

Activity Guide by Quality Classification¹

QUALITY ASSURANCE ACTIVITIES	Quality Classification			
	A4	A3	A2	A1 ¹
Training				
<ul style="list-style-type: none"> • Use of qualified personnel. • Training must be identified, completed, recorded, maintained, and reviewed before work commences. Training and Qualifications Subject Area			X	X
Design				
<ul style="list-style-type: none"> • Plan design effort (develop milestones) and define design criteria. • Identify safety-related structures, systems and components (SSC) • Prepare/revise/distribute drawings, engineering calculations and analyses, specifications, and other design documentation that are considered necessary to define the design parameter of the item/process. This includes determining appropriate codes, standards, and practices. • Perform design reviews. Engineering Design Subject Area	X	X	X	X
Procurement				
<ul style="list-style-type: none"> • Specify QA requirements in the purchasing documents. (When feasible, specify the requirements of BNL-QA-101.) Purchase Requisition Review for Quality-related Requirements Subject Area		X	X	X
<ul style="list-style-type: none"> • Evaluate the capability of suppliers of critical, costly, or complex items. • Evaluate alternate proposals/exceptions from suppliers. Supplier Pre-Award Evaluation Subject Area			X	X
Work Process				
<ul style="list-style-type: none"> • Conduct work planning for the activity or experiment. • Prepare procedures/work permits considered necessary for conducting the activity or experiment. • Prepare/review operating/maintenance procedures for check-out, start-up, and operations for facilities/equipment • Prepare procedures/work permits for complex items. Work Planning and Control for Experiments and Operations Subject Area, Document Control Subject Area			X	X
<ul style="list-style-type: none"> • Identify, protect, and control material that has been identified as age-sensitive (items with limited calendar/operating life) and items subject to environmental deterioration. Materials Requiring Special Handling (Including Age Sensitive Material) Subject Area	X	X	X	X
<ul style="list-style-type: none"> • Identify and document special requirements for handling, storage and transport. • Assure special processes are performed and verified by technically competent personnel, in accordance with written procedures. Materials Requiring Special Handling (Including Age Sensitive Material) Subject Area			X	X

QUALITY ASSURANCE ACTIVITIES	Quality Classification			
	A4	A3	A2	A1 ¹
Inspection and Acceptance Testing				
<ul style="list-style-type: none"> Conduct source, receiving, in-process, and final inspection/testing of specified items, services, and processes using established acceptance and performance criteria. Inspections and Acceptance Subject Area		X	X	X
Control of Nonconforming Items				
<ul style="list-style-type: none"> Identify, control, and correct items, services, and processes that do not meet established requirements. Inform the Procurement & Property Management Division of defective materials which are received. See the section Identifying, Classifying, and Reporting a Nonconformance in the Event/Issues Management Subject Area Indicate inspect/test status on the item or on documentation traceable to the item. Provide traceability to the items/lots inspected 		X	X	X
Corrective and Preventive Action				
<ul style="list-style-type: none"> Determine the cause of nonconformances and develop remedies to preclude the recurrence. Event/Issues Management Subject Area			X	X
Control of Measuring and Test Equipment				
<ul style="list-style-type: none"> Establish calibration procedures and frequency for equipment and devices considered necessary to meet the project's objectives and safe conduct of operations/experiments Identify equipment requiring calibration, establish calibration frequency and show calibration status on equipment Determine the impact of measuring and test equipment found to be out of calibration Calibration Subject Area		X	X	X
Records				
<ul style="list-style-type: none"> Identify records documenting actions taken during an experiment/operation that have affected execution, milestones, or ESH&Q issues. Identify and control items that are considered necessary for meeting objectives and for safely conducting the activity or experiment to ensure their proper use. Prepare & maintain records of actions affecting quality². Records Management Subject Area Work Planning and Control for Experiments and Operations Subject Area		X	X	X

¹Activities listed for Quality Classification A1 systems, subsystems, and assemblies are mandatory. For all other Quality Classifications, listed activities should be considered by the CE/CS

²Quality Assurance Records include Inspection & Test Results (Internal & Vendor Items); Calibration Records; Material Certifications; Waivers/Deviations; and Nonconformance Reports.