

**Idaho National Laboratory**

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Subcontractors	Program Requirements Document	eCR Number: 558810
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Manual: INL Subcontractors Requirements

**1. PURPOSE**

This Requirements Document (RD) provides the minimum requirements for a subcontractor’s *quality assurance* (see def.) program. This document describes the Subcontractor Quality Assurance Program (SQAP) employed at the Idaho National Laboratory (INL) to ensure the quality of subcontracted services.

**2. APPLICABILITY**

This RD applies to *subcontractors* (see def.) when specified by a *subcontract* (see def.) and is primarily intended for use by companies who do not currently have a documented quality assurance program supported by written policies, procedures, and instructions.

Submittal of subcontractor’s formal quality assurance program and implementing procedures to *contractor* (see def.) for review and approval prior to the initiation of work may eliminate the need for all, or specific elements, of the SQAP. Subcontractor’s QA program implementation will be audited at subcontractor’s office(s) by contractor prior to final approval and inclusion of subcontractor on contractor’s Qualified Suppliers List (QSL).

This RD, in conjunction with subcontract required RDs as listed on Form 540.10C, Construction Subcontractor Requirements Manual (SRM) Applicability Determination; or 540.10S, Service Subcontractor Requirements Manual (SRM) Applicability Determination (latest subcontract revision); and herein defined subcontractor submittals will be considered to be the subcontractor’s quality assurance program.

**NOTE:** *This type of qualification limits subcontractor to the procurement of **QL-3** commercial-grade (see def.) items, material, equipment, and services **only** as stated in RD-5004, Procurement Document Control.*

The basis for subcontractor’s inclusion on contractor’s Qualified Suppliers List (QSL) includes the following submittals:

Prior to Award of Subcontract, Request for Proposal Submittals

- Signed Form 540.44, SQAP Program Acceptance and Acknowledgement. The SQAP shall be approved by the highest-ranking company officer within the applicable subcontractor/supplier business unit and shall include the designation of the SQAP manager.

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- Current subcontractor's organizational structure including a description of functional responsibilities, levels of authority, and interfaces for those managing, performing, and assessing quality related work.

After Award, Transmitted to PSQ Manager by Responsible Subcontract Administrator

- Signed Subcontract

**NOTE:** *By acceptance of a subcontract, subcontractor certifies all work shall be performed in accordance with subcontract provisions; Form 540.10C or 540.10S; and the Subcontractor Quality Assurance Program Requirements.*

- Subcontractor's assessment schedule for review and approval by PSQ Manager (Ref RD-5000, section 7.10).

Additional supplemental requirements may be specified for all or part of the work scope as determined to be appropriate by the *contractor* (see def.). The subcontractor implements the requirements of this RD and all supplemental requirements, when and as specified by the subcontract.

The *Subcontractor Quality Assurance Program* (see def.) is based upon the following principles:

1. That *quality* (see def.) is assured and maintained through a single, integrated, effective quality assurance program.
2. That management support for planning, organization, resources, direction, and control is essential to QA.
3. That performance and quality improvement require thorough, rigorous *assessment* (see def.) and *corrective action* (see def.).
4. That workers are responsible for achieving and maintaining quality.
5. That environmental, safety, and health risks and impacts associated with work processes can be minimized while maximizing reliability and performance of work products.

### 3. PROGRAM OVERVIEW

The SQAP is the overall program established to assign QA responsibilities and authorities, define QA policies and requirements, and provide for the performance and assessment of *work* (see def.).

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The SQAP is applied to all *activities affecting quality* (see def.) using a *graded approach* (see def.). For each activity, a *quality level* (QL) (see def.) is assigned by the Contractor. The QL is a designator that identifies the relative risk associated with the failure of items or activities.

All acquisitions designated as Quality Level (QL) QL-1 or QL-2 are requested, procured, received, and accepted under the control of the INL Quality Assurance (QA) Program and provided to the subcontractor as Government Furnished Equipment (GFE).

For each QL the application of SQAP requirements are specified on Form 540.10C or 540.10S, Subcontractor Requirements Manual (SRM) Applicability Determination.

*Supplier Quality Program Plans* (SQPP) (see def.) may be required for specific programs and projects. The requirements of the SQAP are flowed down to sub-tier subcontractors to the extent necessary to ensure the quality of the associated activities performed.

