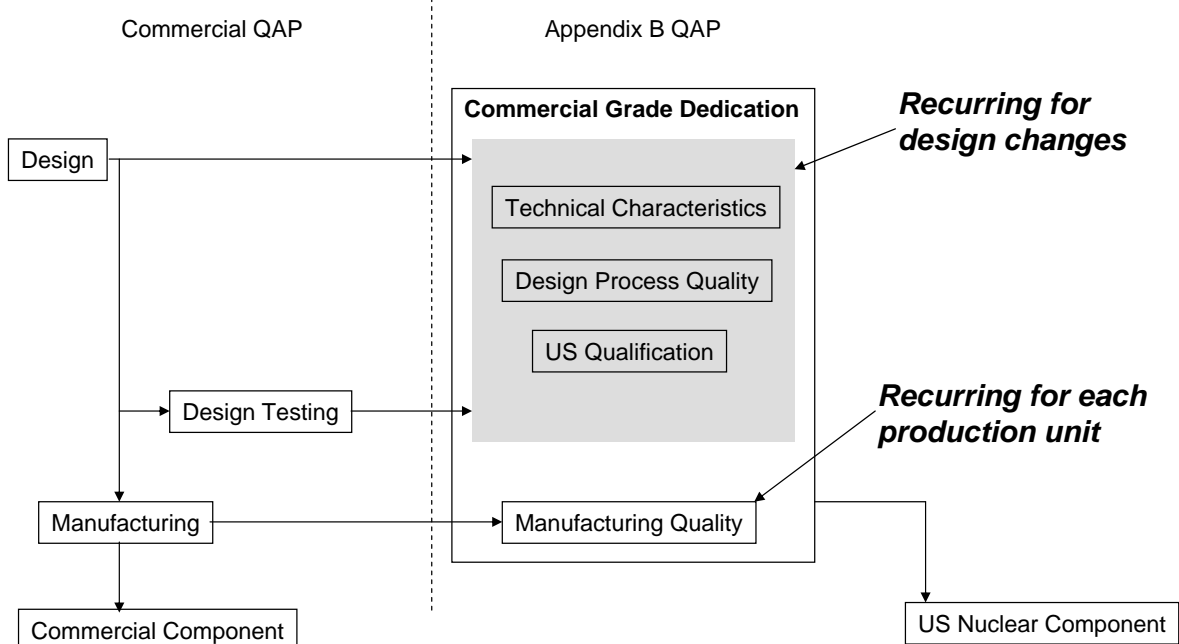


MELTAC

Commercial Grade Dedication

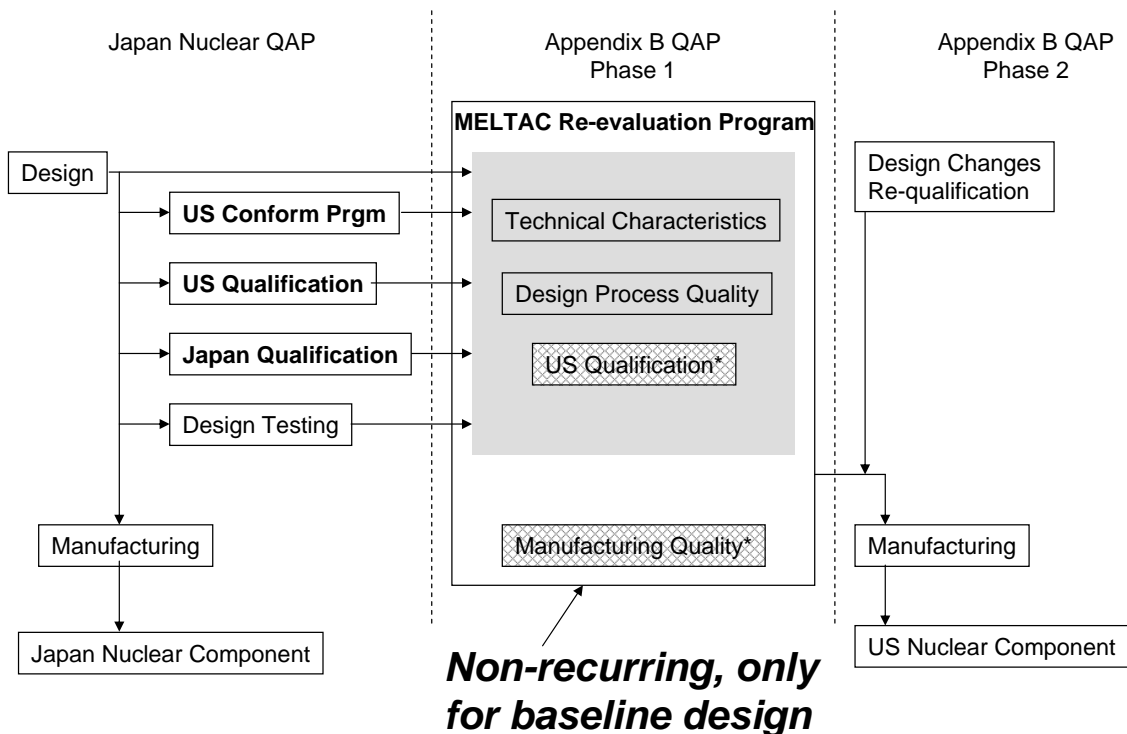
Typical Digital Platform CGD



MELCO CGD

- For MELTAC there are two types of CGD
 - Non-recurring (MELTAC MRP)
 - Recurring (MELTAC CGD)

