| Number/Revision/Change | | | | | Title | |
| --- | --- | --- | --- | --- | --- | --- |
| Specification Developer:  ES (Master Specification Template)  LANL Engineer of Record (EOR)  Subcontractor EOR Firm Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | | | | Specification format:  Construction Standards Institute (CSI)  Procurement-Only, Non-CSI Spec Format Template | |
| **Item #** | **Yes** | **No** | **N/A** | **CRITERIA** | | |
| **COORDINATE REVIEW** | | | | | | |
|  |  |  |  | If appropriate, provide the document to other personnel within IQPA and consolidate comments. | | |
| **SPECIFICATIONS PREPARED IN ACCORDANCE WITH AP-341-610 (not applicable to templates or specifications prepared in accordance with subcontractor procedures)** | | | | | | |
|  |  |  |  | When available in a safety analysis document, does the specification identify functional requirements and performance criteria that support the safety function? (Safety functions, functional requirements and performance criteria are obtained from facility safety analysis or hazard analysis documents, system design descriptions, or facility design descriptions.)  ([AP-341-610](https://coe.lanl.gov/APs/AllAPs/Forms/APbyNumber.aspx), Section 3.4.1) | | |
|  |  |  |  | When an ML-1 or ML-2 item is a commercial grade item, has the preparer developed critical characteristics of the item that perform a safety function and meet definition of commercial grade dedication using [AP-341-607](https://coe.lanl.gov/APs/AllAPs/Forms/APbyNumber.aspx) and the acceptance criteria for those characteristics?  (Note: Commercial Grade Dedication may be required as described in the ESM, Chapter 21 for software, e.g. SHADS and SMACS, that does not perform a safety function.)  ([AP-341-610](https://coe.lanl.gov/APs/AllAPs/Forms/APbyNumber.aspx), Section 3.4.1 and 3.4.2) | | |
|  |  |  |  | Does the specification include Form AP-341-601-FM01, SSC Specification Signature Sheet prepared in accordance with the instructions?  ([AP-341-610-FM-01](https://coe.lanl.gov/APs/AllAPs/Forms/APbyNumber.aspx)) | | |
|  |  |  |  | Have the verification and acceptance requirements been developed and listed? ([AP-341-610](https://coe.lanl.gov/APs/AllAPs/Forms/APbyNumber.aspx), 3.4.2) | | |
|  |  |  |  | Does the specification provide certification, inspection, and test requirements necessary to ensure the item performs its intended function? ([AP-341-610](https://coe.lanl.gov/APs/AllAPs/Forms/APbyNumber.aspx), 3.4.2) | | |
|  |  |  |  | On each affected page, are changes identified with change bars or clouds with the change document number noted next to the change bar or cloud? When there are multiple changes to a specification, does each successive change include previous mark-up changes and associated change document [number](https://coe.lanl.gov/APs/AllAPs/Forms/APbyNumber.aspx)s so that the specification shows the entire history of changes since the last formal revision? ([AP-341-610](https://coe.lanl.gov/APs/AllAPs/Forms/APbyNumber.aspx), 3.4.6) | | |
|  |  |  |  | For revisions to specifications:   1. Are revised sections identified in the body of the specification with revision bars? 2. Is a brief description of the revision and the affected pages provided in the revision history? 3. Is the table of contents updated with the revision status of each revised specification section? 4. If the specification has outstanding mark-up changes, are changes incorporated into the revision so that the specification shows the entire history of changes since the last formal revision? 5. Are the incorporated change document numbers and affected pages listed in the revision history?   ([AP-341-610](https://coe.lanl.gov/APs/AllAPs/Forms/APbyNumber.aspx), 3.4.6) | | |
| **ENGINEERING STANDARDS MANUAL ATTRIBUTES** | | | | | | |