The SQAP is fully integrated with INL management systems including the Integrated Safety Management System, the Environmental Management System, and the Integrated Safeguards and Security Management System. All of these management systems function collectively with the SQAP to ensure safe, secure, and compliant work that meets or exceeds the users' requirements or expectations.

The subcontractor establishes and documents an organizational structure, functional responsibilities, levels of authority, and interfaces for those managing, performing, and assessing quality related work.

Functional responsibilities and levels of authority are developed and documented for each management position and for groups of employees with similar functions. Specific responsibilities for implementing and assessing SQAP requirements are identified.

All subcontractor organizations are responsible for achieving, maintaining, and verifying the quality of activities performed within INL. All employees are responsible for complying with work controlling procedures in their work activities, checking and verifying the quality of their work, identifying and reporting problems, and stopping or correcting work activities that do not meet the established quality requirements.

The SQAP has several program areas. Supplemental requirements may be specified for all or part of the work scope as determined to be appropriate by the contractor. The subcontractor implements the requirements of applicable RD's and all supplemental requirements, when and as specified by the subcontract.

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SQAP Program areas are as follows:

- PDD-1001, Subcontractor Requirements Program Description
  - RD-1008, Training and Indoctrination, provides the minimum requirements for training and indoctrinating responsible subcontractor personnel to INL subcontract requirements.
  - RD-5000, Subcontractor Quality Assurance Program
  - RD-5002, Change Control, identifies the minimum requirements and procedure for initiating, processing, and controlling changes to an approved contract.
  - RD-5003, Vendor Data Control, identifies the minimum requirements for preparing, reviewing, submitting, and controlling *vendor data* (see def.) as required under the terms of the subcontract or purchase order.
  - RD-5004, Procurement Document Control, identifies the minimum requirements and procedure for the preparation of *procurement documents* (see def.) as required to purchase selected materials, equipment, or services.
- NOTE:** *This RD limits subcontractor's to the procurement of **QL-3** commercial-grade (see def.) items, material, equipment, and services **only**.*
- RD-5005, Procedure Development, identifies the minimum requirements for the development and control of work control/administrative procedures as required by the subcontract.
  - RD-5006, Subcontractor Quality Plan (SQP), identifies the required format, structure, and content of the Subcontractor Quality Plan (SQP), if required. The purpose of the Subcontractor Quality Plan is to:
    - (a) demonstrate understanding and executive level commitment to subcontract requirements for quality assurance,
    - (b) describe unique or project specific work processes and controls as required by a subcontract , and
    - (c) establish the subcontractor organizational structure, functional responsibilities, and lines of authority.
  - RD-5007, Document Control, identifies the minimum requirements for the identification and control of designated subcontract documents.
  - RD-5008, Control of Purchased Items, identifies the minimum requirements and procedure for evaluation of material and service subcontractors for receiving and

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controlling purchased items, materials, equipment, and services, as required to complete the terms of the subcontract.

- RD-5009, Material Traceability, identifies the minimum requirements for maintaining material *traceability* (see def.) when required by the subcontract.

This RD applies to all QL-1 and QL-2 material and to that QL-3 material where the specified code or standard requires traceability (e.g. ASME Section VIII, B31.1, NFPA 59A).

Item traceability information will be maintained from receipt through installation and consumption unless otherwise specified by the work order, planning document or purchase order document as a lifetime record.

- RD-5010, Weld Record Packages & Piping Testing Packages, identifies the requirements for developing, maintaining, completing, and controlling weld history documentation.
- RD-5012, Survey Equipment Calibration & Control, identifies the minimum requirements for calibrating and controlling subcontractor surveying equipment.
- RD-5014, Test Control, identifies the minimum requirements and procedure for developing and controlling test procedures, as required by the subcontract.
- RD-5015, Control of Measuring & Testing Equipment, identifies the minimum requirements for the calibration and control of subcontractor *measuring and test equipment* (M&TE see def.).
- RD-5016, Material & Equipment Storage, Handling & Maintenance, provides the minimum requirements for transfer, storage, handling, and maintenance of Government Furnished Equipment/Material (GFE) and or Subcontractor Furnished Equipment/Material (SFE), as required under the terms of the subcontract.
- RD-5017, Inspection & Test Status, identifies and defines the applicable contractor *inspection* (see def.) and *test status indicators* (see def.).
- RD-5018, Control of Nonconformances, identifies the minimum requirements for reporting, controlling, and resolving *nonconformances* (see def.).
- RD-5019, Radiological Control of Field Radiography Operations

