



## COMMERCIAL-GRADE ITEM DEDICATION UPDATE

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Richard McIntyre  
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## COMMERCIAL-GRADE ITEM DEDICATION

# ANCIENT HISTORY

- NRC Inspection in the late 1980's identified common problems
- Pause for industry improvement
- NRC Assessments in the early 1990's
- Pilot inspections
- Numerous meetings with industry
- Public workshop in 1993
- NRC Insp Proc 38703 issued in November 1993
- Recent NUPIC Audits and NRC Inspections have identified findings in Vendor CGI Dedication





# COMMERCIAL-GRADE ITEM DEDICATION

## CGI DEDICATION GUIDANCE

- ANSI N 18.7-1976/R.G. 1.33 – “off the shelf” items may be similarly procured but care must be taken to assure at least equivalent performance
- EPRI NP-5652 – Guideline for the Utilization of CGIs in Nuclear Safety Related Applications (1988)
- Generic Letter 89-02 – conditionally endorsed EPRI NP-5652
- Generic Letter 91-05 – Announces pause in inspections/provides additional clarifications
- NUMARC Procurement Initiative--Basic Initiative – January 1, 1990  
Comprehensive Initiative July 1, 1992
- Appendix A to IP 38703





## COMMERCIAL-GRADE ITEM DEDICATION

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- 10CFR50 Appendix B – Applies to all safety related structures, systems, and components (Basic Components)
- 10CFR Part 21.3 – Definitions
- Dedication – Acceptance Process by which a CGI is designated for use as basic component. Process includes the identification and verification of critical characteristics





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## NRC STAFF VIEW ON COMMERCIAL GRADE ITEMS (CGIs)

- Determine Safety Function
  - Design basis, parts classification
  
- Engineering Evaluation to Identify Design/Performance Attributes Necessary to Perform Safety Function
  
- Procurement Activity to Confirm Engineering Evaluation
  - e.g., CG surveys, testing





# COMMERCIAL-GRADE ITEM DEDICATION

## QA ISSUES IN DEDICATION

- SELECTION OF CRITICAL CHARACTERISTICS
  - Safety function
  - Graded quality
  - Failure modes
  - Reasonable assurance
  - Engineering judgment
  
- TRACEABILITY
  - Items purchased thru distributors



## QA ISSUES IN DEDICATION

- SAMPLING
  - established heat traceability (materials)
  - established lot/batch control (items)
  - Materials/items with no lot/batch control





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## QA ISSUES IN DEDICATION

- COMMERCIAL GRADE SURVEYS
  - Verification of vendor controls
  - Identification of program/procedures
  - Documentation of survey results
  - Survey frequency







# COMMERCIAL-GRADE ITEM DEDICATION

## QA ISSUES IN DEDICATION

- ACCEPTANCE OF VENDOR CERTIFICATES
  - Verify through surveys, testing, other
  - Include distributor controls
  
- USE OF INDUSTRY GUIDANCE
  - Difference between NRC/EPRI definitions

