LOW ACTIVITY WASTE PRETREATMENT SYSTEM
SITE PREPARATION

Project No. T5L01
CSI Section 01 40 00, Rev. 00

Quality Assurance

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Prepared for the U.S. Department of Energy
Office of River Protection

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Contractor for the U.S. Department of Energy
Contract No. DAC27-08RV14800
LAWPS Site Preparation “Quality Assurance”

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1.0 SUMMARY

1.1 This specification delineates the quality assurance (QA) requirements and processes that will be utilized to execute the Low Activity Waste Pretreatment System Subcontract Requisition 297356. Additional QA requirements may be delineated in the design documents and other subcontract documents.

1.2 Hereinafter, the construction SUBCONTRACTOR (includes lower tier subcontractors and suppliers) shall be referred to as “SUBCONTRACTOR” and Washington River Protection Solutions LLC (WRPS) shall be referred to as “BUYER.”

2.0 GENERAL

2.1 The SUBCONTRACTOR agrees to incorporate the QA requirements of this specification and those requirements specified elsewhere in the SUBCONTRACT into their subcontracts and purchase orders for all lower-tier subcontractors and suppliers utilized in the performance of this SUBCONTRACT, as the QA requirements apply for the services or items being provided. The SUBCONTRACTOR shall communicate these QA requirements to their personnel, suppliers, and lower-tier subcontractors so that items and work activities provide for safe and reliable construction.

2.2 The SUBCONTRACTOR shall provide access to its facility, documents and records, applicable to the performance of this subcontract for BUYER review and assessment. The SUBCONTRACTOR shall flow down this “right of access” requirement to its sub-tier subcontractors and suppliers. The SUBCONTRACTOR shall coordinate the review or assessment of sub-tier subcontractors’ and suppliers’ facilities, documents and records with the BUYER’s Construction Management Team (CMT).

2.3 The Statement of Work (SOW) shall identify plant-installed items furnished or fabricated by the SUBCONTRACTOR and specify the BUYER’s Safety Classification (Full Quality Assurance, (Enhanced Quality Assurance, or Commercial Quality Assurance) and Quality Level (FQA, EQA, or CQA).

2.4 Appropriate procurement quality requirements (i.e., Exhibit A the BUYER’s Procurement Quality “B” clauses) shall be identified for each of these items designated Quality Level FQA and EQA, or only for those CQA items requiring NRTL or SCI inspections. These procurement quality requirements may supplement or modify the material requirements stated in the Project Technical Specification.

2.5 The SUBCONTRACTOR is required to have and implement a quality assurance program that is consistent with the requirements of ASME NQA-1-2008, Quality Assurance Requirements for Nuclear Facility Applications, Parts I and II including 2009-1a addenda requirements, as indicated on the Quality Assurance Requirements form (A-6006-661) referenced in the Subcontract Statement of Work.

2.6 The SUBCONTRACTOR’s QA program will be reviewed, evaluated, and approved for the BUYER through an onsite audit conducted by Mission Support Alliance/Acquisition
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Verification Services and will be added to their Evaluated Supplier List (ESL) prior to award of the contract.

3.0 DEFINITIONS

3.1 Commercial Quality Assurance (CQA)

Level of controls for those items, services, or processes where, based on an evaluation of risk or nuclear safety, no additional quality controls beyond the providers published or stated attributes of the item, service, or process is required.

3.2 Enhanced Quality Assurance (EQA)

Level of controls for those items, services, or processes where, based on an evaluation of risk or nuclear safety, additional controls beyond the providers published or stated attributes of the item, service, or process are needed to verify critical attributes.

3.3 Full Quality Assurance (FQA)

Level of controls applied for items services, or processes that are commensurate with the controls invoked under ASME NQA-1 or other appropriate national consensus standard.

4.0 REFERENCES

4.1 The following documents and others referenced in this section form a part of the Subcontract. Referenced documents are those current as of the date of this section unless otherwise indicated.

a. 10 CFR 708, Contractor Employee Protection.
b. 10 CFR 820, General Statement of Enforcement Policy.
c. CFR 830, Nuclear Safety Management, Subpart A, Quality Assurance Requirements
d. CFR 835, Occupational Radiation Protection.e. CFR 851, Worker Safety and Health Program.f. DOE Suspect/Counterfeit Items Guide DOE G 414.1-3g. DOE Order 414.1D, Quality Assuranceh. ASME NQA-1-2008, Quality Assurance Requirements for Nuclear Facility Applications, Parts I and II including 2009-1a addenda requirements

5.0 SUBMITTALS

5.1 SUBCONTRACTOR shall submit a Quality Assurance Program (QAP) in accordance with the Quality Assurance Requirements included in the Statement of Work. [Approval Required]
NOTE: If the SUBCONTRACTOR’s QAP has been previously approved by the BUYER, and the manual has not changed since its approval, the SUBCONTRACTOR may either submit a letter stating as such or include a statement within their proposal in lieu of this submittal.

5.2 SUBCONTRACTOR shall submit changes to the SUBCONTRACTOR QAP. [Approval Required]

5.3 SUBCONTRACTOR shall submit to the BUYER all Subcontractor-generated nonconformance reports, regardless of proposed disposition. Subcontractor-generated nonconformance reports having proposed dispositions of “REWORK”, “REJECT”, “REPAIR”, or “USE AS-IS” shall not have the proposed disposition implemented until the BUYER has agreed in writing with the SUBCONTRACTOR’s proposed disposition. [Approval Required]

5.4 SUBCONTRACTOR shall submit Fabrication Work Control Documents (also known as fabrication, and inspection plans [FIT]) prior to starting fabrication work. [Approval Required]

5.5 SUBCONTRACTOR shall submit completed Fabrication Work Control Documents as soon as the work and documentation are complete. [Approval Required]

5.6 If the supplier’s function is limited to placing the order with the actual manufacturer, the Supplier shall be responsible for providing an uncontrolled copy of the manufacturer’s QA Program Manual to the BUYER and shall ensure that the manual meets the requirements outlined in this specification. If the Supplier will store, repackage, or in any way handle the items before shipment to the BUYER, the Supplier shall submit their QA Program Manual in addition to the Manufacturer’s QA Program Manual. The Manufacturer’s and Suppliers QA Program documents must meet the requirements, as outlined in this specification that pertain to the work each organization performs.

6.0 QUALITY ASSURANCE REQUIREMENTS


6.1.1 As a government SUBCONTRACTOR in a nuclear facility, the SUBCONTRACTOR is subject to enforcement actions under 10 CFR 820, General Statement of Enforcement Policy, (Price Anderson Amendment Act). The enforcement actions require compliance with 10 CFR 820, Procedural Rules for DOE Nuclear Activities, 10 CFR 830, Nuclear Safety Management, 10 CFR 835, Occupational Radiation Protection, 10 CFR 708, Contractor Employee Protection, and 10 CFR 851, Worker Safety and Health Program.

6.1.2 Depending on the nature of the services being provided, the SUBCONTRACTOR and its sub-tier SUBCONTRACTOR’S or suppliers may be subject to enforcement actions of these regulations.

6.1.3 During the performance of work, the SUBCONTRACTOR shall provide to the BUYER copies of all documents that constitute reports of deficiencies, weaknesses,
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non-conformances, or non-compliances with established requirements related to items or services provided for this Contract. Such documents may include:

a. Nonconformance Report
b. Corrective Action Reports
c. Critique Information/Reports
d. Investigation Reports
e. Internal/External Assessment/Surveillance/Audit Reports.
f. Employee Concerns associated with Nuclear Safety
g. Any other document associated with a deficiency or noncompliance

6.1.4 The SUBCONTRACTOR shall accurately, completely, and voluntarily report the nature and actions taken in response to any noncompliance with the nuclear safety rules to the Construction Management Team’s Quality Manager, via the BUYER’S Procurement Specialist and will take prompt and comprehensive corrective action to prevent recurrence.

a. Upon initiation, the form for nuclear safety rule noncompliance reporting shall include the following information:

1. Supplier
2. Title, location and description of the noncompliant condition.
3. Date, time and organization that discovered the noncompliant condition.
4. SUBCONTRACTOR point of contact for the noncompliant condition.

b. After initiation, as the SUBCONTRACTOR’s deficiency reporting process is utilized, the form for nuclear safety rule noncompliance reporting shall identify the following information:

6.2 Electric Equipment Requirements

6.2.1 Electrical equipment must be listed or labeled by a Nationally Recognized Testing Laboratory (NRTL) listed by Occupational Safety and Health Administration (http://www.osha.gov/dts/otpca/nrtl/); or equipment without a listing mark or label by a nationally recognized testing laboratory can only be approved for use if accepted by the BUYER’s designated NEC inspector.