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**4. RESPONSIBILITIES**

<b>RD</b>	<b>Contractor</b>	<b>Subcontractor</b>
RD-1008	Provide training for general site information on the employee orientation requirements during "orange card" training.  Incorporate Subcontractor training documentation into the INL TRAIN database.	Provide specific training to affected employees prior to allowing them to perform affected work.  Prepare and maintain documentation for training provided by subcontractor personnel. Deliver training documentation to the Contractor <i>POC</i> (see def.)  Submit training documentation as vendor data, when specified by the vendor data schedule.
RD-5000	Assure subcontractor is provided with easy access to all requirements documents.	Submit organizational structure, functional responsibilities, levels of authority, and interfaces for those managing, performing, and assessing quality related work.  Submit assessment schedule.  Submit Form 540.44  Submit SQPP, QPPs, and QAPjPs as required.
RD-5002	Process and direct changes to approved Purchase Orders and Contracts.	Train personnel assigned design change control responsibilities.  Initiate and control changes in accordance with RD requirements.  Proceed with changes only upon completion of approved change documentation, as defined by this RD.  Control approved changes in accordance with RD 5007, Document Control, when RD is required by subcontract.
RD-5003	Review and disposition vendor data.  Return copies of dispositioned vendor data to the subcontractor.	Train personnel assigned vendor data responsibilities.  Prepare and maintain the Subcontractor Vendor Data Submittal Log.  Submit vendor data as required by the Vendor Data Schedule in the subcontract or purchase order documents.

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		Follow the requirements of RD-5002 to obtain "or equal" approval before submitting materials as "or equal."	
RD-5004	None	<p>Train personnel assigned responsibilities for procurement document change control.</p> <p>Prepare and maintain a Procurement Control Log.</p> <p>Prepare purchase orders with appropriate information as specified in this procedure.</p> <p>Identify required vendor data submittals in subcontractor prepared procurement documents.</p> <p>Perform an <i>independent</i> (see def.) review of all procurement documents.</p>	
RD-5005	<p>Coordinate review of subcontractor procedures submitted for approval.</p> <p>Coordinate appropriate changes to procedures to resolve contractor review comments.</p> <p>Approve subcontractor procedures that conform to design basis and plant operations requirements.</p>	<p>Train personnel assigned procedure development responsibilities.</p> <p>Prepare and maintain procedures for all anticipated activities, operations, etc.</p> <p>Prepare procedures with format and content as described in this RD.</p> <p>Submit procedures for contractor approval in accordance with RD-5003.</p> <p>Resolve contractor's review comments and modify procedures as needed.</p>	
RD-5006	<p>Review the Subcontractor Quality Plan (if not previously approved) and subsequent revisions to the Plan.</p> <p>Resolve any comments resulting from the review.</p> <p>Approve the SQP when comments are resolved and any necessary changes are incorporated by the subcontractor.</p>	<p>Train personnel assigned responsibilities for SQP preparation.</p> <p>Prepare the SQP in accordance with this RD, if required.</p> <p>Submit the SQP and obtain contractor approval.</p>	
RD-5007	None	<p>Train personnel assigned responsibilities for document control.</p> <p>Perform all work to <i>controlled documents</i></p>	

