

**QUALITY PLAN IMPLEMENTING MATRIX
 CRITERION 5, “WORK PROCESSES”**

Item No.	Requirement	Source Document	Implementation Location
General Requirements			
1.	<p>Perform work consistent with technical standards, administrative controls, and other hazard controls adopted to meet regulatory or contract requirements, using approved instructions, procedures, or other appropriate means.</p> <p style="text-align: center;">AND</p> <p>Work processes must be conducted in accordance with approved instructions, procedures, or drawings to ensure that:</p> <ul style="list-style-type: none"> • Work process parameters are controlled; • Safe and secure work practices are employed; • Specified environmental conditions are maintained; • Records of qualified workers, equipment, and process procedures are maintained; • Requisite quality parameters are verified; • The end product is produced to customer expectations in a safe, efficient manner. 	<p>10CFR830.122(e)(1) AND DOE O 414.1C(4)(b)(5)(a) AND IP 330.0, LANL Quality Assurance Program, Subsection 5.2.2, Retaining Control of Work Processes and Special Processes</p>	<p>ISD 315-1.0, <i>Conduct of Operations Manual</i>, addresses these requirements.</p>
2.	<p>Each work activity not normally attributable to the skill of the craft must be performed under approved (repetitive process) procedures or must be under specific work plans analyzed for risks and hazards such as the Integrated Work Document (IWD) process under IMP 300, <i>Integrated Work Management for Work Activities</i>, prior to implementation.</p>	<p>IP 330.0, LANL Quality Assurance Program, Subsection 5.2.2, Retaining Control of Work Processes and Special Processes</p>	<p>ISD 315-1.0, <i>Conduct of Operations Manual</i>; IP 300-SD2, <i>ISSM System Description</i>; and IMP 300-1, <i>Integrated Work Management Manual</i>, address this requirement.</p>
3.	<p>Work processes must be developed and implemented using available S/CI information and must include the following elements:</p> <p>1) Engineering involvement in the development of procurement specifications; during inspection and testing; and when replacing, maintaining, or modifying equipment.</p>	<p>DOE O 414.1C, Attachment 2(4)(b)(1)</p>	<p>ISD 840-1.1, <i>Procurement Quality</i>, Sections 4.3 and 4.4, address this requirement.</p>

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4.	<p>Work processes must be developed and implemented using available S/CI information and must include the following elements:</p> <p>2) Procurement processes that prevent introduction of S/CIs by:</p> <ul style="list-style-type: none"> a. identifying technical and QA requirements in procurement specifications; b. accepting only those items that comply with the procurement specifications consensus standards, and commonly accepted industry practices; and c. inspecting inventory and storage areas to identify, control, and disposition S/CIs. 	DOE O 414.1C, Attachment 2(4)(b)(2)	ISD 840-1.1, <i>Procurement Quality</i> , Sections 4.3 and 4.4, address this requirement.
5.	<p>Work processes must be developed and implemented using available S/CI information and must include the following elements:</p> <p>3) Inspection, identification, evaluation, and disposition of S/CIs installed in all safety applications and other applications that create potential hazards.</p>	DOE O 414.1C, Attachment 2(4)(b)(3)	ISD 330-9.1, <i>Suspect/Counterfeit Items</i> , Section 4.8.1.B, and ISD 840-1.1, <i>Procurement Quality</i> , Subsection 4.4.4, address this requirement.
6.	<p>Work processes must be developed and implemented using available S/CI information and must include the following elements:</p> <p>4) Engineering evaluations and disposition of S/CIs installed in safety applications/systems or in applications that create potential hazards. The evaluations must consider potential risks to the public and worker and cost/benefit impact and include a schedule for replacement (if required).</p>	DOE O 414.1C, Attachment 2(4)(b)(4)	ISD 330-6.1, <i>Nonconformance Reporting</i> , Section 4.3, and ISD 330-9.1, <i>Suspect/Counterfeit Items</i> , Subsections 4.8.1.B, 4.9.1, and 4.9.3.B, address this requirement.

