

LCLS Quality Assurance Terminology

The following definitions are provided in order to provide clarity to the quality assurance terminology included in this plan.

Acceptance Criteria: The performance requirements necessary to ensure that an item, software, or service is acceptable for use. Acceptance Criteria should be application specific and limits based, for example: 24/26 Volts DC, 2.001/2.002" Diameter.

Acceptance Criteria Listing: A document used to record the Acceptance Criteria and the results of acceptance tests.

Assessment: A planned and impartial evaluation of adequacy of a management process to a pre-existing requirement or standard. Typically performed in response to an unplanned event, or as a quality improvement exercise.

Controlled Document: A document that is critical to the successful or safe operation of the LCLS Project and has controlled distribution and revision control.

Technical Lead: An individual who has been authorized by LCLS Project Director or Project Manager to manage the cost, schedule and technical aspects of LCLS WBS activities.

Fabricated Hardware or Software: Hardware or software that is being made or modified specially in accordance with LCLS specifications.

Design: An electronic or paper document used to communicate requirements for a hardware or software product.

Design Basis: A set of functional requirements that specifically establish what the design is required do, and includes safety, reliability, efficiency, and maintenance considerations.

Design Controls: The administrative controls in place to ensure a design meets requirements and is kept up to date.

Design Interfaces: The technical and/or administrative interfaces required to create, review, approve, and validate a design, and to incorporate design changes.

Design Standards: The workmanship standards that apply to the design. Examples include ASME, ANSI, IEEE, IPC and/or other industry or DOE Standards as appropriate.

Design Validation: The process of testing the design under actual or simulated operation conditions prior to use or implementation.

Design Verification: The process of verifying that design requirements were satisfied prior to release for manufacture or code development.

Nonconformance: The condition when an item, software or service does not meet purchase order requirements.

Inspection: A visual or physical examination to ordering requirements.

Quality: The condition achieved when an item or process meets or exceeds requirements.

Quality Assurance: All those actions that provide confidence that requirements have been achieved.

QA Controls: The administrative controls applied to ensure that an item, system or service will perform as required, prior to purchase or use. (Examples: A material certificate to ensure the quality of material. A supplier evaluation to ensure the supplier is capable. A mechanical inspection to ensure a dimension feature is correct. A

functional test to ensure the item will perform as required. A documented procedure to ensure that work is performed safely and correctly.)

Quality Level: An alphabetic character used to designate the proper amount QA controls to be applied based on a predefined ESH or mission risk.

Record: Permanent and retrievable objective evidence that a requirement has been met, regardless of its physical form. Examples include: Paper drawings, electronic drawings, calculations, specifications, test reports, machine code, books, photographs, notebooks.

Review: An evaluation of adequacy performed by other than the person who did the work.

Test: A simulation of actual operating conditions for a specified period of time.

Traveler: A paper document that travels with hardware or software in order to ensure that certain quality controls are performed. Travelers are often designed to contain sequential requirements as well as signatures and dates for tasks completed.

Validation: The process for evaluating that a design or process will perform as required prior to releasing the design or process for use.