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		(see def.). Maintain central files of controlled documents in accordance with this RD. Maintain controlled distribution of controlled documents, ensuring that the latest revisions of documents are provided to personnel at appropriate work locations.
RD-5008	Perform receiving inspection on subcontractor purchased items upon receipt of Form 432.41, Subcontractor/Supplier Receiving Inspection Request/ Record, from the subcontractor.  Apply contractor status indicators as described in RD-5017	Train personnel assigned responsibilities for control of purchased items. Prepare procurement documents and control them in accordance with RD-5004 when RD required by subcontract. Evaluate sub-tier subcontractor/suppliers or vendors for <i>suspect/counterfeit</i> (see def.) items. Inspect subcontractor/supplier-purchased materials upon receipt for damage or S/CI attributes and <i>verify</i> (see def.) materials conform to procurement and design documents. Tag items requiring receipt inspection by the contractor. Place tagged items in a “Hold for Inspection” area and notify the contractor that items are ready for inspection. Use only those items that have been accepted or released for conditional use by the contractor.
RD-5009	Witness and approve transfer of traceability markings.	Train personnel assigned responsibilities for material traceability. Maintain and protect traceability markings. Transfer material traceability markings when cutting or dividing of materials results in materials being separated from the traceable marking.
RD-5010	Perform weld inspections and record results on the applicable	Train personnel assigned responsibilities for Weld Record Packages & Piping Testing

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	<p>weld record package documents.</p>	<p>Packages.</p> <p>Originate a <i>weld record package</i> (see def.) for each line, system, or structure prior to initiating any welding activity.</p> <p>Protect and control the use of the weld record package.</p> <p>Update the weld record as work progresses. This information is recorded in a timely manner such that the weld records are kept up-to-date.</p> <p>Prepare a weld map for each structure, system, sub-system, component, assembly, or weldment.</p> <p>Perform weld inspections and record results on the applicable weld record package documents, when required by the subcontract documents.</p> <p>Initiate Form 432.43, Subcontractor/Supplier Weld Map and 432.44, Subcontractor/Supplier Weld History Record, or a contractor approved equivalent for each weld.</p> <p>Comply with all applicable inspection requirements. Either perform inspections or request inspections from the contractor’s representative as required by the subcontract.</p> <p>Initiate Form 432.45, Subcontractor/Supplier Weld Repair Card, for each weld repair.</p> <p>Assemble a weld record package(s) for each system, including all applicable welding, inspection, examination, and testing documentation.</p> <p>Submit documentation required by the vendor data schedule in accordance with RD 5003.</p>
<p>RD-5012</p>	<p>Calibrate subcontractor’s survey equipment.</p>	<p>Train personnel assigned responsibilities for equipment <i>calibration</i> (see def.) and control.</p> <p>Submit calibration request and equipment to</p>

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		<p>the contractor for calibration prior to initial use on the project.</p> <p>Tag and segregate “out-of-calibration” survey equipment.</p> <p>Obtain recalibration at specified intervals or when calibration has been compromised.</p> <p>Obtain recalibration upon completion of the survey equipment’s final use on the project.</p> <p>Perform periodic functional checks of survey equipment.</p> <p>Record each usage of survey equipment in the usage record.</p> <p>Document survey activities in survey field logbooks.</p> <p>Maintain original and backup copies of electronic survey data.</p>
RD-5014	<p>Testing is witnessed and approved by the contractor representative.</p>	<p>Train personnel assigned responsibilities for test control and those performing tests.</p> <p>Calibrate and use all test equipment in accordance with RD 5015.</p> <p>Obtain contractor approval of all subcontractor generated test procedures prior to performing testing.</p> <p>Complete and maintain documentation in accordance with this procedure.</p> <p>Submit test documentation as required by the Vendor Data Schedule in accordance with RD 5003.</p>
RD-5015	<p>Perform calibration of subcontractor M&amp;TE.</p> <p>Calibrate subcontractor M&amp;TE in accordance with ISO/IEC17025:2005, General Requirements for the Competence of Testing and Calibration Laboratories.</p>	<p>Train personnel assigned responsibilities for the control of measuring and test equipment.</p> <p>Submit subcontractor M&amp;TE that is to be used on the INL to the contractor for calibration prior to use.</p> <p>Report all M&amp;TE that is lost, out-of-tolerance; unable to calibrate; or noted as malfunctioning, damaged, or otherwise</p>