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7.	<p>Work processes must be developed and implemented using available S/CI information and must include the following elements:</p> <p>5) Ensuring that S/CIs identified in nonsafety applications during routine maintenance and/or inspection are reported, evaluated, and dispositioned to prevent future use in safety applications.</p>	DOE O 414.1C, Attachment 2(4)(b)(5)	ISD 330-9.1, <i>Suspect/Counterfeit Items</i> , Subsections 4.8.1.B, 4.9.1, and 4.10.1.B, address this requirement.
8.	<p>Work processes must be developed and implemented using available S/CI information and must include the following elements:</p> <p>6) Contacting the DOE Inspector General (IG) before destroying or disposing of S/CIs and their documentation to determine whether to retain them for criminal investigation or litigation.</p>	DOE O 414.1C, Attachment 2(4)(b)(6)	ISD 330-9.1, <i>Suspect/Counterfeit Items</i> , Subsection 4.10.2, addresses this requirement.
9.	<p>Work processes must be developed and implemented using available S/CI information and must include the following elements:</p> <p>7) Testing procured or installed S/CIs as necessary using approved engineering test methods.</p>	DOE O 414.1C, Attachment 2(4)(b)(7)	ISD 330-9.1, <i>Suspect/Counterfeit Items</i> , Section 8.1, addresses this requirement.
10.	<p>Work processes must be developed and implemented using available S/CI information and must include the following elements:</p> <p>8) Reporting S/CIs as per DOE O 231.1A, Change 1, <i>Environment, Safety, and Health Reporting</i>, dated 06-03-04, and DOE O 221.1, <i>Reporting Fraud, Waste, and Abuse</i>, dated 03-22-01, to:</p> <ul style="list-style-type: none"> a. the responsible DOE/NNSA line management offices; b. the Office of Environment, Safety and Health; and c. the Office of the Inspector General. 	DOE O 414.1C, Attachment 2(4)(b)(8)	ISD 330-9.1, <i>Suspect/Counterfeit Items</i> , Subsections 4.1, 4.5.1.A and .B, and 4.10.2, address this requirement.
11.	<p>Work processes must be developed and implemented using available S/CI information and must include the following elements:</p> <p>9) Conducting trend analysis and issuing lessons learned reports for use in improving the S/CI prevention.</p>	DOE O 414.1C, Attachment 2(4)(b)(9)	ISD 330-9.1, <i>Suspect/Counterfeit Items</i> , Section 4.7 and Subsection 4.9.3, address this requirement.

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12.	Identify and control items to ensure their proper use.	10CFR830.122(e)(2) AND DOE O 414.1C(4)(b)(5)(b)	ISD 330-11.0, <i>Control of Items</i> , addresses this requirement.
13.	Maintain items to prevent their damage, loss, or deterioration.	10CFR830.122(e)(3) AND DOE O 414.1C(4)(b)(5)(c)	ISD 840-1.1, <i>Procurement Quality</i> , Section 8.3, and ISD 330-11.0, <i>Control of Items</i> , Subsection 4.1.5, address this requirement.
14.	Calibrate and maintain equipment used for process monitoring or data collection. AND Measuring and test equipment (M&TE) used for process monitoring or data collection must be calibrated, controlled, and maintained in accordance with the Laboratory Calibration Program (OST 308-00-00) managed by the Manufacturing Quality Division – Standards and Calibration Laboratory, or in its absence, the manufacturer’s recommended standards.	10CFR830.122(e)(4) AND DOE O 414.1C(4)(b)(5)(d) AND IP 330.0, LANL Quality Assurance Program, Subsection 5.2.4.2, Equipment Used for Process Monitoring or Data Collection	EP-DIR-SOP-5006, <i>Control of Measuring and Test Equipment</i> , 2.1 Background, addresses these requirements.
15.	Detailed test and inspection plans must be developed by the responsible manager to outline the processes for ensuring that the intent of the design is met.	IP 330.0, LANL Quality Assurance Program, Subsection 5.2.2, Retaining Control of Work Processes and Special Processes	ISD 330-8.0, <i>Inspection, Test, and Acceptance</i> , addresses this requirement.
16.	Submittals from subcontractors must be reviewed for acceptability, and their acceptability and use must be identified.	IP 330.0, LANL Quality Assurance Program, Subsection 5.2.2, Retaining Control of Work Processes and Special Processes	ISD 840-1.1, <i>Procurement Quality</i> , Section 4.11, addresses this requirement.

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17.	Accountability for application of special processes to vital safety systems and other high risk applications must be maintained through various verification activities performed by qualified workers.	IP 330.0, LANL Quality Assurance Program, Subsection 5.2.2, Retaining Control of Work Processes and Special Processes	ISD 330-8.0, <i>Inspection, Test and Acceptance</i> , and ISD 322-1.0, <i>Management Assessment</i> , address this requirement.
18.	These activities must include independent inspection, assignment of holdpoints, and witnessing or inspection/test verification in accordance with Criterion 8 of the LANL QAP, and surveillance and assessment conducted in accordance with Criterion 9 of the LANL QAP.	IP 330.0, LANL Quality Assurance Program, Subsection 5.2.2, Retaining Control of Work Processes and Special Processes	ISD 330-8.0, <i>Inspection, Test and Acceptance</i> , and ISD 322-1.0, <i>Management Assessment</i> , address this requirement.
Basic Requirements			
Instructions, Procedures, and Drawings			
19.	<p>Activities affecting quality and services shall be prescribed by and performed in accordance with documented instructions, procedures, or drawings that include or reference appropriate quantitative or qualitative acceptance criteria for determining that prescribed results have been satisfactorily attained.</p> <p style="text-align: center;">AND</p> <p>Work procedures, instructions, plans, drawings, or other appropriate controlling documentation must include or reference, where applicable, proven codes and standards and reference applicable tolerances, including qualitative or quantitative acceptance criteria.</p>	<p>ASME NQA-1-2000, Requirement 5, Instructions, Procedures, and Drawings, 100, Basic</p> <p style="text-align: center;">AND</p> <p>IP 330.0, LANL Quality Assurance Program, Section 4.2.1.1, Identifying Documents</p>	<p><i>ISD 315-1.0, Conduct of Operations</i>, section 16, addresses this requirement for instructions and procedures, and <i>ISD 341-1.2, Engineering Processes Manual</i>, addresses this requirement for drawings.</p>

