  - Clarifies use of product identification

# Updates/Consolidates Guidance

- The description of the dedication process provides detailed steps by a process flow diagram and **associated** detailed instructions.

Figure	Page	Content	Major Step(s)	Expanded Steps
5-2	5-5	Overview of commercial-grade item dedication process	5.1–5.6	n/a
5-3	5-6	Overview of commercial-grade item dedication process	5.7-5.13	n/a
5-4	5-15	Screen for eligibility	5.2	5.2.1–5.2.6
5-5	5-21	Identification of safety function	5.3	5.3.1–5.3.3
5-6	5-27	Failure modes and effects analysis	5.4	5.4.1, 5.4.2
5-7	5-30	Identification of critical characteristics	5.5	5.5.1–5.5.4
5-8	5-37	Establishing dedication boundaries when the safety function is unknown	5.6	5.6.1–5.6.5
5-9	5-43	Identification of acceptance methods—Method 1: Special Tests and Inspections	5.7	5.7.1–5.7.7
5-10	5-50	Method 2: Commercial-Grade Survey	5.7	5.7.8–5.7.14
5-11	5-58	Method 3: Source Verification	5.7	5.7.15–5.7.19
5-12	5-64	Method 4: Item/Supplier Performance Record	5.7	5.7.20–5.7.22

# Basic Diagram Concepts (Process Map Key)



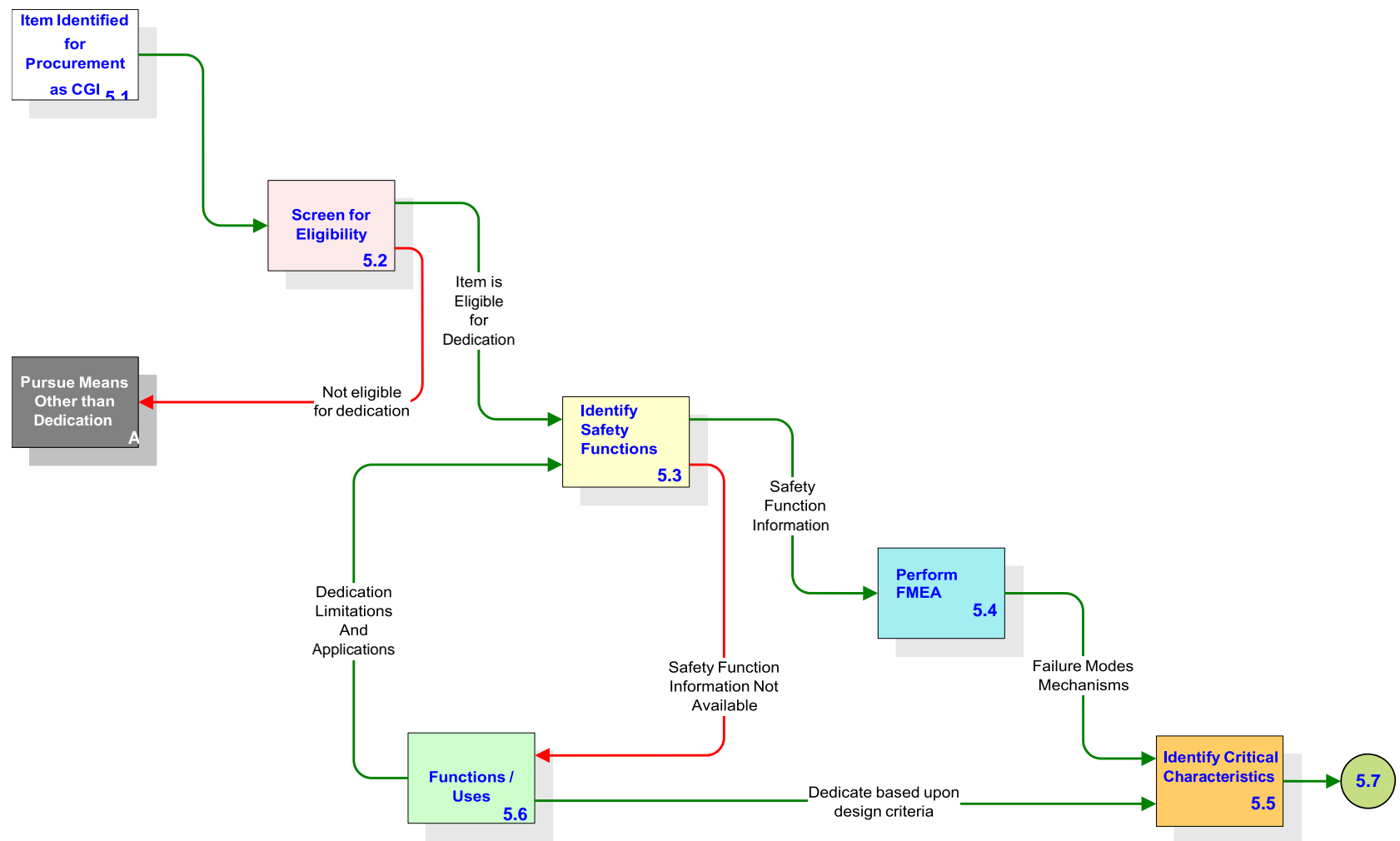
Note: FMEA = failure modes and effects analysis; CGI = commercial-grade item