|  |  |  |  | Does a LANL master specification template, as a minimum, implement and communicate the ESM technical requirements in the form of Construction Specification Institute (CSI) Master Format-numbered, Section Format (three-part) specifications for project use? (STD-342-100 [Chapter 1](https://engstandards.lanl.gov/ESM_Chapters.shtml) - General Section Z10, Section 100 – *Standards Administration by Standards Team*, Para. 1.2.1) | | |
|  |  |  |  | Does specification meet the maturity requirements for the applicable review phase? (STD-342-100 [Chapter 1](https://engstandards.lanl.gov/ESM_Chapters.shtml) - General Section Z10 – Attachment C, *Design Deliverable Schedule 30-60-90-100%*) | | |
|  |  |  |  | Is the specification format compatible with the intended use (construction standards institute (CSI) or in accordance with Appendix D Procurement-Only, Non-CSI Spec Format Template)? (STD-342-100 [Chapter 1](https://engstandards.lanl.gov/ESM_Chapters.shtml#esm1) General Section Z10 Attachment F Specifications, Paragraph 2.0A and 2.0B) | | |
|  |  |  |  | Is the specification management level the same management level as the highest management level (ML-1 is the highest and ML-4 is the lowest) of any item or service described in the specification? (STD-342-100 [Chapter 1](https://engstandards.lanl.gov/ESM_Chapters.shtml#esm1) General Section Z10 Attachment F Specifications, Paragraph 4.0A.1.c.) | | |
|  |  |  |  | Where items with different MLs are covered by the same spec, is the ML for each item stated and the varying expectations made clear for vendor submittals, inspections and tests and acceptance criteria or reference thereto, packaging handling, shipping, and storage, identification markings, etc.? (STD-342-100 [Chapter 1](https://engstandards.lanl.gov/ESM_Chapters.shtml#esm1) General Section Z10 Attachment F Specifications, Paragraph 4.0A.1.c.(1)) | | |
|  |  |  |  | Does the specification implement the sustainable acquisition requirements of ESM Chapter 14? (STD-342-100 [Chapter 1](https://engstandards.lanl.gov/ESM_Chapters.shtml#esm1) General Section Z10 Attachment F Specifications, Paragraph 4.0A.2.) | | |
|  |  |  |  | Are revisions to the specifications after issuance reviewed and approved in the same manner as the initial issuance? (STD-342-100 [Chapter 1](https://engstandards.lanl.gov/ESM_Chapters.shtml#esm1) General Section Z10 Attachment F Specifications, Paragraph 4.0A.3.) | | |
|  |  |  |  | When items with software are being specified, are applicable ESM Chapter 21-Software requirements included? (STD-342-100 [Chapter 1](https://engstandards.lanl.gov/ESM_Chapters.shtml#esm1) General Section Z10 Attachment F Specifications, Paragraph 4.0A.6.) | | |
|  |  |  |  | Are documents or samples submitted for design agency approval prior to fabrication, delivery, and/or installation identified in a single article (required for CSI format) under the following headings:  1) Action  2) Informational  3) Sustainable Design (incorporates specific sustainable design requirements, tracks info separately from Action submittals –e.g., for LEED)  4) Closeout (includes the maintenance materials)  5) Delegated Design (incorporates LANL design review specific process, tracks separately from Action submittals)  (STD-342-100 [Chapter 1](https://engstandards.lanl.gov/ESM_Chapters.shtml#esm1) General Section Z10 Attachment F Specifications, Paragraph 4.0C.1.) | | |
|  |  |  |  | For spec packages (“books”), are submittal procedures addressed including a summary of required submittals (and timing)? For the technical and quality submittals required by the CSI specs, is this accomplished using the Master Specification [Section 01 3300](https://engstandards.lanl.gov/specs.shtml), Submittal Procedure?  Note: When a single-topic spec is involved (e.g., a procurement), a separate document summarizing the required submittals is not needed.  (STD-342-100 [Chapter 1](https://engstandards.lanl.gov/ESM_Chapters.shtml#esm1) General Section Z10 Attachment F Specifications, Paragraph 4.0C.2.) | | |