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	<p>Prepare calibration records.</p>	<p>suspect, to the contractor in accordance with RD-5002.</p> <p>Submit subcontractor M&amp;TE utilized onsite for recalibration at specified intervals and upon completion of its intended use.</p> <p>List subcontractor M&amp;TE utilized at any location during the performance period of the subcontract on Form 432.50, Subcontractor/Supplier Calibration Control Record.</p> <p>Submit M&amp;TE documentation required by the Vendor Data Schedule in accordance with RD-5003.</p>
RD-5016	<p>Transfer GFE to subcontractor when requested in accordance with this RD.</p> <p>When transferring custody of GFE to subcontractor, identify all storage, handling, and maintenance requirements pertaining to the GFE in the transfer documents.</p>	<p>Train personnel assigned responsibilities for material and equipment storage, handling, and maintenance.</p> <p>Initiate request for transfer of GFE from contractor to subcontractor.</p> <p>Store GFE in accordance with all handling, storage, and maintenance instructions provided by the contractor when GFE is transferred to the subcontractor's custody.</p> <p>Originate and complete equipment /material storage, handling, and maintenance instructions for all subcontractor furnished material/equipment (SFE) that requires specific and/or unique handling, storage, and/or maintenance.</p> <p>Maintain all material and equipment in accordance with the manufacturer's requirements and/or instructions.</p> <p>Perform maintenance at the frequency specified (required or recommended) by the manufacturer. Upon completion, all required maintenance actions are documented using the applicable contractor Form 432.52, Subcontractor Equipment/Material, Storage, Handling, and Maintenance Instructions.</p> <p>Complete, maintain, and store documentation required by this RD in a single location in a secure and protected environment.</p>

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RD-5017	<p>Provide status indicators for subcontractor use.</p> <p>Remove status indicators.</p>	<p>Train personnel assigned responsibilities for inspection and test status indicators.</p> <p>Utilize, maintain and control contractor status indicators as required in this and referenced RDs.</p>
RD-5018	<p>Document all subcontractor nonconforming conditions.</p> <p>Provide conditional release for nonconforming items as appropriate.</p>	<p>Train personnel assigned responsibilities for control of nonconformances.</p> <p>Identify and report potential or known nonconforming conditions.</p> <p>Segregate and prevent inadvertent usage of nonconforming items.</p> <p>Implement disposition of nonconforming items.</p> <p>Obtain re-inspections as directed by contractor approved conditional release.</p>
RD-5019	<p>Notify the RSO prior to radiographic operations.</p> <p>Ensure documentation of subcontract radiographer qualifications are submitted via the vendor data system.</p> <p>Ensure documentation of subcontract radiography license is submitted via the vendor data system.</p> <p>Ensure subcontractors identify radiation generating devices (RGDs) to Radiological Control Department prior to transport of devices onto INL facilities.</p> <p>Provide registration of RGDs and/or radiography sealed sources as requested.</p> <p>Monitor emergency or off-normal incidents, for instituting corrective actions safely.</p> <p>Verify subcontractor radiographers and radiographer assistants have necessary qualifications or certifications.</p> <p>Submit status of subcontractor radiography personnel qualifications to the INL TRAIN system</p> <p>Review subcontractor radiography</p>	<p>Train personnel assigned responsibilities for control of Field Radiography.</p> <p>Perform radiography in accordance with subcontractor license, training, and INL specific instructions.</p> <p>Identify Radiography sealed sources or x-ray machines intended for use prior to moving equipment on site.</p> <p>Submit Radiographer certifications and Radiographer's Assistant qualifications.</p> <p>Radiography personnel: Attend a documented review, conducted by INL RSO, of operation requirements for radiography as described in RD-5019.</p> <p>Initiate Form 441.58, Field Radiography Checklist, Section I, at least 24-hours in advance of scheduled RT operations.</p> <p>Ensure posting of the area in which radiography will be performed, including any adjacent areas, in accordance with the Radiation Work Permit (RWP).</p> <p>Make notification for any unusual or abnormal RT events, as required by RD-5019.</p>

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	<p>safety program documents.</p> <p>In conjunction with Radiological Control Department, monitor emergency or off-normal incidents, for instituting corrective actions safely.</p>	
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**5. QPPs and QAPjPs**

*Quality Program Plans* (see def.-QPPs) may be required for specific programs and projects. QPPs are written whenever there is a need to address unique contractor requirements that are not reflected in the SQAP, or to authorize a deviation for a specific program or project. *Quality Assurance Project Plans* (QAPjPs – see def.) may be required and are written to address how Environmental Protection Agency requirements or activities are being controlled by the subcontractor.