# Contents of Steps

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- Each step in the process flow diagram provides
  - Description
  - Methodology
  - Precautions/ Lessons Learned

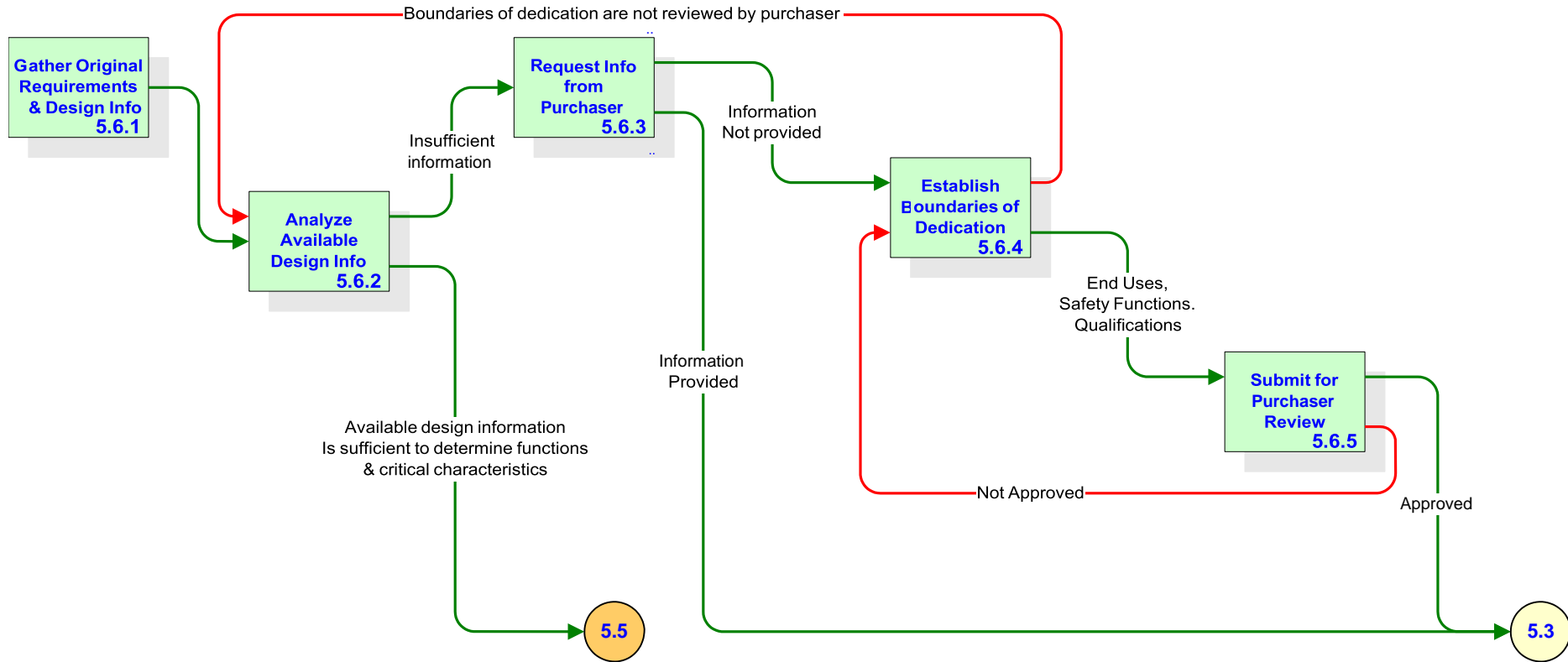
# Process Flow Diagram (Steps 5.1-5.6)