|  |  |  |  | Has the project’s design agency edited and completed the submittal schedule template in 01 3300, deleting submittals for spec sections and submittals that aren’t involved and adding for spec sections and submittals they create?  (STD-342-100 [Chapter 1](https://engstandards.lanl.gov/ESM_Chapters.shtml#esm1) General Section Z10 Attachment F Specifications, Paragraph 4.0C.2.)  Note: This question is applicable to a CSI formatted specification package. | | |
|  |  |  |  | Are verification methods compatible with the guidance contained in Table Z10-F-1, *Acceptance Method Suggestions*? (STD-342-100 [Chapter 1](https://engstandards.lanl.gov/ESM_Chapters.shtml#esm1) General Section Z10 Attachment F Specifications, Paragraph 4.0D.) | | |
|  |  |  |  | Do ML-1 and -2 specs, at a minimum, delineate the safety function of the item or service (included in Part 1, General” of CSI formatted specifications (or similar location if an alternate format is used))? (STD-342-100 [Chapter 1](https://engstandards.lanl.gov/ESM_Chapters.shtml#esm1) General Section Z10 Attachment F Specifications, Paragraph 4.0E) | | |
|  |  |  |  | For (ML-1/ML2) hazard category 2 and 3 nuclear facilities, are critical characteristics specified, if known, and are critical characteristics and acceptance criteria specified if the item or service will be procured through commercial grade dedication and a third party dedicator is not responsible for developing these?  (STD-342-100 [Chapter 1](https://engstandards.lanl.gov/ESM_Chapters.shtml#esm1) General Section Z10 Attachment F Specifications, Paragraph 4.0E.)  **Note**: This is guidance. | | |
|  |  |  |  | Have the LANL [master specifications](https://engstandards.lanl.gov/specs.shtml) been enhanced to identify the unique quality standards (IBC qualification requirements, AWS CWI, etc.)?  (ASME NQA-1-2008/2009, Part I, Requirement 3, Paragraph 300(a)) | | |
|  |  |  |  | For ML-1/ML-2 that rely on CGD, have the [master specifications](https://engstandards.lanl.gov/specs.shtml) been enhanced to include  submittal of external supplier CGD Plans and results and documentation of Commercial Grade Dedication such as verification reports, results of tests and inspections, and dedication packages?  (STD-342-100 [Chapter 1](https://engstandards.lanl.gov/ESM_Chapters.shtml#esm1) General Section Z10 Attachment F Specifications, Paragraph 4.0E.)  **Note**: This is guidance. | | |
|  |  |  |  | For ML-1/ML-2 and where appropriate ML-3, have the [master specifications](https://engstandards.lanl.gov/specs.shtml) been enhanced to reference (by citing the applicable code or standard) or include (for requirements not governed by a code or standard) vendor (subcontractor) qualifications?  (STD-342-100 [Chapter 1](https://engstandards.lanl.gov/ESM_Chapters.shtml#esm1) General Section Z10 Attachment F Specifications, Paragraph 4.0E.)  **Note**: This is guidance. | | |
|  |  |  |  | For nuclear or radiological facilities ML-1/ML-2 and where appropriate ML-3, have the [master specifications](https://engstandards.lanl.gov/specs.shtml) been enhanced to include the use of the nuclear version of Master Specification 01 4000, Quality Requirements?  (STD-342-100 [Chapter 1](https://engstandards.lanl.gov/ESM_Chapters.shtml#esm1) General Section Z10 Attachment F Specifications, Paragraph 4.0E.)  **Note**: This is guidance. | | |