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20.	The activity shall be described to a level of detail commensurate with the complexity of the activity and the need to assure consistent and acceptable results.	ASME NQA-1-2000, Requirement 5, Instructions, Procedures, and Drawings, 100, Basic	<i>ISD 315-1.0, Conduct of Operations</i> , section16, addresses this requirement for instructions and procedures, and <i>ISD 341-1.2, Engineering Processes Manual</i> , addresses this requirement for drawings.
21.	The need for and level of detail in written procedures or instructions shall be determined based upon complexity of the task, the significance of the item or activity, work environment, and worker proficiency and capability (education, training, experience). AND Higher hazard work (such as work with the potential to cause radiological harm or work governed by authorization bases documentation) must require strict specification of all work controls in work plans or procedures.	ASME NQA-1-2000, Requirement 5, Instructions, Procedures, and Drawings, 100, Basic AND IP 330.0, LANL Quality Assurance Program, Section 4.2.1.1, Identifying Documents	<i>ISD 315-1.0, Conduct of Operations</i> , section16, addresses the first paragraph requirement, <i>ISD 112-1, Nuclear Facility Safety Documentation</i> ; <i>IMP 112, Nuclear Facility Safety Basis</i> ; and <i>IMP 300-1, Integrated Work Management Manual</i> ; address these requirements.
Identification and Control of Items			
22.	Controls shall be established to assure that only correct and accepted items are used or installed.	ASME NQA-1-2000, Requirement 8, Identification and Control of Items, 100, Basic	<i>ISD 330-11.0, Control of Items</i> , Section 4.1, addresses this requirement.
23.	Identification shall be maintained on the items or in documents traceable to the items, or in a manner that assures that identification is established and maintained. AND Identification necessary to provide traceability for an item, from initial receipt through installation and use, must be placed on the items or on documents traceable to the items.	ASME NQA-1-2000, Requirement 8, Identification and Control of Items, 100, Basic	<i>ISD 330-11.0, Control of Items</i> , Sections 4.1, 4.2, and 4.3, addresses this requirement.

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24.	When items such as labels, tags, ink stamps, or paints are used to identify items, provisions must be made to protect the identification from deteriorating.	IP 300-SD3.2, LANL Quality Assurance Program, Section 5, Work Processes, Subsection 5.2.3, Identifying and Controlling Items	ISD 330-11.0, <i>Control of Items</i> , Section 4.2.2, addresses this requirement.
25.	Items of production (batch, lot, component, part) shall be identified from the initial receipt and fabrication of items up to and including installation and use.	ASME NQA-1-2000, Requirement 8, Identification and Control of Items, 201, Item Identification	ISD 330-11.0, <i>Control of Items</i> , Section 4.2.1, addresses this requirement.
26.	This identification shall relate to an applicable design or other pertinent specifying document.	ASME NQA-1-2000, Requirement 8, Identification and Control of Items, 201, Item Identification	ISD 330-11.0, <i>Control of Items</i> , Section 4.3.1, addresses this requirement.
27.	Physical identification shall be used to the maximum extent possible. AND To prevent the use of incorrect Suspect/Counterfeit Items or defective items, physical identification must be used when possible.	ASME NQA-1-2000, Requirement 8, Identification and Control of Items, 202, Physical Identification AND IP 330.0, LANL Quality Assurance Program, Subsection 5.2.4.1, Subcontractors and LANL Maintenance Workers	ISD 330-11.0, <i>Control of Items</i> , Section 4.2.2, addresses this requirement.

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28.	<p>Where physical identification on the item is either impractical or insufficient, physical separation, procedural control, or other appropriate means shall be employed.</p> <p style="text-align: center;">AND</p> <p>When physical identification is impractical, workers must employ physical segregation, procedural control, or other means.</p>	<p>ASME NQA-1-2000, Requirement 8, Identification and Control of Items, 202, Physical Identification</p> <p style="text-align: center;">AND</p> <p>IP 330.0, LANL Quality Assurance Program, Subsection 5.2.4.1, Subcontractors and LANL Maintenance Workers</p>	<p>ISD 330-11.0, <i>Control of Items</i>, Section 4.2.2, addresses this requirement.</p>
29.	<p>Identification markings shall be applied using materials and methods that provide a clear and legible identification and do not degrade the function or service life of the item.</p> <p style="text-align: center;">AND</p> <p>Identification must be clear, legible, and indelible. The marking material and method should not affect the overall function or performance of the controlled item.</p>	<p>ASME NQA-1-2000, Requirement 8, Identification and Control of Items, 202, Physical Identification</p> <p style="text-align: center;">AND</p> <p>IP 330.0, LANL Quality Assurance Program, Subsection 5.2.4.1, Subcontractors and LANL Maintenance Workers</p>	<p>ISD 330-11.0, <i>Control of Items</i>, Section 4.2.2, addresses this requirement.</p>
30.	<p>The correct identification of items must be verified and documented before they are released for processing, use, storage, or shipping.</p>	<p>IP 330.0, LANL Quality Assurance Program, Subsection 5.2.4.1, Subcontractors and LANL Maintenance Workers</p>	<p>ISD 330-11.0, <i>Control of Items</i>, Subsections 4.1.4 through 4.1.7, address this requirement.</p>