**6. ORGANIZATION AND RESPONSIBILITIES**

Prior to the initiation of any work covered by this RD, subcontractor submits to contractor an organizational structure detailing functional responsibilities, levels of authority, and interfaces for those managing activities affecting quality. The authority and duties of persons and organizations performing activities affecting the safety-related functions of structures, systems, and components are clearly established and delineated in writing. Specific responsibilities for implementing SQAP requirements are identified.

The subcontractor is responsible for the execution of the SQAP. The subcontractor may delegate to others, such as subtier subcontractors or consultants, the work of executing specific elements of the SQAP, but retain full responsibility therefore. These requirements are flowed down to subcontractors subtier’s in accordance with RD-5004.

Contractor’s prior written consent is required for acquisition of materials or services that are identified or defined as Quality Level, QL-1 or QL-2 in accordance with Contractor’s latest governing procedures.

Irrespective of the organizational structure, the individual(s) assigned the responsibility for assuring effective execution of any portion of the SQAP at any location where activities subject to this RD are being performed have direct access to such levels of management as may be necessary to perform this function.

**7. SPECIFIC PROGRAM AREA DESCRIPTIONS**

The SQAP addresses specific quality program requirements in order to provide control over activities affecting the quality of identified structures, systems, and components to

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an extent consistent with their importance to safety. The following list is not all inclusive of the RD’s and is included to further emphasize selected program elements.

**7.1 Personnel Training and Qualification**

The training program focuses on providing employees with knowledge and skills necessary to perform tasks that meet acceptance and performance criteria. Training is designed to help employees understand safety conditions of tasks and processes; procedures needed to conduct tasks; and quality, safety, and environmental requirements. Training gives employees an understanding of acceptance and rejection criteria, systems terminology, and reasons for performing specific control functions to minimize process variability.

The Contractor defines training, qualification, and certification requirements for selected positions or job categories. Training and qualification requirements are established and periodically reviewed to ensure that requirements continue to reflect training needs.

**7.2 Work Processes, Planning, and Performing Work**

Work processes include all activities involved in performing a defined task. Contractor management promotes the concept that quality is integrated into the work process. Work processes include such activities as procurement, material control, fabrication, construction, decommissioning, installation, modification, maintenance, operations, document and records management, independent verification, testing, inspection, radiological controls, waste management and transportation, environmental monitoring and restoration.

Work is performed under controlled conditions using work-controlling documents such as approved procedures, drawings, instructions, work packages, or other appropriate means. Work-controlling documents contain provisions and *acceptance criteria* (see def.) (when appropriate) needed to perform work. Work controlling documents are developed, reviewed, approved, issued or released, and controlled. Those documents identify authorities, responsibilities, interfaces (both internal and external), and performance criteria required to successfully complete the work. Work directions provide a level of detail commensurate with the risk, complexity, and importance of the work.

When appropriate, job briefings are held prior to work performance.

**7.3 Identification and Control of Items**

Controls are implemented to ensure that items are identified, maintained, and controlled to provide traceability and prevent the use of incorrect or defective

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items. Specific identification and traceability requirements specified in codes, standards, or specifications are applied through work-controlling documents.

**7.4 Handling, Storing, and Shipping**

Work-controlling and procurement documents provide instructions for handling, storing, and shipping items. Documents include controls for cleaning, marking, packaging, and protecting items from deterioration, damage, or loss.

**7.5 Control of Special Processes**

Requirements for the control of special processes are applied through implementing procedures and training. Special processes are those for which the results are highly dependent on the control of the process or the skill of the operator and for which the quality of the product cannot be readily determined by inspection or test. Special processes include welding, soldering, brazing, heat treating, chemical cleaning and nondestructive examinations. Only qualified personnel using qualified procedures are allowed to perform special processes.

**7.6 Subcontractor Procurement**

The subcontractor’s procurement system provides controls to ensure that items and services comply with established requirements and perform as specified. As required, procurement documents incorporate contractor requirements into corresponding purchase requirements so that (a) prospective suppliers are evaluated before orders are placed, (b) supplier performance is monitored, and (c) items received and services provided are verified as complying with purchase requirements.

The procurement of all materials provides for prevention of suspect or counterfeit materials.

Contractor’s prior written consent from the Program/Project QA Representative is required for acquisition of materials or services that are identified or defined by Contractor as Quality Level QL-1 or QL- 2 in accordance with Contractor’s latest governing procedures.