MELTAC MRP



*Not included in MRP

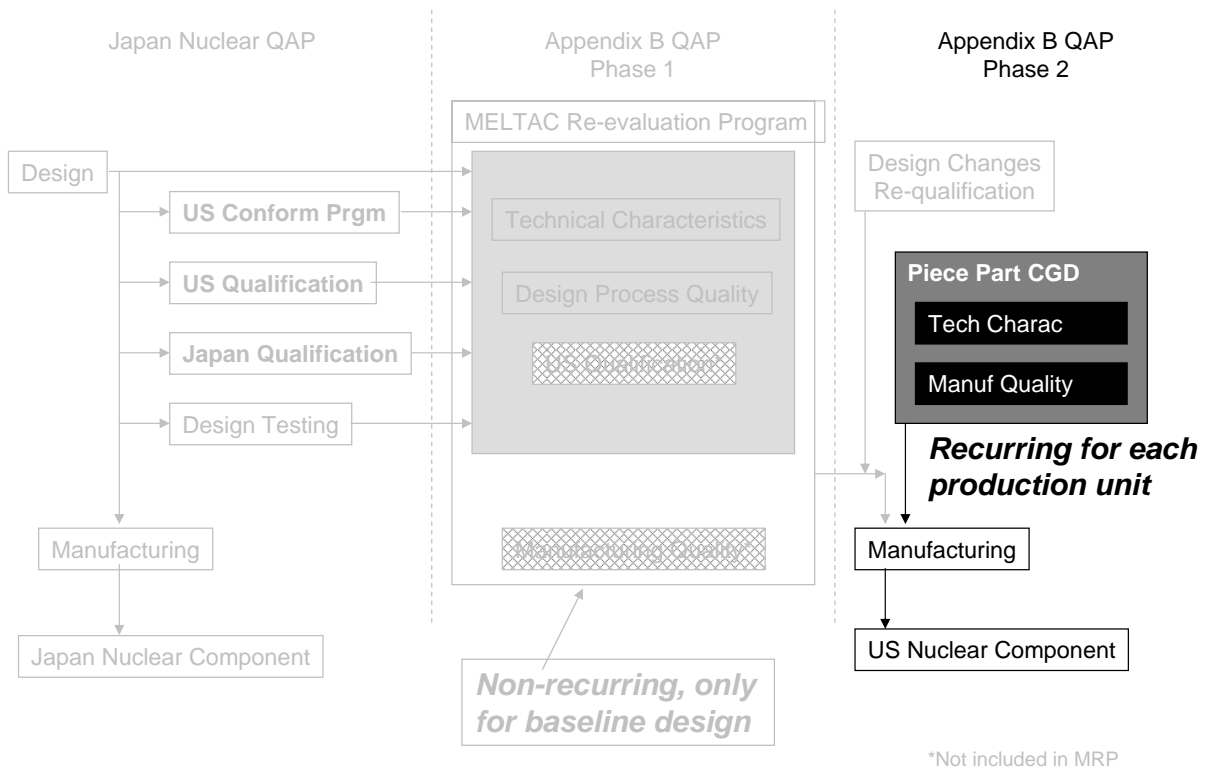
MELTAC MRP Project Plan

- Technical Characteristics
 - Defined by
 - MELTAC TR, MUAP-07005
 - Section 4 MELTAC Platform Description
 - Section 5 Environmental, Seismic, Electromagnetic and Isolation Qualification
 - Section 7 Equipment Reliability
 - » 7.1 History of Operation
 - » 7.2 Mean Time between Failures
 - » 7.5 Periodic Replacement Equipment
 - APPENDIX A HARDWARE SPECIFICATIONS
 - APPENDIX B FUNCTIONAL SYMBOL SOFTWARE SPECIFICATIONS
 - Assessed by
 - Traceability of TR characteristics to MELTAC design/test specifications
 - Conformance to specifications assessed through Design Process Quality
- Design Process Quality
 - Assessed in accordance with
 - EPRI TR-106439, Table 6-4c
 - EPRI TR-107330, Section 7, including detailed assessment for
 - Section 7.2D Design process equivalence to
 - » 10CFR50 Appendix B
 - Section 7.4 V&V process equivalence to
 - » IEEE 7-4.3.2-2003 Sections 5.3.3 and 5.3.4
 - » IEEE 1012-1986 (1998 will be used; it is more current, NRC endorsed)
 - » EPRI TR-103291-1986 (not used in assessment; IEEE1012-1998 is more current)

MELTAC MRP Project Plan

- Conducted by MELCO personnel
 - Who did not participate in the MELTAC design process
 - Who have technical qualifications equivalent to original designers
 - Who have been trained on the MRP process
- Conducted in accordance with MELCO's Appendix B QAP
 - MHI audit December 2009 concludes MELCO now has an Appendix B QAP for design related activities (phase 1)
 - QAP phase 1 audited by MHI included procedure for generating project plans
 - MRP Project Plan generated in accordance with QA procedure for generating project plans
 - QAP phase 2 audit by MHI May 2010 will confirm MRP project plan was prepared in accordance with QA procedure for project plans
- MRP is described in
 - MHI letter UAP-HF-09418 August 28, 2009
 - MELTAC TR MUAP-07005 Rev 4, Section 6.3.2
