

APPENDIX B: CHAPTER 21 REFERENCE LISTING

The most recent document revision (including revised document numbering and/or titles) applies unless otherwise stated. (Requirement 21-0108) *Most national standards are available to LANL personnel via links; others must purchase.*

Non-LANL (Publicly Available)

[10 CFR 830](#), *Nuclear Safety Management*
[10 CFR 835](#), *Occupational Radiation Protection*
[48 CFR 970-5223-1](#), *Integration of Environment, Safety, and Health into Work Planning and Execution*
[ANSI/ANS-10.7](#), *Non-Real-Time, High-Integrity Software for the Nuclear Industry – Development Requirements*
[ASME NQA-1-2008/NQA-1A-2009](#), *Quality Assurance Requirements for Nuclear Facility Applications, Part I and Part II*
[ASME NQA-1-2015 Part III, Subpart 3.2-2.14](#), *Quality Assurance Requirements for Commercial Grade Items and Services, Commercial Grade Computer Programs, and Software Services*
ASQ [Certified Software Quality Engineer Handbook](#), L. Westfall, Am. Soc of Quality Pres.
[DOE G 413.3-21](#), *Cost Estimating Guide*
[DOE O 414.1E](#), *Quality Assurance*
[DOE Safety Software Quality Assurance Central Registry](#)
[DOE G 414.1-4](#), *Safety Software Guide for Use with 10 CFR 830 Subpart A, Quality Assurance Requirements, and DOE O 414.1C, Quality Assurance (Revision A pending)*
[DOE G 450.4-1C](#), *Integrated Safety Management System Guide*
[DOE P 450.4A](#), *Integrated Safety Management Policy*
[DOE SQAS21.01.00-1999](#), *Software Risk Management—A Practical Guide*
[DOE-STD-1073](#), *Configuration Management*
[DOE-STD-1195](#), *Design of Safety Significant Safety Instrumented Systems Used at DOE Nonreactor Nuclear Facilities*
[EPA/100/K-09/003](#), *Guidance on the Development, Evaluation, and Application of Environmental Models*
IAEA TR. No. 397, *Quality Assurance for Software Important to Safety*, IAEA, 2000

IEEE

ANSI/IEEE Std 7-4.3.2-2010, *IEEE Standard Criteria for Digital Computers in Safety Systems of Nuclear Power Generating Stations*
ANSI/IEEE Std 828, *IEEE Standard for Configuration Management in Systems and Software Engineering*
ANSI/IEEE Std 26514, *Systems and Software Engineering—Requirements for Designers and Developers of User Documentation*
ANSI/IEEE Std 29148, *Systems and Software Engineering – Life Cycle Processes – Requirements Engineering*
IEEE Std 344, *Standard for Seismic Qualification of Equipment for Nuclear Power Generating Stations*
IEEE Std 830, *IEEE Recommended Practice for Software Specifications*
IEEE Std 1012, *IEEE Standard for System and Software Verification*
IEEE Std 1016, *IEEE Standard for Information Technology – System Design – Software Design Descriptions*
IEEE Std 1016.1, *IEEE Guide to Software Design Descriptions*
IEEE Std 1028, *IEEE Standard for Software Reviews and Audits*
IEEE Std 1666, *IEEE Standard for Standard System C Language Reference Manual*
IEEE Std 12207, *Systems and Software Engineering – Software Life Cycle Processes*
ISO/IEC/IEEE 24765, *Systems and Software Engineering – Vocabulary*
ISO/IEC/IEEE 29119, *Software and systems engineering—Software testing*
ISO/IEC/IEEE 29148, *Systems and Software Engineering-Life Cycle Processes-Requirements Engineering*
ANSI/ISA S84.00.01, *Functional Safety: Safety Instrumented Systems for the Process Industry Sector*
[Merriam-Webster Dictionary](#)

Section SOFT-INTRO: Chapter Introduction

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LANL (internal-only links except as noted)