6.3 Inspection and Testing

6.3.1 Inspections and testing including the documentation required by the contract shall be performed by qualified SUBCONTRACTOR Quality Control personnel or third party, who is independent of the work being performed. Quality Control personnel or third party shall be trained and qualified in accordance with the SUBCONTRACTOR’s or third party approved QAP. Supplier performing weld inspections shall be Certified
Weld Inspector (CWI) in accordance with the requirements specified in AWS/SNT-TC-1 as AWS QC-1 Inspector.

6.3.2 Inspections and testing required for field activities will be included in Work Packages. The SUBCONTRACTOR shall provide the inspection and testing documentation required to support the work packages and include the documentation in the work packages.

6.3.3 Inspections and testing required for field activities will be included in Work Packages. The SUBCONTRACTOR shall provide the inspection and testing documentation required to support the work packages and include the documentation in the work packages.

6.3.4 The SUBCONTRACTOR shall develop and submit work control documents (e.g., fabrication, inspection, and test plans) for items to be fabricated by the SUBCONTRACTOR or their lower-tier SUBCONTRACTOR. The work control document shall delineate details for performing the fabrication including inspections and testing required by the subcontract. The BUYER will identify required inspection points, include third party inspections, during review of the work control documents.

6.3.5 The SUBCONTRACTOR shall submit completed fabrication work control documents to BUYER for approval. The SUBCONTRACTOR shall perform a final acceptance review to verify that all steps have been completed and that required documentation (e.g., weld records, installation inspection reports, material inspection reports, pressure test reports, coating inspection reports, continuity resistance test, megger tests, etc.) has been included. Final acceptance shall be signified by signature and date on the work control document.

6.3.6 When BUYER’s “hold/witness” points are identified in the work control document, the SUBCONTRACTOR shall provide at least 48 hours advance notice.

NOTE: A BUYER’s “hold/witness” points may be waived by correspondence (e.g., e-mail) from the BUYER’s Construction Management Team, which will be included with the work control document.

6.4 Receipt Inspection

6.4.1 SUBCONTRACTOR’s procured permanent plant items shall be receipt-inspected by the SUBCONTRACTOR in accordance with their QAP prior to delivery to the work site. Items may be receipt-inspected at the site shops but prior to delivery at the installation area.

NOTE: Special receipt inspection requirements apply to SUBCONTRACTOR-procured items that are designated by the BUYER as Safety Significant. See article 6.7 of this specification for details.

6.4.2 When SUBCONTRACTOR fabricates BUYER’s permanent plant items, the Fabrication Work Control Document shall identify the final inspection(s) necessary for the BUYER to accept the fabrication. The BUYER’s inspection personnel shall perform final inspection(s). The BUYER’s inspection personnel shall indicate final acceptance of the fabricated item on behalf of the BUYER. Normally, application of
an acceptance tag will indicate acceptance and authorize the SUBCONTRACTOR to install the fabricated item.

6.4.3 When BUYER’s permanent plant items are provided, the SUBCONTRACTOR shall inspect and document all furnished items prior to accepting custodial responsibility. Discrepancies identified during inspection shall be immediately brought to the BUYER’s Construction Management Teams attention. The inspection shall include as applicable:

a. Labels, tagging and/or general identification of items.

b. Final Documentation Packages have been approved (signed & dated).

c. Quantity of items received.

d. Any visible damage to packaging (e.g., water marks, oil stains, crushed container, etc.).

e. Any visible damage to items (e.g., corrosion, scaling, cracks, broken pieces, obstruction or damage to rotating equipment, etc.).

f. Condition of visible coatings and/or paint.

g. Protective covers and seals installed.

h. Cleanliness of items.

i. Labeling is in accordance with the specifications or SOW.

j. Special Shipping and Handling requirements are addressed.

6.5 Construction Completion/Acceptance

6.5.1 Upon completion or cancellation of the work, the SUBCONTRACTOR shall notify the BUYER for formal turn over and acceptance. Independent systems or facilities, where construction is complete, may be subject to partial turnover at BUYER’s or SUBCONTRACTOR’s request. The SUBCONTRACTOR’s notifications will:

a. Verify that all applicable submittals are complete as required by the Master Submittal Log (MSL).

b. Verify that all applicable field Work Release(s) and work packages are complete and applicable documentation is submitted to the BUYER’s Construction Management Team.

c. Request a walk-down and finalization of a punch-list for partial and final work acceptance.

6.5.2 The BUYER’s Construction Management Team will arrange with the SUBCONTRACTOR a mutually agreeable time for a walk-down for complete or partial turnover.

6.5.3 The SUBCONTRACTOR will prepare a discreet punch list detailing all items required for completion for the specified turnover and will review the punch list with the BUYER’s Construction Management Team.
6.6 Noncompliance and Nonconformance

NOTE: This sub-section is to be used in conjunction with sub-sections 5.3 of this specification.

6.6.1 The SUBCONTRACTOR shall assure that services and processes that do not meet the requirements of the contract are identified, mitigated or controlled, and corrected. Non compliances that have significant cost, schedule, quality, safety, health or environmental implications shall be investigated to determine the extent of the noncompliance and its causes.

6.6.2 The SUBCONTRACTOR shall verify that actions taken to correct non compliances are complete and adequate to prevent recurrence. The relevant responses, actions required, verifications, and other documentation shall be transmitted to BUYER upon closure.

6.6.3 The SUBCONTRACTOR shall either correct nonconforming items immediately after the disposition has been approved by the BUYER, or control them to prevent inadvertent use, installation, or testing.

6.6.4 The SUBCONTRACTOR shall control nonconforming items by segregating affected items in a clearly identified and designated hold area, marking or tagging the items to indicate they are nonconforming, or instituting other measures approved by the BUYER’s Construction Management Team.

6.6.5 The SUBCONTRACTOR shall notify the BUYER’s Construction Management Team whenever nonconforming items cannot be restored to their original, specified condition (i.e., nonconformance dispositioned “REPAIR” or “USE-AS-IS”).

6.6.6 In selected cases, nonconforming item may be conditionally released for work or installation provided the nonconforming condition is not affected and the corrective action can still be performed. The BUYER shall be notified of such cases to authorize a conditional release. Otherwise, nonconforming items shall not be released until corrective actions have been completed and verified.

6.6.7 The SUBCONTRACTOR shall utilize one number tracking system to track nonconformances (i.e. LAWPS-NCR-0001, LAWPS-NCR-0002, etc.). The nonconformance data base (tracking system) shall include the ability to identify non conformances by system number, and tag/equipment number.

6.7 Commercial Grade Items/Dedication

6.7.1 The provisions of ASME NQA-1 for Commercial Grade Items (CGI) shall apply to the SUBCONTRACTOR. The SUBCONTRACTOR will be required to have a robust commercial dedication process and procedures in place. Experience with commercial grade dedication is essential during the performance of this work.

6.7.2 The SUBCONTRACTOR may dedicate FQA, EQA items or materials under their program. The SUBCONTRACTOR may also procure items or materials that are intended for dedication by the BUYER. In such a case, the Statement of Work shall
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identify the items or materials that the SUBCONTRACTOR is allowed to procure on behalf of the BUYER.