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31.	Markings shall be transferred to each part of an identified item when subdivided and shall not be obliterated or hidden by surface treatment or coating unless other means of identification are substituted.	ASME NQA-1-2000, Requirement 8, Identification and Control of Items, 202, Physical Identification	ISD 330-11.0, <i>Control of Items</i> , Subsection 4.2.2, addresses this requirement.
32.	When codes, standards, or specifications include specific identification or traceability requirements (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), the program shall provide such identification and traceability control.	ASME NQA-1-2000, Requirement 8, Identification and Control of Items, 301, Identification and Traceability of Items	ISD 330-11.0, <i>Control of Items</i> , Subsection 4.3.2.A, addresses this requirement.
33.	Items having limited calendar or operating life or cycles shall be identified and controlled to preclude use of items whose shelf life or operating life has expired.	ASME NQA-1-2000, Requirement 8, Identification and Control of Items, 302, Limited Life Items	ISD 330-11.0, <i>Control of Items</i> , Subsection 4.3.2.B, addresses this requirement.
34.	Provisions shall be made for the control of item identification consistent with the planned duration and conditions of storage, such as: a) Provisions for maintenance or replacement of markings and identification records due to damage during handling or aging; b) Protection of identifications on items subject to excessive deterioration due to environmental exposure; c) Provisions for updating existing plant records.	ASME NQA-1-2000, Requirement 8, Identification and Control of Items, 303, Maintaining Identification of Stored Items	ISD 330-11.0, <i>Control of Items</i> , Subsection 4.1.5, addresses this requirement.
35.	Items must be identified and controlled to ensure their proper use and must be maintained to prevent their damage, loss, or deterioration in accordance with the requirements contained in ISD 330-11, <i>Identification and Control of Items</i> .	IP 330.0, LANL Quality Assurance Program, Subsection 5.2.4, Identifying and Controlling Items	ISD 330-11.0, <i>Control of Items</i> , Sections 4.2 and 4.3, address this requirement.

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36.	Items must meet functional and operational requirements consistent with design specifications in accordance with the requirements in ISD 330-8, <i>Inspection, Test, and Acceptance</i> .	IP 330.0, LANL Quality Assurance Program, Subsection 5.2.4, Identifying and Controlling Items	ISD 330-8.0, <i>Inspection, Test and Acceptance</i> , Section 4.1, addresses this requirement.
37.	When mandated by requirements documents (e.g., design, procurement, construction, or maintenance), the material or item pedigree including inspection, testing, and operating status, must be retained as a permanent record.	IP 330.0, LANL Quality Assurance Program, Subsection 5.2.4, Identifying and Controlling Items	ISD 330-8.0, <i>Inspection, Test and Acceptance</i> , Sections 6.2 and 6.3, address this requirement.
38.	Identification necessary to provide traceability for an item, from initial receipt through installation and use, must be placed on the items or on documents traceable to the items.	IP 330.0, LANL Quality Assurance Program, Subsection 5.2.4, Identifying and Controlling Items	ISD 330-11.0, <i>Control of Items</i> , Sections 4.2 and 4.3, address this requirement.
39.	When items such as labels, tags, ink stamps, or paints are used to identify items, provisions must be made to protect the identification from deteriorating.	IP 330.0, LANL Quality Assurance Program, Subsection 5.2.4, Identifying and Controlling Items	ISD 330-11.0, <i>Control of Items</i> , Section 4.2, addresses this requirement.
Control of Special Processes			
40.	<p>Special processes that control or verify quality, such as those used in welding, heat treating, and nondestructive examination, shall be performed by qualified personnel using qualified procedures in accordance with specified requirements.</p> <p style="text-align: center;">AND</p> <p>Special processes that control or verify quality, such as those used in welding, heat-treating, and nondestructive examination, must be approved by the responsible manager for specific applications.</p>	<p>ASME NQA-1-2000, Requirement 9, Control of Special Processes, 100, Basic</p> <p style="text-align: center;">AND</p> <p>IP 330.0, LANL Quality Assurance Program, Subsection 5.2.2, Retaining Control of Work Processes and Special Processes</p>	ISD 330-5.0, <i>Special Processes</i> , Subsection 4.3.2.A, addresses this requirement.

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41.	Special processes shall be controlled by instructions, procedures, drawings, checklists, travelers, or other appropriate means.	ASME NQA-1-2000, Requirement 9, Control of Special Processes, 201, Special Processes	ISD 330-5.0, <i>Special Processes</i> , Subsection 4.3.1.A, addresses this requirement.
42.	Special process instructions shall include or reference procedure, personnel, and equipment qualification requirements. AND These processes [welding, heat treating, and nondestructive examination] must be performed in accordance with documents that include or reference procedures, workers, and equipment qualification requirements.	ASME NQA-1-2000, Requirement 9, Control of Special Processes, 201, Special Processes AND IP 330.0, LANL Quality Assurance Program, Subsection 5.2.2, Retaining Control of Work Processes and Special Processes	ISD 330-5.0, <i>Special Processes</i> , Subsection 4.3.2.A, addresses this requirement.
43.	Conditions necessary for accomplishment of the process shall be included. AND Conditions necessary for accomplishment of the special process and acceptance criteria must be included in the work documents.	ASME NQA-1-2000, Requirement 9, Control of Special Processes, 201, Special Processes AND IP 330.0, LANL Quality Assurance Program, Subsection 5.2.2, Retaining Control of Work Processes and Special Processes	ISD 330-5.0, <i>Special Processes</i> , Subsection 4.3.2.A, addresses this requirement.
44.	These conditions shall include proper equipment, controlled parameters of the process, specified environment, and calibration requirements.	ASME NQA-1-2000, Requirement 9, Control of Special Processes, 201, Special Processes	ISD 330-5.0, <i>Special Processes</i> , Subsection 4.3.2.A, 4.3.5, and 4.3.9, address this requirement.