|  |  |  |  | For ML-1/ML-2 and where appropriate ML-3, have the [master specifications](https://engstandards.lanl.gov/specs.shtml) been enhanced to include more detailed construction submittals?  (STD-342-100 [Chapter 1](https://engstandards.lanl.gov/ESM_Chapters.shtml#esm1) General Section Z10 Attachment F Specifications, Paragraph 4.0E.)  **Note**: This is guidance. | | |
|  |  |  |  | For ML-1/ML-2 and where appropriate ML-3, have the [master specifications](https://engstandards.lanl.gov/specs.shtml) been enhanced to include the submittal of Certified Mill Test Reports (CMTRs) for items that are credited with a structural related safety function?  (STD-342-100 [Chapter 1](https://engstandards.lanl.gov/ESM_Chapters.shtml#esm1) General Section Z10 Attachment F Specifications, Paragraph 4.0E.)  **Note**: This is guidance. | | |
|  |  |  |  | For ML-1/ML-2 and where appropriate ML-3, have the [master specifications](https://engstandards.lanl.gov/specs.shtml) been enhanced to include a more rigorous material receipt and control, possibly including segregation and inventory control?  (STD-342-100 [Chapter 1](https://engstandards.lanl.gov/ESM_Chapters.shtml#esm1) General Section Z10 Attachment F Specifications, Paragraph 4.0E.)  **Note**: This is guidance. | | |
|  |  |  |  | For ML-1/ML-2 and where appropriate ML-3, have the [master specifications](https://engstandards.lanl.gov/specs.shtml) been enhanced to include storage, maintenance, and handling requirements in accordance with ASME NQA-1, Subpart 2.2 *Quality Assurance Requirements for Packaging, Shipping, Receiving, Storage, and Handling of Items for Nuclear Facilities*? Specify the Classification (i.e., Level A, B, C, or D) for each individual item (e.g., in specs and/or a consolidated bill of materials–CBOM)  (STD-342-100 [Chapter 1](https://engstandards.lanl.gov/ESM_Chapters.shtml#esm1) General Section Z10 Attachment F Specifications, Paragraph 4.0E.)  **Note**: This is guidance. | | |
|  |  |  |  | For ML-1/ML-2 and where appropriate ML-3, have the [master specifications](https://engstandards.lanl.gov/specs.shtml) been enhanced to include more rigorous field quality control including submittal of test procedures and test and inspection personnel qualifications?  **Note**: Specification Section 01 4000 nuclear version includes many of these additional requirements.  (STD-342-100 [Chapter 1](https://engstandards.lanl.gov/ESM_Chapters.shtml#esm1) General Section Z10 Attachment F Specifications, Paragraph 4.0E.)  **Note**: This is guidance. | | |
|  |  |  |  | For ML-1/ML-2 and where appropriate ML-3, have the [master specifications](https://engstandards.lanl.gov/specs.shtml) been enhanced to include increased test and inspection and associated Hold and Witness points (including in-shop, receipt inspection, and in-place), and submittal of test and inspection reports per Specification 01-4000 requirements?  (STD-342-100 [Chapter 1](https://engstandards.lanl.gov/ESM_Chapters.shtml#esm1) General Section Z10 Attachment F Specifications, Paragraph 4.0E.)  **Note**: This is guidance. | | |
|  |  |  |  | For power, instrumentation, and control equipment, does the specification invoke quality requirements (e.g., inspection, testing) identified in the following:   1. Codes and standards (e.g., IEEE 336™-2010, *IEEE Recommended Practice for Installation, Inspection and Testing for Class 1E Power, Instrumentation, and Control Equipment at Nuclear Facilities*) listed in [DOE O420.1](https://int.lanl.gov/org/ddops/oma/prime-contract-management/applicable-directives/index.shtml) (current contractual version), Facility Safety, Tables 5, 6 and 7 (ML-1 and ML-2 only) 2. codes and standards listed in the requirements and criteria document (RCD – see [AP-341-602](https://coe.lanl.gov/APs/AllAPs/Forms/APbyNumber.aspx)) such as those in Engineering Standards Manual Chapters 7, 8, and 15?   ([SD330](https://int.lanl.gov/policy/documents/SD330.pdf), Table 7, Table B-1a, Table B-1b, Table B-2 Subpart 2.4) | | |