6.7.3 The commercial grade dedication process for items/materials/services shall be performed under the SUBCONTRACTOR’s Commercial Dedication Program. The BUYER’s Construction Management Team shall retain approval authority for items/materials and services obtained under the SUBCONTRACTOR’s Commercial Dedication Program.

6.7.4 To facilitate the procurement of items or materials that are intended to be dedicated, the SUBCONTRACTOR must submit their proposed Commercial Grade Item Plan procurement document to the BUYER for approval prior to ordering, in accordance with the following:

a. A CGI plan shall be approved by the BUYER prior to SUBCONTRACTOR ordering items or material to be dedicated.

b. The SUBCONTRACTOR submits for BUYER approval a proposed procurement document specifying the CGI item or material, the intended supplier, the Quality Assurance requirements, the procurement quality clauses to be invoked, and acceptance document at receipt.

NOTE: The acceptance criteria for receipt may relate to one or more critical characteristics for the item or material identified by the BUYER. In such an instance, SUBCONTRACTOR’s receipt-inspection activities may need to be repeated by the BUYER’s qualified personnel during processing of the CGI dedication plan package.

c. Receipt Inspections for SUBCONTRACTOR’s procured items shall coordinated with BUYER’s Construction Management Team inspection personnel.

d. The SUBCONTRACTOR shall order the Quality Level FQA or EQA item or material upon receipt of written authorization from the BUYER.

6.8 Suspect/Counterfeit Parts

6.8.1 Items furnished for this subcontract shall not include Suspect/Counterfeit Items (SCI) nor shall such items be used in performing any work under this subcontract. The SUBCONTRACTOR shall have an SCI Program that implements at minimum, the following requirements:

a. Assure adequate controls are in place to prevent delivery of suspect/counterfeit items to the project site.

b. The SUBCONTRACTOR shall verify during receipt inspections of items that none of the characteristics of suspect/counterfeit items are present. These characteristics are described in DOE Suspect/Counterfeit Items Guide DOE G 414.1-3
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c. Inspect SUBCONTRACTOR and lower-tier subcontractors owned, rented or leased equipment to confirm fasteners installed in the equipment are not marked with the suspect bolts head marks identified on DOE Headmark List.

d. Include the SCI requirements in all purchasing agreements, lower tier subcontracts, suppliers, and rental or leasing agreements.

6.9 Measuring and Test Equipment

6.9.1 Measuring and Test Equipment (M&TE) shall be properly calibrated, maintained, and controlled. When M&TE is used to perform inspections and tests, the M&TE calibration certificate shall be included with the inspection and test report.

6.9.2 Perform calibration at specified intervals based on the type of equipment, required accuracy, and frequency of use, stability characteristics, and other conditions affecting performance. Calibration shall have accuracy traceable to national standards (where they exist), and calibration standards shall have the accuracy to ensure that the M&TE will have the required tolerances. Maintain records and mark equipment to show calibration status.

6.9.3 When M&TE is found to be out of calibration, the SUBCONTRACTOR shall have a method to identify its use since the last calibration and methods to re verify acceptability of items previously tested.

6.9.4 Reference Standards shall have a minimum accuracy four times greater than that of the measuring and test equipment being calibrated to ensure that the reference standards contribute no more than one-fourth of the allowable calibration tolerance. Where this 4:1 ratio cannot be maintained, the basis for selection of the standard in question shall be technically justified.
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7.0 EXHIBIT A: HANFORD SITE PROCUREMENT QUALITY CLAUSES

Procurement quality clauses may be used for the acquisition of items and services. The clauses establish contractual obligations for quality program systems, identification, traceability, documents submittals, testing, reporting, qualification, special process controls, inspections, etc.

The clauses have been created as a convenient way for you to communicate your quality requirements to the supplier with a minimal effort on your part. Instead of writing the same quality requirements over and over on many Purchase Requisitions/Contract Requisitions or contract orders, you can write the clause number(s) in the QA Clauses section. Clauses with blank underlines require input by the user.

When you invoke a clause, you invoke it in its entirety. If only part of the wording meets your needs, do not invoke the clause. Instead, write your requirements in the body of the Purchase Requisition/Contract Requisition. Also, you need to be aware that the suppliers are NOT provided the instructions. The instructions are for your information only.

The selection of clauses should be compatible with the particular type of item or service to be procured. Certain items and services may require extensive controls throughout all stages, while others may require only a limited quality assurance effort in selected phases. QA quality clauses may be invoked on CQA procurements. Some factors that determine the extent of application are:

1. Importance of failure or malfunction to plant safety.
2. Complexity or uniqueness of the item/service.
3. Degree to which functional compliance can be demonstrated by inspection and test.
4. Quality history and degree of standardization of the item.
5. Impact on project, program schedules, and financial consequences.
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PREAWARD AND SUPPLIER FABRICATION

B01  Quality Assurance Program Submittal and Pre-award Survey
B04  Supplier Quality Program Evaluation
B07  Certified Quality Program
B10  Quality System for Materials Specifying Testing Per ASME
B12  Supplier Use of Calibrated Equipment
B13  Fabrication/Inspection/Test Plan
B14  Supplier Use of Software Controlled Instruments and Equipment Containing Embedded Software (Firmware)
B15  Supplier Use of Commercial off the Shelf Software
B16  Source Inspection
B17  Certified Electrical Inspector (Non-NEC-IAEI)
B18  Supplier Use of Spreadsheet Calculations Using Commercial off the Shelf Software
B19  First Article Inspection-Source
B22  Nonconformance Documentation and Reporting
B25  Certified Weld Inspector (CWI)
B28  Welding Procedures and Qualifications
B31  Nondestructive Examination Process

MATERIAL IDENTIFICATION

B32  Identification of Items with Part number/Model number
B33  Identification of Items with Catalog Cut
B34  Identification of Items
B37  Identification and Traceability of Items
B43  Identification of Age Control Items

TESTING AND TEST DATA

B46  Liquid Penetrant Material Certification
B49  Certified Material Test Report
B52  Inspection and Test Report
B55  Flame Test Report
B58  Calibration Report
B61  Certification of Calibration
B64  Repair and Calibration Services
B65  Nationally Recognized Testing Laboratory (NRTL) Listed or Labeled
B66  Nationally Recognized Testing Laboratory (NRTL) Listed or Labeled components in a system

INSPECTION AND ACCEPTANCE CRITERIA

B67  First Article Inspection/Test-Receiving
B70  Supplier Furnished Items
B73  Control of Graded Fasteners
B76  Procurement of Potentially Suspect or Counterfeit Items
B79  Certificate of Conformance
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B80  Certificate of Conformance for Commercial Grade Surveyed Procurements
B82  Recommended Spare Parts Listing
B83  Certificate of Conformance for Respiratory Protection Equipment
B84  Not Used

MATERIAL HANDLING

B85  Packaging/Shipping Procedures
B88  Direct Drop Shipment
1 QUALITY ASSURANCE PROGRAM SUBMITTAL AND PRE-AWARD SURVEY

The Offeror shall submit the quality assurance program manual that addresses the quality assurance programs identified herein. The formal submittal documentation (cover letter) shall identify the specific bid request and project.

If the Offeror's manual has been previously approved by the Buyer but is not current, the manual shall be updated and resubmitted to the Buyer with the proposal. If the manual has not changed since its previous approval by the Buyer, a statement to this effect shall be submitted with the proposal. The Buyer shall evaluate the Offeror’s Quality Assurance program prior to contract award. This evaluation may include a survey of quality program implementation at the Offeror’s facilities. If a program change is required, it will be identified to the Offeror prior to contract award. A deficient or inadequate program may be used as the basis to deny award of this contract.