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45.	The requirements of applicable codes and standards, including acceptance criteria for the process shall be specified or referenced in procedures or instructions.	ASME NQA-1-2000, Requirement 9, Control of Special Processes, 202, Acceptance Criteria	ISD 330-5.0, <i>Special Processes</i> , Subsection 4.3.2.A, addresses this requirement.
46.	For special processes not covered by existing codes and standards or where quality requirements specified exceed those of existing codes or standards, the necessary requirements for qualifications of personnel, procedures, or equipment shall be specified or referenced in procedures or instructions.	ASME NQA-1-2000, Requirement 9, Control of Special Processes, 203, Special Requirements	**ISD 330-5.1, <i>Special Processes</i> , addresses this requirement.
47.	It is the responsibility of the organization performing the special process to adhere to the approved procedures and processes.	ASME NQA-1-2000, Requirement 9, Control of Special Processes, 303, Responsibility	ISD 330-5.0, <i>Special Processes</i> , Subsection 4.3.2, addresses this requirement.
48.	Records shall be maintained as appropriate for the currently qualified personnel, processes, and equipment of each special process.	ASME NQA-1-2000, Requirement 9, Control of Special Processes, 400, Records	ISD 330-5.0, <i>Special Processes</i> , Section 6.3, addresses this requirement.
Control of Measuring and Test Equipment			
49.	Selection of measuring and test equipment shall be based on the type, range, accuracy, and tolerance needed to accomplish the required measurements for determining conformance to specified requirements.	ASME NQA-1-2000, Requirement 12, Control of Measuring and Test Equipment, 200, Selection	EP-DIR-SOP-5006, Revision 0.0, <i>Control of Measuring and Test Equipment</i> , Section 2.1, addresses this requirement.
50.	Measuring and test equipment shall be calibrated at prescribed time periods or usage and whenever the accuracy of the equipment is suspect.	ASME NQA-1-2000, Requirement 12, Control of Measuring and Test Equipment, 301, Calibration	EP-DIR-SOP-5006, Revision 0.0, <i>Control of Measuring and Test Equipment</i> , Sections 4.3 and 4.5, address this requirement.

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51.	Calibration shall be against certified equipment having known valid relationships to nationally recognized standards.	ASME NQA-1-2000, Requirement 12, Control of Measuring and Test Equipment, 301, Calibration	EP-DIR-SOP-5006, Revision 0.0, <i>Control of Measuring and Test Equipment</i> , Section 2.2, addresses this requirement.
52.	If no nationally recognized standards exist, the basis for calibration shall be documented.	ASME NQA-1-2000, Requirement 12, Control of Measuring and Test Equipment, 301, Calibration	EP-DIR-SOP-5006, Revision 0.0, <i>Control of Measuring and Test Equipment</i> , Section 2.2, addresses this requirement.
53.	Calibration procedures shall identify or reference required accuracy.	ASME NQA-1-2000, Requirement 12, Control of Measuring and Test Equipment, 302, Control	EP-DIR-SOP-5006, Revision 0.0, <i>Control of Measuring and Test Equipment</i> , Subsection 4.1.2, addresses this requirement.
54.	Methods and frequency of checking accuracy shall be defined in procedures.	ASME NQA-1-2000, Requirement 12, Control of Measuring and Test Equipment, 302, Control	EP-DIR-SOP-5006, Revision 0.0, <i>Control of Measuring and Test Equipment</i> , Subsection 4.1.2, addresses this requirement.
55.	The calibration method and interval of calibration for measuring and test equipment shall be defined, based on the type of equipment, stability characteristics, required accuracy, intended use, and other conditions affecting capability.	ASME NQA-1-2000, Requirement 12, Control of Measuring and Test Equipment, 302, Control	EP-DIR-SOP-5006, Revision 0.0, <i>Control of Measuring and Test Equipment</i> , Subsection 4.1.2, addresses this requirement.
56.	Out-of-calibration devices shall be tagged or segregated, or both, and not used until they have been recalibrated.	ASME NQA-1-2000, Requirement 12, Control of Measuring and Test Equipment, 302, Control	EP-DIR-SOP-5006, Revision 0.0, <i>Control of Measuring and Test Equipment</i> , Subsections 4.5.2 and 4.5.3, address this requirement.