|  |  |  |  | For concrete, structural steel, soils, and foundations, does the specification invoke quality requirements (e.g., inspection, testing) identified in the following:   1. IBC, 2. codes and standards listed in [DOE O420.1](https://int.lanl.gov/org/ddops/oma/prime-contract-management/applicable-directives/index.shtml) (current contractual version), *Facility Safety*, Table 1: *Codes for Safety Significant and Safety Class Structures* (ML-1 and ML-2 only); and 3. codes and standards listed in the RCD such as those in [Engineering Standards Manual](https://engstandards.lanl.gov/ESM_Chapters.shtml) Chapters 3, 4, 5, 13, and 16?   ([SD330](https://int.lanl.gov/policy/documents/SD330.pdf), Table 7, Table B-1a, Table B-1b, Table B-2, NQA-1 Part II Subpart 2.5 Alternate Approach) | | |
|  |  |  |  | For mechanical equipment and systems, does the specification invoke quality requirements (e.g., inspection, testing) identified in the following:   1. codes and standards listed in [DOE O420.1](https://int.lanl.gov/org/ddops/oma/prime-contract-management/applicable-directives/index.shtml) (current contractual version), *Facility Safety*, Tables 2, 3, and 4 (ML-1 and ML-2 only) 2. codes and standards listed in the RCD such as those in [Engineering Standards Manual](https://engstandards.lanl.gov/ESM_Chapters.shtml) Chapters 2, 5, 13, 15, and 17   ([SD330](https://int.lanl.gov/policy/documents/SD330.pdf), Table 7, Table B-1a, Table B-1b, Table B-2, NQA-1 Subpart 2.8 Alternate Approach) | | |
|  |  |  |  | For ML-1/ML-2 and where required by codes and standards (for all MLs) have the [master specifications](https://engstandards.lanl.gov/specs.shtml) been enhanced to identify which items require:   1. specific identification, 2. specific traceability (such as identification or traceability of the item to applicable specification and grade of material; heat, batch, lot, part, or serial number; or specified inspection, test, or other records) 3. CMTRs   (ASME NQA-1, Part I, Requirement 8, Paragraph 301; STD-342-100 [Chapter 1](https://engstandards.lanl.gov/ESM_Chapters.shtml#esm1) General Section Z10 Attachment F Specifications, Paragraph 4.0E.) | | |
|  |  |  |  | For ML-1/ML-2 and where appropriate ML-3, have the [master specifications](https://engstandards.lanl.gov/specs.shtml) been enhanced to include seismic and other environmental qualification requirements including system interaction?  (STD-342-100 [Chapter 1](https://engstandards.lanl.gov/ESM_Chapters.shtml#esm1) General Section Z10 Attachment F Specifications, Paragraph 4.0E.)  **Note:** This is guidance. | | |
|  |  |  |  | For ML-1/ML-2 and where appropriate ML-3, have the [master specifications](https://engstandards.lanl.gov/specs.shtml) been enhanced to include independent technical review/design verification per NQA-1?  (STD-342-100 [Chapter 1](https://engstandards.lanl.gov/ESM_Chapters.shtml#esm1) General Section Z10 Attachment F Specifications, Paragraph 4.0E.)  **Note**: This is guidance. | | |
|  |  |  |  | For projects and when CSI format is required, is the LANL [Master Specification Template](https://engstandards.lanl.gov/specs.shtml) (if available) used and modified (delete verbiage such as submittals, materials and methods, that is not applicable; appropriate section reference; update incomplete, uncoordinated, or outdated information)? (STD-342-100 Chapter 1 General Section Z10 Attachment F Specifications, Paragraph 5.0A. to C. and E.) | | |
|  |  |  |  | Are added non-LANL Master Specifications numbered (with minor differences allowed) per the latest CSI [MasterFormat](http://www.csinet.org/numbersandtitles) system rules? (STD-342-100 [Chapter 1](https://engstandards.lanl.gov/ESM_Chapters.shtml#esm1) General Section Z10 Attachment F Specifications, Paragraph 5.0H.1.) | | |