Instructions

Related Clauses: B04 or B07

Clause B01 requires quality assurance program submittals from Offeror’s indicating that the QA program submitted will be used for the proposed work. Because this clause applies to the proposal process only, it is dropped when the Purchase Order/Contract Order is awarded. When Clause B07 is also invoked, the Offeror submits a copy of the current quality assurance program manual.
B04 SUPPLIER QUALITY PROGRAM EVALUATION

The Supplier shall document, implement, and maintain a quality assurance program which is consistent with [Standard], [Year of Edition], [Specific Requirements]. The Supplier's program is subject to review at all times by the Buyer. The Supplier's program, written for compliance with a quality assurance program standard other than the one imposed on the Purchase Order/Contract Order, may be acceptable if it complies with the quality assurance program requirements specified.

When subcontracting any portion of this Purchase Order/Contract Order, the Supplier is required to invoke the applicable quality assurance program requirements on the Subcontractor.

The Buyer reserves the right to verify the quality of work at the Supplier's facility, including any SUBCONTRACTOR’s facility. Access to a SUBCONTRACTOR’s facility shall be requested through the Supplier and verification may be performed jointly with the Supplier.

The Supplier shall, during the performance of this Purchase Order/Contract Order, submit proposed changes to the quality assurance program to the Buyer for review prior to implementation.

Instructions

Related Clause: B01

Clause B04 requires an evaluation of the Supplier's quality assurance program to assure compliance with the nationally recognized quality assurance program standard applicable to the specific procurement. An on-site evaluation is required when the supplier is not listed on the Evaluated Supplier List for the specified standard or when there is no alternate means of acceptance available.

Clause B04 may be invoked to require a full program or only those portions of the program applicable to the specific procurement.
B07   CERTIFIED QUALITY PROGRAM

The Supplier shall maintain the certified quality program (e.g., ASME, ISO, NIST, Federal Regulations) specified in the Purchase Order. A copy of the Supplier's current quality assurance program manual and Authorizing Certificate shall be submitted to the BUYER with the Proposal. The Certificate shall remain current for the duration of the Purchase Order/Contract Order. The Supplier shall notify the Buyer of Certificate cancellation or revocation.

Instructions

Related Clause:  B01

Clause B07 requires the Supplier to submit the Authorizing Certificate in addition to the quality assurance program manual. Acceptable Authorizing Certificates include, but are not limited to, the following:

6. ASME Section III, NCA 3800, ASME Boiler and Pressure Vessel Code
7. ASME Section III, NCA 4000, ASME Boiler and Pressure Vessel Code
8. ASME Section VIII, Boiler and Pressure Vessel Code, Division 1, Unfired Pressure Vessels, Appendix 10, Quality Control System
9. ISO 9001, Quality Systems - Model for Quality Assurance in Design/ Development, Production, Installation and Servicing
10. ISO 9002, Quality Systems - Model for Quality Assurance in Production and Installation
11. ISO 9003, Quality Systems - Model for Quality Assurance in Final Inspection and Test
12. National Institute of Standards and Technology (NIST), National Voluntary Laboratory Accreditation Program (NVLAP)
13. 10 CFR 50, Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants, Appendix B, Quality Assurance
14. 10 CFR 71, Packaging and Transportation of Radioactive Material, Subpart H, Quality Assurance
15. 10 CFR 72, Licensing Requirements for the Independent Storage of Spent Nuclear Fuel and High-Level Radioactive Waste, Subpart G, Quality Assurance
B10  QUALITY SYSTEM FOR MATERIALS SPECIFYING TESTING PER ASME

Materials shall be manufactured and controlled under a Quality System Program in accordance with the latest issue of ASME Section III, NCA-3800.

The manufacturer shall be audited, approved, and qualified by ASME, i.e., possess a Quality System Certificate (Material Manufacturer, Material Supplier).

The Supplier (if not the manufacturer) shall, as a minimum, document and maintain a Quality System, Identification, and Verification Program per NCA-3800.

These systems shall be used during performance of this Purchase Order/Contract Order and shall be subject to audit and approval by the Buyer or its representative, as warranted. The Supplier's Quality Program and Manufacturer's ASME certificate shall be submitted by the Supplier with the proposal.

Where such documentation has been submitted to the Buyer within the past 12 months and such documentation has not been revised, submittals are not necessary. Instead, the Supplier shall reference the Quality Program title revision and/or date and the manufacturer's name and ASME certification number and its expiration date.

Certified Material Test Reports:
The chemical analyses and mechanical results as specified by the Purchase Order/Contract Order shall be submitted prior to or with each shipment. Each report shall contain the following:

1. Product Description - Specification(s), Codes, Type of Material, etc.
2. Actual results of chemical analysis/mechanical testing in accordance with the provisions of the Code, standard and/or specifications.
3. The specification defining the chemistry/test requirements.
4. Traceability to the item tested (Heat No., Lot No., etc.).
5. The name and address of the manufacturer which shall be identified by letterhead, logo or other similar marking.
6. The manufacturer's ASME Certificate No. and expiration date.
7. The Purchase Order/Contract Order number and item to which the report applies.
8. The reports are for review and acceptance by the Buyer.

Instructions

Related Clause: B07

Clause B10 is invoked for all materials requiring ASME certification. If it is invoked with a welding material specification, it is approved by the requisitioner's welding engineer.
B12 SUPPLIER USE OF CALIBRATED EQUIPMENT

The Supplier shall submit certification stating that the Supplier owned equipment used by the Supplier in the performance of the work listed in the procurement documents has been calibrated utilizing standards whose calibration is traceable to the National Institute of Standards and Technology. If no such standard(s) is available, the Supplier shall submit for review and approval, documentation stating the basis of the equipment’s calibration. This certification shall include a report of actual calibration results. The documentation shall be identifiable to the equipment being used and to any acceptance criteria listed in the procurement documents. The report shall contain the signature, with printed name, of the authorized representative of the agency who performed the calibration.

1. Prior to the start of work, the Supplier shall submit the latest calibration certification/report certifying that all calibrated Supplier used equipment is in-calibration.

2. During the course of the contract, the Supplier shall submit a calibration certification/report certifying that all calibrated Supplier owned equipment was calibrated at any manufacture recommended or other prescribed intervals that occur during the life of the work, or whenever the accuracy of the equipment is suspect.

3. Upon completion of work that requires its use, the Supplier shall submit a closeout calibration certification/report certifying that all calibrated Supplier used equipment was recalibrated.

If at any time during the course of contract, the Supplier owned equipment’s as-found calibration measurements are out-of-tolerance; the Supplier shall notify the Buyer and submit a copy of the calibration report showing the discrepant as-found measurements. The Supplier shall evaluate the use of the equipment to determine if previously collected data is acceptable. The Supplier shall submit for approval written documentation of this evaluation, including, as necessary, recommendations for the recollection of previously collected data found to be unacceptable.

One copy of the all required documentation, unless otherwise specified, shall be submitted for review and approval.

Instructions

Related Clause: B14

Clause B12 is invoked for Suppliers working on the Hanford Site; whose deliverables are the data (raw or reduced) measured by the calibrated equipment itself or the results of engineering or environmental field analysis, evaluations, or models based on the data measured by the calibrated equipment. This clause may also be invoked when the Supplier will be making critical measurements of items or processes specifically identified in the procurement documents. For high risk projects, the BTR should contact the calibration agency listed on the calibration report for the supplier’s equipment closeout calibration, Item #3, for a copy of the standards’ next calibration report.