**NOTE:** *Subcontractors are limited to the procurement of **Quality Level 3**, commercial-grade items, material, equipment, and services **only**.*

The subcontractor’s procurement process includes verification of acceptability of items and services. Verification includes (as appropriate) inspecting materials, equipment, or activities at the supplier’s facility; reviewing objective evidence; testing items before or after shipment; inspecting products or services upon receipt; or testing items after installation.

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Nonconforming items or services are documented and controlled to preclude inadvertent use. Deviations from procurement requirements are documented, reviewed, and approved in accordance with implementing procedures.

**7.7 Inspection, Test Control, and Acceptance Testing**

Inspections and tests are to be performed in accordance with approved procedures to verify conformance with specified requirements. Quality inspection and test activities are planned and controlled in accordance with procedures, instructions, and checklists. Inspections and tests performed for acceptance are performed by qualified individuals. Acceptance inspection(s) of QL-1 and QL- 2 items or services intended to demonstrate compliance with project requirements and approved engineering criteria shall be performed by qualified and authorized individuals other than those who performed or supervised the work being inspected. .

Personnel performing inspections and tests verify that the materials, instruments, and measuring and test equipment are correct and suitable for use. Results of independent quality inspections and tests are documented, verified as acceptable, and maintained as records. Records identify the item examined, date of examination, examiner or data recorder, equipment used, inspection criteria or reference documents, results and acceptability, and action taken concerning any deviations noted. Implementing procedures specify actions for identifying and controlling nonconforming items and deficient services. Records are reviewed and examined for completeness and adequacy prior to validation and subsequent disposition.

Upon completion of inspections and tests, the using organization verifies acceptance of items, services, and processes before use. Administrative controls and indicators define the status of items to preclude inadvertent bypassing of required inspections and tests, or the inadvertent acceptance and use of the item or process.

**7.8 Control of Measuring and Test Equipment**

Measuring and Test Equipment (M&TE) is identified, calibrated, and maintained as directed by implementing procedures. Items requiring calibration include portable M&TE, measurement standards, and survey instrumentation.

Procedures apply controls for identification, maintenance, and calibration of instruments in accordance with specified standards, ranges, and tolerances appropriate to their use. Calibration standards are traceable to applicable national standards. M&TE is calibrated at intervals depending on the required accuracy, intended use, frequency of use, stability characteristics, and other conditions affecting the performance of the instrument.

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The Contractors M&TE system includes a recall process that establishes intervals and notifies users of calibration due dates. Users must ensure calibration intervals are not exceeded. M&TE found in an out-of-calibration or out-of-tolerance condition is tagged or segregated. Tagged or segregated equipment is not used until it has been recalibrated or replaced. However, Contractor may provide a temporary extension of the calibration due date for limited periods under certain specific conditions, such as the completion of a test, may be permissible provided the extension has an adequate and documented basis and is controlled. Out-of-calibration and out-of-tolerance conditions are documented and evaluated for possible negative impact on the validity of acquired data.

**7.9 Suspect/Counterfeit Items Prevention**

Subcontractor controls are established to prevent the introduction and use of suspect or counterfeit materials. Subcontractors are required to have sufficient procedural controls preventing the delivery or use of suspect or counterfeit materials. Managers, supervisors, and workers are trained on S/CI processes and controls. Suspect/counterfeit materials found currently installed or in inventory are identified and controlled. Identified S/CIs are reported to the contractor.

**7.10 Subcontractor Assessments**

Assessments evaluate the adequacy and effectiveness of management systems and identify problems that hinder achievement of objectives. Subcontractors assess activities such as work processes, planning, organizational interfaces, cost control, training and qualifications. Special attention is given to methods for improving processes and procedures.

Assessment activities include direct observation of work, interviews, document reviews, and drills and exercises. The extent of the effort expended to perform assessments is commensurate with the risk associated with the program or activity being evaluated. Assessment results, including findings and concerns, are documented.

Schedules of assessments are to be prepared at the beginning of each subcontract year and submitted to the Contractor. Frequencies of assessments are commensurate with the status, risk, or complexity of the activity being assessed.

Assessments measure the quality of items and activities, evaluate the adequacy of work performance, and promote improvement.