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Item No.	Requirement	Source Document	Implementation Location
57.	Measuring or test equipment consistently found to be out of calibration shall be repaired or replaced.	ASME NQA-1-2000, Requirement 12, Control of Measuring and Test Equipment, 302, Control	EP-DIR-SOP-5006, Revision 0.0, <i>Control of Measuring and Test Equipment</i> , Section 4.5.10, addresses this requirement.
58.	When measuring and test equipment are found to be out of calibration, an evaluation commensurate with the significance of the condition shall be made and documented including the validity of previous inspection or test results and of the acceptability of items previously inspected or tested.	ASME NQA-1-2000, Requirement 12, Control of Measuring and Test Equipment, 302.1, Corrective Action	EP-DIR-SOP-5006, Revision 0.0, <i>Control of Measuring and Test Equipment</i> , Subsections 4.5.5 through 4.5.8, address this requirement.
59.	Measuring and test equipment shall be properly handled and stored to maintain accuracy.	ASME NQA-1-2000, Requirement 12, Control of Measuring and Test Equipment, 302.2, Handling and Storage	EP-DIR-SOP-5006, Revision 0.0, <i>Control of Measuring and Test Equipment</i> , Section 4.7, addresses this requirement.
60.	Equipment shall be suitably marked or otherwise identified to indicate calibration status.	ASME NQA-1-2000, Requirement 12, Control of Measuring and Test Equipment, 302.3, Status Indication	EP-DIR-SOP-5006, Revision 0.0, <i>Control of Measuring and Test Equipment</i> , Subsection 4.5.2, addresses this requirement.
61.	Calibration and control measures are not required for commercial equipment such as rulers, tape measures, levels, etc., if such equipment provides the required accuracy.	ASME NQA-1-2000, Requirement 12, Control of Measuring and Test Equipment, 303, Commercial Devices	EP-DIR-SOP-5006, Revision 0.0, <i>Control of Measuring and Test Equipment</i> , Section 2.1, addresses this requirement.
62.	Records shall be established and maintained to indicate calibration status and the capability of measuring and test equipment to satisfactorily perform their intended function.	ASME NQA-1-2000, Requirement 12, Control of Measuring and Test Equipment, 400, Records	EP-DIR-SOP-5006, Revision 0.0, <i>Control of Measuring and Test Equipment</i> , Section 4.9, addresses this requirement.

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Item No.	Requirement	Source Document	Implementation Location
Handling, Storage, and Shipping			
63.	Handling, storage, cleaning, packaging, shipping, and preservation of items shall be controlled to prevent damage or loss and to minimize deterioration.	ASME NQA-1-2000, Requirement 13, Handling, Storage, and Shipping, 100, Basic	ISD 840-1.1, <i>Procurement Quality</i> , Section 8.3, addresses this requirement.
64.	These activities shall be conducted in accordance with established work and inspection instructions, drawings, specifications, shipment instructions, or other pertinent documents or procedures specified for use in conducting the activity.	ASME NQA-1-2000, Requirement 13, Handling, Storage, and Shipping, 100, Basic	ISD 840-1.1, <i>Procurement Quality</i> , Section 8.3, addresses this requirement.
65.	When required, special equipment (such as containers, shock absorbers, and accelerometers) and special protective environments (such as inert gas atmosphere, specific moisture content levels, and temperature levels) shall be specified and provided and their existence verified.	ASME NQA-1-2000, Requirement 13, Handling, Storage, and Shipping, 200, Special Requirements	ISD 840-1.1, <i>Procurement Quality</i> , Subsection 8.3.C.6, addresses this requirement.
66.	When required for critical, sensitive, perishable, or high-value items, specific procedures for handling, storage, packaging, shipping, and preservation shall be used.	ASME NQA-1-2000, Requirement 13, Handling, Storage, and Shipping, 300, Procedures	ISD 840-1.1, <i>Procurement Quality</i> , Subsection 8.3.C.5, addresses this requirement.
67.	Special handling tools and equipment shall be utilized and controlled where necessary to ensure safe and adequate handling.	ASME NQA-1-2000, Requirement 13, Handling, Storage, and Shipping, 400, Tools and Equipment	ISD 840-1.1, <i>Procurement Quality</i> , Section 8.3.A, addresses this requirement.
68.	Special handling tools and equipment shall be inspected and tested periodically or prior to use as necessary to ensure performance.	ASME NQA-1-2000, Requirement 13, Handling, Storage, and Shipping, 400, Tools and Equipment	ISD 840-1.1, <i>Procurement Quality</i> , Section 8.3.A, addresses this requirement.