Quality Assurance Inspection Plan Acceptance Criteria for B12

When invoking this Clause include the following QAIP Inspection Characteristic:

1. “Verify receipt of Procurement Quality Clause B12 certificate or documentation for approval.
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B13 FABRICATION/INSPECTION/TEST PLAN
Fabrication/Inspection/Test Plan (Traveler)

The Supplier shall prepare a detailed fabrication/inspection/test plan (Traveler) for insertion of Buyer-designated source inspection/witness notification points. Prior to starting work, the plan shall be submitted to the Buyer for review, approval and insertion of BUYER’s designated inspection/witness notification points unless otherwise specified in procurement documents. The plan shall include the following:

1. Traceability to BUYER’s Purchase Order/Contract Order document number.
2. Description of items to be fabricated/tested/inspected (e.g., components, subassemblies, assemblies).
3. Sequential fabrication/process steps.
4. Sequential points for inspection and tests to be performed during fabrication/processing.
5. Method/procedure to be used for performance of inspection/test/fabrication, including:
   a. Each characteristic or attribute to be evaluated,
   b. The report form to be utilized,
   c. Specific Codes/Standard requirements as specified by procurement documents i.e., ASME, ASTM, ANSI, etc., and
   d. Sampling plans for final characteristics (e.g., AQL, lot size, inspection level), where applicable.

Subsequent revisions/modifications to the fabrication/inspection/test plan document require review and approval by the Buyer prior to implementation of the change. When subcontracting any portion of this Purchase Order/Contract Order, the Supplier is required to invoke the applicable quality assurance program requirements on the Subcontractor.

**Instructions**

Clause B13 is invoked whenever additional data is required for determining the requisitioner's source inspection/surveillance requirements at the Supplier's facility. Notification shall be provided in writing, by the Buyer, indicating Buyers’ approval of the Final Inspection Test (FIT) prior to start of work.
B14 SUPPLIER USE OF SOFTWARE CONTROLLED INSTRUMENTS AND EQUIPMENT CONTAINING EMBEDDED SOFTWARE (FIRMWARE)

When Supplier owned calibrated equipment used on the Hanford Site:
- Contains software or programmable hardware, or
- Is controlled by a software driven external device (computer), or
- Collects data which is processed, analyzed, reduced, or otherwise modified using software before submittal to the Buyer.

The Supplier shall submit a statement certifying that the operation of equipment’s programmable components is validated by calibration of the equipment. This statement shall list the equipment’s programmable components and shall warrant that all three requirements listed below are met. The statement shall be on the Supplier’s letterhead and signed, with printed name, by an authorized agent of the Supplier.

1. The equipment, including any software driven external device is calibrated, adjusted, and maintained as a unit, and
2. The calibration standards’ data measured by the equipment is processed, analyzed, reduced, or otherwise modified by the same programmable components used in normal operation, and
3. The code contained in the programmable components including any data files, used to process, analyze, reduce, or otherwise modify the measured values, cannot be altered by the user during normal operation of the equipment. This does not include operational or control data (such as run time or count time) entered into the system following approved procedures or manufacturer’s published instructions.

One copy of the documentation, unless otherwise specified, shall be submitted for review and approval prior to the equipment being used on site.

Instructions

Related Clause: B12

Clause B14 is invoked along with B12 whenever the Supplier used equipment contains programmable components. If any of the three requirements listed above is not met; then this clause cannot be used and the applicable software configuration control requirements must be invoked in the procurement documents.

Quality Assurance Inspection Plan Acceptance Criteria for B14

When invoking this Clause include the following QAIP Inspection Characteristic:

1. Verify receipt of Procurement Quality Clause B14 documentation.
B15 SUPPLIER USE OF COMMERCIAL-OFF-THE-SHELF SOFTWARE

The Supplier shall submit the following documentation for all engineering analysis/design, data analysis/reduction, and engineering/environmental modeling commercial-off-the-shelf (COTS) software\(^1\) (application) used in the performance of work listed in the procurement documents.

1. Description of the COTS software, including:
   a. Manufacturer’s name and address,
   b. COTS application’s title and version identifier
   c. Operating system and hardware platform that will be used,
   d. Manufacturer’s Technical Specifications or other published description of the COTS application’s theoretical basis of operation or conceptual/mathematical models.

2. Standard data set(s) used to verify operation of the COTS application.
   a. Data sets shall cover each function or mode of operation which will be used during the performance of the work listed in the procurement documents.
   b. When the COTS application’s range of operation cannot be verified by a single data set, the Supplier shall submit, as a minimum, data sets covering the upper and lower thirds of its range.

3. The results expected from the standard data set(s) including the basis for accepting the standard data expected results, such as:
   - Comparison with hand calculations,
   - Comparison with calculations using comparable proven problems,
   - Comparison with information from published data,
   - Comparisons with other validated computer programs, or
   - Comparisons with experiments and tests.

4. The output generated by the COTS application using the standard data set(s). This output shall include a statement warranting that the output accurately reflects the use of the standard data set(s) with the COTS application. The statement shall be on the Supplier’s letterhead and signed, with printed name, by an authorized agent of the Supplier.

When required by the procurement documents verification of the COTS application operation using the submitted standard data set(s) shall be witnessed a BUYER’s representative.

One copy of the documentation, unless otherwise specified, shall be submitted for review and approval.

\(^1\)COTS software refers to an existing application which will be implemented on a standard operating system without the need for modification of its executable/object code.

**Instructions**

Clause B15 is invoked whenever the Supplier will be using COTS software to prepare/verify design calculations, analyze or reduce data, or to model structures, processes, or environments. If the Supplier is using custom developed, proprietary software (not commercially available), or software that has been modified to perform the work listed in procurement documents; then this clause cannot be used and the applicable software configuration control requirements must be invoked in the procurement documents.

Quality Assurance Inspection Plan Acceptance Criteria for BX3

When invoking this Clause include the following QAIP Inspection Characteristic:

1. Verify BTR or QAE receipt of Procurement Quality Clause B15 documentation.
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**B16  SOURCE INSPECTION**
All items are subject to inspection at the Supplier's facility or Supplier's SUBCONTRACTOR’s facility by a BUYER’s quality assurance/quality control representative. Supplier shall notify Buyer at least 5 working days in advance of the time items will reach any inspection hold point established by the Buyer in the procurement package.

**Instructions**

Related Clause:  B13

Clause B16 is invoked whenever design requirements, client request or preplanning indicate a need for inspection of items at the Supplier's facility or a SUBCONTRACTOR’s facilities. Source Inspections should be planned:

1. if the item cannot be properly inspected at the time of delivery due to fabrication making critical areas inaccessible.
2. for a first article from a casting in order to assure subsequent items will be acceptable prior to production of large quantities.
3. if unique or special testing equipment is available at the suppliers facility and not at the Hanford Site.
4. if the item would have to be disassembled to view the critical features after delivery.
5. if the item will be drop shipped to another supplier. See PRO 268
6. if it would be more cost effective to repair the item at the suppliers facility prior to shipment to Hanford.
7. if your schedule commitments and goals do not allow the time to send it back to the supplier for repairs or corrections.
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**B17 CERTIFIED ELECTRICAL INSPECTOR (Non-NEC IAEI)**

Supplier personnel performing electrical inspections/tests shall be certified in accordance with the requirements specified in NQA-1 or another recognized national code or standard. Such codes or standards shall require the evaluation of the candidate’s education, experience, training, physical requirements and; either test results or capability demonstration. The inspection/test personnel shall be reevaluated & recertified at periodic intervals not to exceed 3 years.

The following documentation shall be submitted prior to the start of fabrication:

2. Evidence inspector has performed an electrical inspection within the past year, e.g. Past inspection reports or an affidavit by the supplier’s quality representative whom is not the same person as the inspector.
3. A current visual acuity examination. This exam must be performed annually. Approval shall be obtained from the Buyer prior to start of fabrication.

**Instructions**

Clause B17 is invoked when fabricating items/systems/components with electrical work in which inspection for acceptance is required.

This clause is used when the level of detail for performing inspections go above and beyond NEC IAEI inspections/tests, e.g. termination labeling & torque, point to point verification, megger & continuity testing etc…

The QAIP acceptance criteria: “Verify the Design Authority or QAE received Clause B17 documentation.”
**B18 SUPPLIER USE OF SPREADSHEET CALCULATIONS USING COMMERCIAL-OFF-THE-SHELF SOFTWARE**

The Supplier shall submit the following documentation for all spreadsheets used to perform mathematical calculations in the performance of work listed in the procurement documents.