**Note:** FMEA = failure modes and effects analysis; CGI = commercial-grade item



# Process Flow Diagram



# Examples of Dedication

Commercial Grade Item Dedication Technical Evaluation EPRI Joint Utility Task Group  
Form CG11, Rev. 0

Evaluation Number CGI 0005 Revision 0

## SECTION A ITEM DESCRIPTION

<b>INVENTORY CONTROL NO:</b> EMW-JS2	
<b>NOUN IDENTIFIER:</b> Connector, Copper, Terminal, Ring Tongue 16-14 AWG, #6 Stud, PISG, Blue Stripe, PVF2 Insulated	
<b>MANUFACTURER NAME:</b>	<b>MANUFACTURER MODEL / PART / CATALOG NUMBER(S)</b>
BCP Industries	630319

## SECTION B END USE / PARENT / HOST EQUIPMENT INFORMATION

Note: If the specific end-use(s) / plant applications are not known, complete Section C of this form in lieu of Section B prior to proceeding.

Not Applicable (Section C Completed Below)

<b>EQUIPMENT ID (TAG) NUMBERS OR DESCRIPTION OF ITEM USAGE:</b>		
Various applications in accordance with Juliet Plant Electrical Specification 2323-EWJS-100		
<b>PARENT COMPONENT/HOST DESCRIPTION:</b>		
Various terminations made in accordance with Juliet Plant Electrical Specification 2323-EWJS-100		
<b>FUNCTIONAL SAFETY CLASS OF COMPONENT / HOST:</b>		<b>BASIS / SOURCE:</b>
<input checked="" type="checkbox"/> Safety-Related <input type="checkbox"/> Non-Safety Related (If non-safety, item is not a candidate for dedication)		Juliet Plant Electrical Specification 2323-EWJS-100
<b>IDENTIFICATION OF PARENT COMPONENT/HOST EQUIPMENT FUNCTION(S)</b>		
<b>FUNCTIONAL MODE</b>	<b>BASIC SAFETY FUNCTION(S)</b>	<b>DESCRIBE (AS REQUIRED)</b>
<input type="checkbox"/> Active <input checked="" type="checkbox"/> Passive	Maintain Circuit Integrity	Maintain electrical continuity for power, control and instrumentation circuits of various safety related equipment
<input type="checkbox"/> Active <input checked="" type="checkbox"/> Passive	Maintain Structural Integrity	Maintain structural integrity during normal operating and design basis event conditions
<input type="checkbox"/> Active <input type="checkbox"/> Passive		
<input type="checkbox"/> Active <input type="checkbox"/> Passive		
<b>PARENT COMPONENT/HOST EQUIPMENT IS (CHECK ALL THAT APPLY):</b>		
<input checked="" type="checkbox"/> EQ <input type="checkbox"/> ASME SECTION III <input checked="" type="checkbox"/> CLASS 1E <input type="checkbox"/> CONTAINMENT PRESSURE BOUNDARY <input checked="" type="checkbox"/> SEISMIC CLASS 1 <input type="checkbox"/> SERVICE LEVEL 1 COATING <input type="checkbox"/> OTHER: (see below)		
Use includes applications qualified via IEEE Test Report RST, Rev. 4 and Dudek Laboratory Environmental Qualification Report EEQ-THOM-12, Rev. 8.		

# Additional Topics of Interest

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- Commercial Grade Survey Planning
- Commercial Grade Dedication Example
- Commercial Grade Item Dedication Forms
- Sampling/Traceability
- Qualification Versus Dedication
- Reasonable Assurance
- Terminology

# Questions?

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