- [AP-341-402](#), *Engineering Document Management in Operating Facilities*
- [AP-341-405](#), *Identification and Control of Technical Baseline, Variances, Alternate Methods, and Clarifications in Operating Facilities*
- [AP-341-502](#), *Management Level Determination*
- [AP-341-504](#), *Temporary Modification Control*
- [AP-341-510](#), *Field Walk-down, Data Gathering, and Inspections*
- [AP-341-519](#), *Design Revision Control*
- [AP-341-605](#), *Calculations*
- [AP-341-601](#), *Functions and Requirements Document*
- [AP-341-602](#), *Requirements and Criteria Document (RCD)*
- [AP-341-611](#), *System Design Descriptions*
- [AP-341-613](#), *Instrumentation Set Point Control*
- [AP-341-616](#), *Technical Baseline Change During Design*
- [AP-341-620](#), *Review of LANL Produced Design Documents*
- [AP-341-621](#), *Design Authority Technical Review*
- [AP-341-622](#), *LANL Review of Designs Produced by External Agencies*
- [AP-341-703](#), *Commercial Grade Dedication*
- [AP-341-801](#), *Post Modification/Post Maintenance Testing*
- [AP-341-802](#), *System Health Reporting*
- [AP-341-901](#), *Performing Vital Safety System Assessments*
- [AP-350-406](#), *Startup and Commissioning*
- [ASM 3400.00.0410](#), *Goods or Services Requiring Special Review/Approval*
- [ASM Website](#)
- [Conduct of Operations Resources](#)
- [CIO-P100](#), *Cybersecurity Program Plan*
- [SEO-COOP-006](#), *Continuity of Operations Plan*
- [ES Division Office \(ES-Div\) Website](#)
- [ESDO-AP-002](#), *Engineering Services (ES) Software Inventory Instructions*
- [Form 2033](#), *Graded Software Determination*
- [Forms](#) for P1040, many of use herein
- [Information System Security Officer \(ISSO\)](#)
- [Institutional Evaluated Supplier List \(IESL\)](#)
- Institutional Quality SQA [webpage](#)
- [IQPA-IQ-FSD-116](#), *Software Quality Management Plan (SQMP) for LANL Less Than Commercially Controlled (LTCC) Software*
- [LA-14167-MS](#), *Los Alamos National Laboratory, Concepts of Model Verification and Validation*, Thacker et al., 2004
- LIST-SB-503, *Nuclear Facility List*, (e.g., r2.1 directly [here](#), or under [Other Resources](#))
- [P204-1](#), *Controlled Unclassified Information*
- [P218](#), *Cyber Security Controls*
- [P322-4](#), *Issues Management*
- [P328-5](#), *Assessments*
- [P330-2](#), *Control and Calibration of Measuring and Test Equipment (M&TE)*
- [P330-5](#), *Special Processes*
- [P330-6](#), *Nonconformance Control and Reporting*
- [P330-8](#), *Inspection and Test*
- [P330-9](#), *Suspect/Counterfeit Items (S/CI)*
- [P341](#), *Facility Engineering Processes Manual*
- [P342](#), *Engineering Standards*
- [P343](#), *Facility Engineering Training and Qualification Manual*
- [P781-1](#), *Conduct of Training*
- [P805](#), *Export Control*
- [P841-1](#), *Quality Procurements*
- [P1020-2](#), *Laboratory Document Control*
- [P1040](#), *Software Quality Management*
- [P1011](#), *Information Technology Acquisition and Use*
- [PD110](#), *Safety Basis*
- [PD115](#), *LANL Readiness Program*
- [PD210](#), *Cyber Security Program*
- [PD330](#), *LANL Quality Assurance Program Description*
- [PD340](#), *Conduct of Engineering and Configuration Management for Facility Work*
- [PD370](#), *Conduct of Engineering for Research and Development (R&D)*
- [Safety Basis Document List](#)
- [SBP-15-351](#), *Design Basis or Safety Basis Change Review*
- [SBP111-1](#), *Facility Hazard Categorization and Documentation*
- [SBP112-3](#), *Unreviewed Safety Question (USQ) Process*
- [SBP113-3](#), *Unreviewed Safety Issue (USI) Process*
- [SD130](#), *Nuclear Criticality Safety Program*
- Software Quality Assurance [webpage](#) (IQPA-IQP)
- [STD-342-100](#), *Engineering Standards Manual* (available externally)
- [TeamForge](#)