1. Description of the commercial-off-the-shelf (COTS) software application used to develop/run the spreadsheet, including:
   a. Manufacture’s name and address,
   b. COTS spreadsheet application’s title and version identifier
   c. Operating system and hardware platform that will be used,
2. An electronic copy of the spreadsheet(s).
3. Description of the calculations, mathematical formulas, and embedded data used in the spreadsheet(s).
4. Standard data set(s) used to verify operation of the spreadsheet application.
   a. Data sets shall cover each calculation/function which will be used during the performance of the work listed in the procurement documents.
   b. When the spreadsheet’s range of calculations cannot be verified by a single data set, the Supplier shall submit, as a minimum, data sets covering the upper and lower thirds of its range.
5. The results expected from the standard data set(s), including the basis for accepting the standard data expected results, such as:
   a. Comparison with hand calculations,
   b. Comparison with calculations using comparable proven problems,
   c. Comparison with information from published data.
6. The output generated by the spreadsheet using the standard data set(s). This output shall include a statement warranting that the output accurately reflects the use of the standard data set(s) with the spreadsheet. The statement shall be on the Supplier’s letterhead and signed, with printed name, by an authorized agent of the Supplier.

One copy of the documentation, unless otherwise specified, shall be submitted for review and approval.

**Instructions**

Clause B18 is invoked whenever the Supplier will be using COTS spreadsheet software, such as Microsoft® Excel®, to prepare and use spreadsheets which perform mathematical calculations in support of work listed in the procurement documents. This clause is not required for spreadsheets used to simply display data or to perform built-in functions, such as sorting or summing columns/rows, which does not modify the entered data itself.

Quality Assurance Inspection Plan Acceptance Criteria for B18

When invoking this Clause include the following QAIP Inspection Characteristic:

1. Verify BTR or QAE receipt of Procurement Quality Clause B18 documentation.
B19 FIRST ARTICLE INSPECTION-SOURCE
The Supplier shall schedule a first article inspection for the BUYER at the Supplier's plant to demonstrate compliance with all Purchase Order/Contract Order requirements. A comparable inspection shall be scheduled at production change points or for specified articles following major tooling, process, or design changes, or subsequent to evident quality degradation. For a first article inspection, the Supplier shall present or demonstrate the following to the Buyer as a minimum:

1. Drawings, specifications, and other documentation used for manufacture, inspection, and test of the first article.
2. Objective evidence of inspection acceptance of tooling, processes, and test equipment used to produce the first article.
3. Objective evidence of the Supplier's inspection and acceptance of the first article.
4. Compliance with quality program requirements of this Purchase Order/Contract Order.
5. Other applicable documentation, data, demonstrations, tests, or evidence of conformance of the first article to requirements of this Purchase Order/Contract Order.

The Supplier shall notify the Buyer at least five working days before the first article is available for inspection.

Instructions
Clause B19 is invoked for hardware which is subject to repetitive manufacturing processes by the Supplier. The Supplier is required to demonstrate compliance with all Purchase Order/Contract Order requirements during the manufacture of the "first article."
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B22 NONCONFORMANCE DOCUMENTATION AND REPORTING

All nonconformances identified at the Supplier's facility with a proposed disposition of "Accept" or "Repair" shall be approved by the BUYER before any corrective action is taken by the Supplier on the nonconformance.

Accept: A disposition that a nonconforming item will satisfactorily perform its intended function without repair or rework.

Repair: A disposition requiring the processing of a nonconforming item so that its characteristics meet the requirements listed in the disposition statement of the nonconformance report.

A Supplier Nonconformance exists when:

1. A Purchaser’s technical or material requirement, or a requirement in a Purchaser approved Supplier document is violated; and
2. The nonconformance cannot be corrected by continuation of the original manufacturing process or by rework; or
3. The item does not conform to the original requirement but can be restored to a condition such that the capability of the item to function is unimpaired.

Nonconformances shall be documented by the Supplier on the Supplier's nonconformance form. After documenting the nonconformance, disposition and technical justification, the form shall be forwarded to the Buyer.

After the recommended disposition has been evaluated by the Buyer, the form shall be returned to the Supplier with a disposition of approval or rejection. The Supplier may take corrective action on the nonconformance only after the form is approved.

The Supplier's nonconformance form shall be shipped with the affected item.

Instructions

Clause B22 is invoked when ordering engineered equipment. This clause is not invoked when ordering by part or model number.

Buyer disposition of supplier non conformances shall be resolved prior to request for Source Inspections.
B25  CERTIFIED WELD INSPECTOR (CWI)

Supplier personnel performing weld inspections shall be certified as a Certified Weld Inspector (CWI) in accordance with the requirements specified in AWS QC-1. The following documentation shall be submitted prior to the start of fabrication:

2. Current and valid visual acuity examination. The examination must be performed annually.

Approval shall be obtained from the Buyer prior to start of fabrication.

Instructions

Clause B25 is invoked when welding is to be performed and weld inspection is required. Approval is obtained from the designated subject matter expert (i.e., certified Level III Weld Inspector).

B28  WELDING PROCEDURES AND QUALIFICATIONS

Welding procedures and personnel shall be qualified in accordance with the applicable AWS or ASME specifications as specified in the Purchase Order/Contract order. The Supplier shall submit copies of all welding procedures, Procedure Qualification Records, and Welder Qualification Records to be employed in the performance of this Purchase Order/Contract Order. Buyer approval is required prior to the start of fabrication.

Changes and revisions to welding documentation shall be submitted to the Buyer for review and approval prior to use. When subcontracting any portion of this Purchase Order/Contract Order, the Supplier is required to invoke the applicable quality assurance program requirements on the Subcontractor.

Instructions

Clause B28 is invoked when (1) the governing engineering documentation specifies welding in accordance with a recognized national standards and (2) the requisitioner's review/approval is required prior to start of Supplier's fabrication to assure that the Supplier's process and personnel qualifications comply with established requirements.

Approval is obtained from the designated welding engineer.
B31 NONDESTRUCTIVE EXAMINATION PROCESS

Nondestructive examination (NDE) personnel shall be qualified and certified in accordance with the recommended guidelines of the American Society of Nondestructive Testing's (ASNT) ANSI/ASNT CP-189 or ASNT SNT-TC-1A, unless otherwise specified in the ordering data.

The Supplier is not authorized to begin fabrication until the following documentation has been reviewed and approved by the BUYER:

1. NDE qualification and certification procedures
2. Personnel Level I, II, and III qualifications and certifications which include objective evidence of NDE training, formal education, examinations, experience, date of hire, and current eye examination
3. NDE method/examination procedures that are in accordance with the applicable codes/standards specified in procurement documents.

All NDE reports and radiographs shall be traceable to the item examined, include all essential examination parameters, and signed and dated by the NDE examiner. All NDE reports and radiographs shall accompany or precede shipment of material. Radiographs, and radiographic technique and examination reports shall be subject to approval by the Buyer prior to shipment of completed items.

When subcontracting any portion of this Purchase Order/Contract Order, the Supplier is required to invoke the applicable quality assurance program requirements on the Subcontractor.

Instructions

Clause B31 is invoked whenever design requirements specify that NDE is to be performed by the Supplier and NDE reports and/or radiographs are to be submitted. Approval is obtained from the Nondestructive Examination organization.
B32 IDENTIFICATION OF ITEMS WITH PART NUMBER/MODEL NUMBER

All items shall be identified with the part number/model number. Identification shall be on the item or the package containing the item. When the identification is on the item, such marking shall not impair the service of the item or violate dimensional, chemical, or physical requirements.

Instructions

Clause B 32 is invoked when verification of critical characteristics is required to a manufacturer’s part or model number for items or components. B32 is not invoked unless ordering by part/model number. The product data sheet is not required, but may be provided by the Supplier to facilitate Quality Control (QC) inspection of critical characteristics identified by the cognizant engineer. To require the product data sheet use clause B33
After QC inspection, a copy of the product data sheet accompanies the accepted product to the field.