|  |  |  |  | Is the project work description clear, concise, complete, and correct in accordance with the industry standard of care?  (STD-342-100 [Chapter 1](https://engstandards.lanl.gov/ESM_Chapters.shtml#esm1) General Section Z10 Attachment F Specifications, Paragraph 5.0I.) | | |
|  |  |  |  | Does the specification package (“books”) comply with wording requirements below including Table of Contents, approval sheet, format, language, and tailoring of spec to match project requirements (including deletion of unneeded subsections and paragraphs)? (STD-342-100 [Chapter 1](https://engstandards.lanl.gov/ESM_Chapters.shtml#esm1) General Section Z10 Attachment F Specifications, Paragraph 5.0J.) | | |
|  |  |  |  | Do books and single sections have footers with Project ID; change footer rev. to 0 and current date?  (STD-342-100 [Chapter 1](https://engstandards.lanl.gov/ESM_Chapters.shtml#esm1) General Section Z10 Attachment F Specifications, Paragraph 5.0J.) | | |
|  |  |  |  | Does an assembled specification package include applicable specifications from all Divisions, especially Division 1, General requirements. (e.g., Submittal Procedures, Product Options & Substitutions, and Project Record Documents, etc.)?  (STD-342-100 [Chapter 1](https://engstandards.lanl.gov/ESM_Chapters.shtml#esm1) General Section Z10 Attachment F Specifications, Paragraph 5.0K.) | | |
|  |  |  |  | Is the final submittal of the specification package bound and does it include the following:   1. Approval Coversheet Form AP-341-610-FM01 for LANL specifications, 2. Approval Coversheet based on Form 1 for non-LANL specification, and 3. Table of contents for CSI formatted specifications (Use Form 2) with revision number of each section (these shall be Rev.0 for all specs and sections on initial issue; prior to that, drafts specs and sections should use Rev. 0a, 0b, etc.)?   When more than one volume of specifications is required for a project, is the volume number noted on the cover sheet and in the table of contents?  **Note**: This question is not applicable to specification section templates.  (STD-342-100 [Chapter 1](https://engstandards.lanl.gov/ESM_Chapters.shtml#esm1) General Section Z10 Attachment F Specifications, Paragraph 5.0L) | | |
|  |  |  |  | Does the specification incorporate the guidance of Appendix A, *Considerations in Developing Engineering Specifications*? (STD-342-100 [Chapter 1](https://engstandards.lanl.gov/ESM_Chapters.shtml#esm1) General Section Z10 Attachment F Specifications, Appendix A) | | |
|  |  |  |  | Does the specification incorporate the guidance of Appendix B, Engineering Specifications Checklist?  (STD-342-100 [Chapter 1](https://engstandards.lanl.gov/ESM_Chapters.shtml#esm1) General Section Z10 Attachment F Specifications, Appendix B) | | |
|  |  |  |  | Do data sheets for motors, heat exchanger pumps, fans and blowers follow the guidance of Appendix C, *Equipment Data Sheet Examples*? (STD-342-100 [Chapter 1](https://engstandards.lanl.gov/ESM_Chapters.shtml#esm1) General Section Z10 Attachment F Specifications, Paragraph 4.0A.4.) | | |
|  |  |  |  | Does the specification follow the guidance of Appendix E, *Wording of Specs*? (STD-342-100 [Chapter 1](https://engstandards.lanl.gov/ESM_Chapters.shtml#esm1) General Section Z10 Attachment F Specifications, Appendix E) | | |
| Comments: | | | | | | |
| Completed By (Printed Name) | | | | | | Date |
| **NOTES:**  **1. The checklist is guidance only and not maintained as record. Completion of the checklist is optional. Submit comments through the applicable document review process.**  **2 Contact the document author or document owner, as necessary, to obtain information to complete checklist items.** | | | | | | |