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Item No.	Requirement	Source Document	Implementation Location
69.	Operators of special handling and lifting equipment shall be experienced or trained in use of the equipment.	ASME NQA-1-2000, Requirement 13, Handling, Storage, and Shipping, 500, Operators	ISD 840-1.1, <i>Procurement Quality</i> , Section 8.3.A, addresses this requirement.
70.	Marking or labeling shall be utilized as necessary to adequately maintain and preserve the item, including indication of the presence of special environments or the need for special controls.	ASME NQA-1-2000, Requirement 13, Handling, Storage, and Shipping, 600, Marking and Labeling	ISD 840-1.1, <i>Procurement Quality</i> , Section 8.4, addresses this requirement.
71.	Responsible managers must assure that any items shipped in association with a specific work activity, including items returned to the vendor, must be shipped in accordance with the requirements contained in IPP 525, <i>Hazardous Material (Hazmat) Packaging and Transportation</i> , or the manufacturer-approved shipping procedures.	IP 330.0, LANL Quality Assurance Program, Subsection 5.2.5.1, Packaging, Handling, and Shipping of Items	ISD 840-1.1, <i>Procurement Quality</i> , Subsection 8.3A.3, and EP-ERSS-SOP-5057, Revision 0.0, <i>Handling, Transporting, and Shipping of Field Samples</i> , Section 2.2, address this requirement.
72.	Responsible managers must maintain integrity of quality-affecting items (items whose failure could result in nuclear hazards, environmental contamination, significant monetary loss, or critical work requirements not being met) through appropriate warehousing, storage, and oversight. [NOTE: Oversight activities for verification include inspection, monitoring, surveillance, or assessment conducted in accordance with Criterion 8 and Criterion 9 of the LANL QAP.]	IP 330.0, LANL Quality Assurance Program, Subsection 5.2.5.2, Storing Items	ISD 840-1.1, <i>Procurement Quality</i> , Section 8.3, addresses this requirement.
Inspection, Test, and Operating Status			
73.	The status of inspection and test activities shall be identified either on the items or in documents traceable to the items where it is necessary to ensure that required inspections and tests are performed and to ensure that items which have not passed the required inspections and tests are not inadvertently installed, used, or operated.	ASME NQA-1-2000, Requirement 14, Inspection, Test, and Operating Status, 100, Basic	ISD 330-8.0, <i>Inspection, Test and Acceptance</i> , Section 4.5, addresses this requirement.

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Item No.	Requirement	Source Document	Implementation Location
74.	Status shall be maintained through indicators, such as physical location and tags, markings, shop travelers, stamps, inspection records, or other suitable means.	ASME NQA-1-2000, Requirement 14, Inspection, Test, and Operating Status, 100, Basic	ISD 330-8.0, <i>Inspection, Test and Acceptance</i> , Section 4.5, addresses this requirement.
75.	The authority for application and removal of tags, markings, labels, and stamps shall be specified.	ASME NQA-1-2000, Requirement 14, Inspection, Test, and Operating Status, 100, Basic	ISD 330-8.0, <i>Inspection, Test and Acceptance</i> , Section 4.5, addresses this requirement. ISD 101-19, <i>Safety Signs, Labels, and Tags</i> , addresses this requirement. ISD 315-1, <i>Conduct of Operations Manual</i> addresses this requirement.
76.	Status indicators shall also provide for indicating the operating status of systems and components of the nuclear facility, such as by tagging valves and switches, to prevent inadvertent operation.	ASME NQA-1-2000, Requirement 14, Inspection, Test, and Operating Status, 100, Basic	ISD 330-8.0, <i>Inspection, Test and Acceptance</i> , Section 4.5, addresses this requirement. ISD 101-3, <i>Lockout/Tagout for Hazardous Energy Control</i> addresses this requirement. ISD 315-1, <i>Conduct of Operations Manual</i> addresses this requirement.
Control of Nonconforming Items			
77.	Items that do not conform to specified requirements shall be controlled to prevent inadvertent installation or use.	ASME NQA-1-2000, Requirement 15, Control of Nonconforming Items, 100, Basic	ISD 330-6.1, <i>Nonconformance Reporting</i> , Subsection 4.1.1, addresses this requirement.
78.	Controls shall provide for identification, documentation, evaluation, segregation when practical, and disposition of nonconforming items, and for notification to affected organizations.	ASME NQA-1-2000, Requirement 15, Control of Nonconforming Items, 100, Basic	ISD 330-6.1, <i>Nonconformance Reporting</i> , Subsection 4.1.1, addresses this requirement.
79.	Nonconforming items shall be identified by legible marking, tagging, or	ASME NQA-1-2000,	ISD 330-6.1, <i>Nonconformance</i>

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	other methods not detrimental to the item, on either the item, the container, or the package containing the item.	Requirement 15, Control of Nonconforming Items, 200, Identification	<i>Reporting</i> , Subsection 4.1.1, addresses this requirement.
80.	Nonconforming items shall be segregated, when practical, by placing them in a clearly identified and designated hold area until properly dispositioned.	ASME NQA-1-2000, Requirement 15, Control of Nonconforming Items, 300, Segregation	ISD 330-6.1, <i>Nonconformance Reporting</i> , Subsection 4.1.1, addresses this requirement.
81.	When segregation is impractical or impossible due to physical conditions such as size, weight, or access limitations, other precautions shall be employed to preclude inadvertent use of a nonconforming item.	ASME NQA-1-2000, Requirement 15, Control of Nonconforming Items, 300, Segregation	ISD 330-6.1, <i>Nonconformance Reporting</i> , Subsection 4.1.1, addresses this requirement.
82.	Nonconforming items shall be evaluated and recommended dispositions shall be proposed.	ASME NQA-1-2000, Requirement 15, Control of Nonconforming Items, 401, Control	ISD 330-6.1, <i>Nonconformance Reporting</i> , Sections 4.3 and 4.4, address this requirement.
83.	Further processing, delivery, installation, or use of a nonconforming item shall be controlled pending the evaluation and an approved disposition by authorized personnel.	ASME NQA-1-2000, Requirement 15, Control of Nonconforming Items, 401, Control	ISD 330-6.1, <i>Nonconformance Reporting</i> , Section 4.4, addresses this requirement.
84.	The responsibility and authority for the evaluation and disposition of nonconforming items shall be defined.	ASME NQA-1-2000, Requirement 15, Control of Nonconforming Items, 402, Responsibility and Authority	ISD 330-6.1, <i>Nonconformance Reporting</i> , Sections 4.3 and 4.4, address this requirement.