Assessment checklists may be used to ensure depth, accuracy, continuity, and documentation of the assessment. Checklists consist of relevant requirements and procedures, corrective actions taken since the previous assessment, and areas where opportunities for improvement may exist.

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The assessment team evaluates objective evidence and documents the assessment results. The results are reported to and reviewed by subcontractor management who investigates the findings, identify problem causes, and schedules corrective action, including measures to prevent or minimize recurrence. The extent of the effort expended by management is commensurate with the importance of the problem evaluated.

The subcontractor ensures that finding responses are evaluated for adequacy using a graded approach. Findings, actions, and schedules are tracked to closure. Closure is verified for all findings and the effectiveness of actions for significant deficiencies is validated. Assessment records are maintained and controlled.

**7.11 Document Control**

The document management system governs the development, control, and distribution of controlled documents. The system outlines how controlled documents are prepared, reviewed, approved, controlled, and distributed for use. Documents are prepared to prescribe processes, specify requirements, or establish design.

Management of the organization performing the work or activity, in concert with the Contractor, identifies the documents requiring control and is responsible for ensuring document control requirements are met.

Users of controlled documents are responsible for using the latest approved revision and for marking, destroying, or discarding cancelled or superseded documents.

Records may be written or printed documents, microfilm, photographs, or electronic files. Computer hardware and software used to index, store, or access records are maintained and controlled to ensure record accountability, reproducibility, and protection from loss. Records may be originals or reproduced copies.

Implementing procedures include instructions for the retention, protection, preservation, changing, traceability, accountability, and retrievability of records and provide controls so that records are legible, accurate, complete, retrievable, and validated by authorized personnel.

Records are stored and maintained in a manner that minimizes the risk of damage, larceny, vandalism, or deterioration. Active records are not sent to records holding facilities but are stored in a facility where the records may be accessed.

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**9.0 DEFINITIONS**

Terms utilized in this RD are defined in LST-359.

**10. INL QA PROGRAM REQUIREMENTS DOCUMENT REFERENCES**

LRD-13010, Quality Assurance Program Requirements

LRD-13100, Work Processes

LRD-13200, Design

LRD-13300, Procurement

LRD-13400, Inspection and Acceptance Testing

LRD-13500, Suspect/Counterfeit Items Prevention

LRD-13700, Assessment

LWP-13740, Performing Inspections and Surveillances

LRD-13800, Quality Improvement

LRD-13900, Documents and Records

LRD-15001, Radiological Control Manual, Chapter 3, Conduct of Radiological Work

**11. SRM REFERENCES**

PDD-1001, Subcontractor Requirements Program Description

RD-1008, Training and Indoctrination

RD-5000, Subcontractor Quality Assurance Program

RD-5002, Change Control

RD-5003, Vendor Data Control

RD-5004, Procurement Document Control

RD-5005, Procedure Development

RD-5006, Subcontractor Quality Plan (SQP)

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- RD-5007, Document Control
- RD-5008, Control of Purchased Items
- RD-5009, Material Traceability
- RD-5010, Weld Record Packages & Piping Testing Packages
- RD-5012, Survey Equipment Calibration & Control
- RD-5014, Test Control
- RD-5015, Control of Measuring & Testing Equipment
- RD-5016, Material and Equipment Storage, Handling & Maintenance.
- RD-5017, Inspection & Test Status
- RD-5018, Control of Nonconformances
- RD-5019, Radiological Control of Field Radiography Operations

**12. APPLICABLE FORMS**

- Form 540.10C, Construction Subcontractor Requirements Manual (SRM) Applicability Determination
- Form 540.10S, Service Subcontractor Requirements Manual (SRM) Applicability Determination
- Form 540.44, SQAP Program Acceptance and Acknowledgement
- Form 432.41, Subcontractor/Supplier Receiving Inspection Request/ Record
- Form 432.43, Subcontractor/ Supplier Weld Map
- Form 432.44, Subcontractor/Supplier Weld History Record
- Form 432.45, Subcontractor/Supplier Weld Repair Card
- Form 432.50, Subcontractor/Supplier Calibration Control Record
- Form 432.52, Subcontractor Equipment/Material, Storage, Handling, and Maintenance Instructions
- Form 441.58, Field Radiography Checklist