B33 IDENTIFICATION OF ITEMS WITH PRODUCT DATA SHEET

The supplier shall submit a legible copy of the product data sheet (e.g., drawing, catalog page, brochure) that provides adequate information to enable the Buyer to verify the form and function of the article procured. One copy of the documentation, unless otherwise specified, shall accompany the applicable item(s) shipped.

Instructions

Clause B33 is invoked to require the supplier to provide the product data sheet to facilitate inspection of critical characteristics identified by the purchaser. After QC inspection, a copy of the product data sheet accompanies the accepted product to the purchaser.
B34    IDENTIFICATION OF ITEMS

All items shall be identified with the part number/model number. Identification shall be on the item or the package containing the item. When the identification is on the item, such marking shall not impair the service of the item or violate dimensional, chemical, or physical requirements.

The Supplier shall submit a legible copy of the product data sheet (e.g., drawing, catalog page, brochure) that provides adequate information to enable the Buyer to verify the form and function of the articles procured.

One copy of the documentation, unless otherwise specified, shall accompany the applicable item(s) shipped.

Instructions

Clause B34 is invoked when verification of critical characteristics is required, to a manufacturer's product data sheet, for items or components. B34 is not invoked unless ordering by part or model number. This clause requires the supplier to mark the item or package with the part/model number and provide a product data sheet. B34 is a combination of Clauses B32 and B33. It is redundant to impose B34 with B32 and B33.

The product data sheet is provided by the Supplier to facilitate Quality Control (QC) inspection of critical characteristics identified by the cognizant engineer.

After QC inspection, a copy of the product data sheet accompanies the accepted product to the field.

B37    IDENTIFICATION AND TRACEABILITY OF ITEMS

All items shall be identified with the part, heat, batch, or serial number and the Purchase Order and line item number. Identification shall be on the item or the package containing the item. Where identification is on the item, such markings shall not impair the service of the item or violate dimensional, chemical, or physical requirements.

Instructions

Clause B37 is invoked when traceability from the items to the documentation is required.
IDENTIFICATION OF AGE CONTROL ITEMS

The Supplier shall identify each item, assembly, package, container, or material, having limited shelf life, with the cure date or date of manufacture and the expiration date. The Supplier shall specify any storage temperatures, humidity and environmental conditions which should be maintained. Material shall NOT be furnished having less than 75 percent of total shelf life available at time of shipment.

Instructions

Clause B43 is invoked for the procurement of age-controlled items (e.g., rubber products, seals, diaphragms, adhesives) which may be stored for periods of time prior to use or installation (e.g., spare parts).

LIQUID PENETRANT MATERIAL CERTIFICATION

A certification of contaminant content shall be furnished for each batch number of penetrant, cleaner, developer, and emulsifier provided. The certification shall include the test results which meet the requirements of ASME Section V, Article 6, and the latest mandatory addenda or Purchase Order/Contract Order specified addenda. All materials and reports are subject to review and acceptance by the Buyer.

Instructions

Clause B46 is invoked whenever liquid penetrant materials such as penetrant, cleaner or developer is purchased.

CERTIFIED MATERIAL TEST REPORT

The Certified Material Test Report (CMTR) shall include actual results of all chemical analysis, tests, examinations, and treatments required by the material specification and this Purchase Order/Contract order. The CMTR shall be legible, reference applicable specification number and year of edition, and be traceable to the material furnished by heat or lot number. All reports are subject to review and acceptance by the Buyer. One copy of the documentation, unless otherwise specified, shall accompany the applicable item(s) shipped.

Instructions

Clause B49 is invoked whenever design requirements specify that Certified Material Test Reports are required. Note that the following sentence has been removed from the clause: All CMTRs shall be provided on report forms providing the manufacturer's name.
B52  **INSPECTION AND TEST REPORT**
The Supplier shall submit legible, reproducible copies of Inspection/Test Reports. The report(s) shall include the following:

1. Identification of the applicable inspection and/or test procedure utilized.
2. Resulting data for all characteristics evaluated, as required by the governing inspection/test procedure.
3. Traceability to the item inspected/tested, (i.e., serial number, part number, lot number, etc.).
4. Signature of the Supplier's authorized representative or agency which performed the inspections/tests.

One copy of the documentation, unless otherwise specified, shall accompany the applicable item(s) shipped.

**Instructions**

Clause B52 is invoked whenever records of inspections and/or tests, performed by the Supplier, are required to substantiate/document compliance with Purchase Order/Contract Order requirements. Examples of applicable documentation are:

1. Dimensional Inspection Records (in-process/final)
2. Visual Weld Inspection Records (in-process/final)
3. Protective Coating Verifications
4. Hardware Identification Verifications
5. Testing Verifications
6. Receiving Inspection Records
7. Special Process Verifications

B55  **FLAME TEST REPORT**
A flame test report shall be submitted. The report shall include the following:

1. Test procedure identification.
2. Resulting data as required by IEEE-383.
3. Traceability to the material tested (i.e., batch number, heat number, lot number).
4. Signature of the authorized representative or agency performing the tests.

Reports shall also reference the Purchase Order/Contract Order number.

One copy of the documentation, unless otherwise specified, shall accompany the applicable item(s) shipped.

**Instructions**

Clause B55 is invoked when the results or test data from flame tests are required by the Purchase Order/Contract Order.
**B58 CALIBRATION REPORT**

Certification stating the equipment furnished to the Purchase Order/Contract Order requirements has been calibrated utilizing standards whose calibration is traceable to the National Institute of Standards and Technology or other documented evidence must be submitted stating the basis of the calibration. In addition, the Supplier shall submit a report of actual calibration results. The report shall be identifiable to the acceptance criteria of the items submitted and shall meet Purchase Order/Contract Order requirements. The report shall contain the signature of the authorized representative of the agency verifying compliance. One copy of the documentation, unless otherwise specified, shall accompany the applicable item(s) shipped.

**Instructions**

Related Clause: B61

Clause B58 is invoked when the Supplier is required to provide the actual test data resulting from calibration tests performed on the item(s).

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**B61 CERTIFICATION OF CALIBRATION**

The Supplier shall submit legible, reproducible copies of Certificates of Calibration, which are traceable to the National Institute of Standards and Technology, for each article ordered. Each certificate shall be identified with:

1. The BUYER’s Purchase Order/Contract Order number.
2. Identification of the article to which the certificate applies.
3. The standards used for calibration. Each calibration certificate shall be signed by the Supplier's representative that is responsible for the calibration to attest to its authenticity.

One copy of the documentation, unless otherwise specified, shall accompany the applicable item(s) shipped.

**Instructions**

Clause B61 is invoked when calibration is performed and documentation of testing is required to provide verification of calibration. This clause applies to inspection devices used for determination of acceptance.
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**B64  REPAIR AND CALIBRATION SERVICES**

When repair and calibration services are required, the Supplier shall perform the repairs in accordance with the manufacturer's instructions. The report of calibration shall include:

1. Actual calibration or test data
2. The as-found data or condition
3. As-left data (after repair and calibration, before leaving the Lab) if different than the as-found data
4. The scope and description of repairs completed or attempted, if applicable.
5. The instrument identification or serial number

The report shall be signed by the Supplier's authorized representative.

One copy of the documentation, unless otherwise specified, shall accompany the applicable item(s) shipped.

**Instructions**

Clause B64 is invoked when repair and calibration services are procured for requisitioner-owned equipment.
B65  NATIONALLY RECOGNIZED TESTING LABORATORY (NRTL) LISTED OR LABELED

All electrical control panels and electrical equipment (a general term including material, fittings, devices, appliances, luminaries [fixtures], apparatus, and the like used as a part of, or in connection with, an electrical installation) delivered or brought onto the site in performance of this contract must be listed or labeled by an organization currently recognized by OSHA as a nationally recognized testing laboratory (NRTL).