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Item No.	Requirement	Source Document	Implementation Location
85.	Responsibility for the control of further processing, delivery, installation, or use of nonconforming items shall be designated in writing.	ASME NQA-1-2000, Requirement 15, Control of Nonconforming Items, 402, Responsibility and Authority	ISD 330-6.1, <i>Nonconformance Reporting</i> , Section 4.4, addresses this requirement.
86.	Personnel performing evaluations to determine a disposition shall have demonstrated competence in the specific area they are evaluating, have an adequate understanding of the requirements, and have access to pertinent background information.	ASME NQA-1-2000, Requirement 15, Control of Nonconforming Items, 403, Personnel	ISD 330-6.1, <i>Nonconformance Reporting</i> , Section 4.4, addresses this requirement.
87.	A disposition, such as use-as-is, reject, repair, or rework of nonconforming items shall be made and documented.	ASME NQA-1-2000, Requirement 15, Control of Nonconforming Items, 404, Disposition	ISD 330-6.1, <i>Nonconformance Reporting</i> , Section 4.4, addresses this requirement.
88.	Technical justification for the acceptability of a nonconforming item dispositioned repair or use-as-is shall be documented.	ASME NQA-1-2000, Requirement 15, Control of Nonconforming Items, 404, Disposition	ISD 330-6.1, <i>Nonconformance Reporting</i> , Subsections 4.4.2.A and 4.4.2.B, address this requirement.
89.	Nonconformances to design requirements dispositioned use-as-is- or repair shall be subject to design control measures commensurate with those applied to the original design, and: 1. If changes to the specifying document are required to reflect the as-built condition, then the disposition shall require action to change the specifying document to reflect the accepted nonconformance. 2. Any document or QA record change required by the disposition of the nonconformance shall be identified	ASME NQA-1-2000, Requirement 15, Control of Nonconforming Items, 404, Disposition	**ISD 330-6.2, <i>Nonconformance Reporting</i> , addresses this requirement.

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Item No.	Requirement	Source Document	Implementation Location
90.	Required as-built records shall reflect the use-as-is or repair condition.	ASME NQA-1-2000, Requirement 15, Control of Nonconforming Items, 404, Disposition	**ISD 330-6.2, <i>Nonconformance Reporting</i> , addresses this requirement.
91.	Repaired items shall be re-examined in accordance with applicable procedures and with the original acceptance criteria unless the disposition has established alternate acceptance criteria. AND Repaired or reworked items shall be re-examined using the original process and acceptance criteria unless the nonconforming item disposition has established alternate acceptance criteria.	ASME NQA-1-2000, Requirement 15, Control of Nonconforming Items, 405, Re-examination	ISD 330-6.1, <i>Nonconformance Reporting</i> , Subsection 4.4.1.2.B, addresses this requirement.
Monitoring Process Activities			
92.	Responsible managers must monitor work processes for compliance with specific work requirements.	IP 330.0, LANL Quality Assurance Program, Subsection 5.2.6, Monitoring Process Activities	ISD 322-1.0, <i>Management Assessment</i> , and ISD 322-2.0, <i>Independent Assessment</i> , address this requirement.
93.	In addition to the normal work control processes, responsible managers must continuously monitor work processes through various verification activities as outlined in work-specific acceptance test/plans.	IP 330.0, LANL Quality Assurance Program, Subsection 5.2.6, Monitoring Process Activities	ISD 322-1.0, <i>Management Assessment</i> , and ISD 322-2.0, <i>Independent Assessment</i> , address this requirement.

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Suspect/Counterfeit Item (S/CI) Prevention Process			
94.	<p>Work process controls for S/CI must include:</p> <ul style="list-style-type: none"> • Development and implementation of policies and procedures that prevent the introduction and use of S/CI through engineering involvement, design, procurement, testing, inspection, maintenance, evaluation, disposition, reporting, trend analysis, and lessons learned work process controls; • Training to inform responsible managers, supervisors, and workers on S/CI processes and controls, including prevention, detection, and disposition of S/CI; • Identification of S/CI through inspection, test, and surveillance; and • Restriction of S/CI use to only those items found to be acceptable through engineering analysis and formal disposition process. 	IP 330.0, LANL Quality Assurance Program, Section 5, Work Processes, Subsection 5.2.2, Retaining Control of Work Processes and Special Processes	ISD 330-9.1, <i>Suspect/Counterfeit Items</i> , Subsections 1.3.4.1, 4.10.1.B, 5.1, and 8.1, address this requirement.

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