- MRP Report JEXU-1022-6301
 - Will be submitted by June 30, 2010
 - Includes plan, process and results

MELTAC CGD



MELTAC CGD Process

- MELCO delivers
 - Fully assembled and tested systems
 - Spare parts at the replaceable module level
- Systems and spares are composed of numerous commercial piece parts
 - Resistors, switches, electro-optical converters, integrated circuits, power supplies, etc.
- Commercial parts are dedicated in accordance with
 - EPRI NP-5652 “Guideline for the Utilization of Commercial Grade Items in Nuclear Safety Related Applications”, and
 - EPRI TR-102260 “Supplemental Guidance for the Application of EPRI Report NP-5652 on the Utilization of Commercial Grade Items”
 - Most commercial parts are accepted using Option D
 - Parts are assembled and tested as a unit under MELCO’s 10CFR50 Appendix B program
 - Where critical characteristics cannot be confirmed by unit testing, piece parts are accepted using Option C
 - Accomplished by qualifying the subsupplier under MELCO’s 10CFR50, Appendix B program, utilizing a source verification, or performing tests and inspections upon receipt

MELTAC CGD Process

- Conducted by MELCO personnel
 - Who have been trained on the CGD process
- Conducted in accordance with MELCO's Appendix B QAP
 - QAP phase 2 is described in MHI letter UAP-HF-09418 August 28, 2009
- MELCO does not plan to include a description of piece part CGD in MUAP-07005
 - Piece part CGD is covered under MELCO's Appendix B QAP
 - MHI QA audit report for MELCO's QAP phase 2, which will address piece part CGD, will be submitted by June 30, 2010
 - MELCO's Appendix B QAP is referenced in MUAP-07005

Summary

- There are two different types of commercial grade dedication conducted for MELTAC
 - MRP is non-recurring to establish the quality of the base-line design (equivalent to Appendix B)
 - Piece part CGD is recurring to ensure on-going quality control
- Both are conducted under MELCO's 10CFR50 Appendix B QAP