A. All electrical equipment installed as part of this contract must comply with the National Electric Code (NEC), NFPA 70 and where applicable ANSI C2 (NESC). The BUYER reserves the right to inspect electrical equipment and installations. Contractor is responsible for notifying BUYER when installations are available for inspection.

B. Electric motors shall be manufactured and tested in accordance with NEMA MG-1 as applicable, or listed by an organization currently recognized by OSHA as an NRTL. Documentation of NEMA MG-1 compliance shall be made available to the BUYER upon request.

C. Electrical equipment and devices for which there is a UL category code identifying product categories must be Listed or Labeled by an OSHA recognized NRTL.

   1. The Canadian Standard Association (CSA) marking is currently recognized by OSHA as an NRTL when the label includes “US” or “NRTL” subscript.
   2. The European Union “CE” marking, Directive 93/68EEC, is not currently recognized by OSHA as an NRTL marking.
   3. The International Electrotechnical Commission (IEC) Standard 60529 for enclosures, (IPxx), is not currently recognized by OSHA as an NRTL label.

Note: for a list of approved NRTLs, see http://www.osha.gov/dts/otpca/nrtl/

D. Electrical equipment for which there is no listing category must be evaluated or tested using a method submitted to and approved by the BUYER prior to delivery of the equipment. A Field Evaluation performed by an NRTL prior to delivery is the preferred method for BUYER approval.

E. Electrical equipment is also subject to the “Counterfeit Suspect Item Program”.

Instructions

Clause B65 is intended to be applied to procurements of safety related electrical equipment and components. It may be applied to non-safety related items if desired. If the item procured is electrical equipment labeled as a Recognized Component (reverse UR), and it is intended to be installed as a component of a Listed assembly, make a note stating this on the QAIP. It is the responsibility of the specifying engineer to assure the Recognized Component is used in accordance with all appropriate requirements and conditions of acceptability as described in the listing category for the component.
B66  NATIONALLY RECOGNIZED TESTING LABORATORY (NRTL) LISTED OR LABELED COMPONENTS IN A SYSTEM

All electrical control panels and electrical equipment (a general term including material, fittings, devices, appliances, luminaries [fixtures], apparatus, and the like used as a part of, or in connection with, an electrical installation) delivered or brought onto the site, in performance of this contract, must be listed or labeled by an organization currently recognized by OSHA as a Nationally Recognized Testing Laboratory (NRTL).

The supplier of a system which has electrical components shall, as a minimum, supply the BUYER with a list of the components which includes the manufacturer and the NRTL which certified the component. The list should include the following:

<table>
<thead>
<tr>
<th>Component</th>
<th>Quantity</th>
<th>Manufacturer</th>
<th>NRTL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>2.</td>
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<tr>
<td>3.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Etc…</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The list shall be signed and dated by the person doing the verification.

Instructions

Clause B66 is intended to be applied to procurements of electrical systems such as; occupied trailers, connex boxes with lighting, skids, assemblies and any other system which when assembled would prevent verification upon receipt that ALL components are NTRL listed/labeled.
LAWPS Site Preparation “Quality Assurance”

B67 FIRST ARTICLE INSPECTION/TEST-RECEIVING

The Supplier shall deliver (state quantity) units of Purchase Order/Contract Order items within (state number of days) calendar days from the Purchase Order/Contract Order date to the BUYER at the location specified in the Purchase Order/Contract Order for first article inspection and/or tests. The shipping documents shall specify the Purchase Order/Contract Order and identify the lot, item, or other Purchase Order/Contract Order item designation. The characteristics and/or performance requirements which the first article must meet, and will be subjected to, are specified elsewhere in the Purchase Order/Contract Order.

Within (state number of days) calendar days after Buyer receives the first article, Buyer shall notify the Supplier in writing of the approval or disapproval of the first article. Notice of approval shall not relieve Supplier from compliance with all requirements of the specifications and drawings. A notice of disapproval shall cite the reasons for disapproval. Supplier shall submit additional first articles for inspection and/or testing or make repairs, changes, modifications as directed by the BUYER.

Instructions

Clause B67 is invoked for the procurement of hardware which is subject to repetitive manufacturing processes by the Supplier, but does not require specialized equipment to perform a complete inspection of the completed item.

The clause requires the Supplier to submit the "first article" to the Buyer, along with copies of the associated inspection documentation, for inspection/test at the requisitioner's facility to determine its compliance with the requirements of the Purchase Order/Contract Order.

B70 SUPPLIER FURNISHED ITEMS

Suppliers shall obtain the items on this Purchase Order/Contract Order directly from the original manufacturer. The supplier shall provide legible and reproducible documentation, with the delivery, that provides objective evidence that the items were provided by the original manufacturer. These may include the Purchase Order/Contract Order to the original manufacturer, shipping documentation, or manufacturer invoice; each of which identify the items obtained from the original manufacturer.

One copy of the documentation, unless otherwise specified, shall accompany the applicable item(s) shipped.

Instructions

Clause B70 is intended to be applied to procurements of commercial grade items ordered through a supplier where additional assurance is needed that the items have been obtained from the original equipment manufacturer (OEM). It requires that the supplier purchase the ordered items directly from the OEM and submit objective evidence, with delivery of the items, that this requirement has been met. Particular consideration should be given to commercial grade items designated for use in safety-related applications; such as, electrical components (circuit breakers, relays, fuses, heaters for overload relays, trip units, and assemblies such as panel boards, motor control centers, load centers, and switchgear) where the potential for unauthorized refurbishment exists if intermediaries are involved. Related Clause: B76
LAWPS Site Preparation “Quality Assurance”

B73   CONTROL OF GRADED FASTENERS
The provisions stated below are the minimum Department of Energy requirements for high strength graded fasteners produced in compliance with national consensus standards (e.g., SAE, ASTM, ASME).

1. Fasteners shall exhibit grade marks and manufacturer's identification symbols (headmarks) as required in the specifications referenced in the Purchase Order/Contract Order.

2. Any fasteners supplied with headmarks matching those displayed on the attached Suspect/Counterfeit Fastener Headmark list, or facsimiles thereof, shall be deemed to be unacceptable under the terms of this Purchase Order/Contract Order.

   Suspect Bolt Head Marking Card

   Suspect Stainless Steel Fastener Headmark List

3. When requested by the BUYER, the Supplier shall provide a legible and reproducible copy of the manufacturer's Certified Material Test Reports (CMTR). These CMTRs shall report the values of the actual chemical and physical tests performed on the represented fastener lot/material heat. Fastener packaging/labeling shall be traceable by lot number or other

4. Fasteners shall be inspected to verify compliance with the Purchase Order/Contract Order requirements. Additionally, fasteners may also be subjected to destructive testing.

4. When requested by the Buyer, the Supplier shall provide a Certificate of Conformance which must certify conformance and traceability of supplied materials to the subject Purchase Order/Contract Order. The document must be legible and reproducible.

Instructions

When requesting a Certified Material Test Report (CMTR), Clause B49 is invoked.
When a Certificate of Conformance is required, Clause B79 is invoked.
Clause B73 is invoked for procurements of high strength graded fasteners (e.g., Grade 5, 8, ASTM 325 fasteners). Clause B73 does not apply to SAE Grades 1, 2, and 4.
LAWPS Site Preparation “Quality Assurance”

**B76 PROCUREMENT OF POTENTIALLY SUSPECT OR COUNTERFEIT ITEMS**

Notwithstanding any other provisions of this agreement, the Supplier warrants that all items provided to the Contractor shall be genuine, new and unused unless otherwise specified in writing by the Contractor. Supplier further warrants that all items used by the Supplier during the performance of work for the Hanford Site, include all genuine, original, and new components, or are otherwise suitable for the intended purpose. Furthermore, the Supplier shall indemnify the Contractor, its agents, and third parties for any financial loss, injury, or property damage resulting directly or indirectly from material, components, or parts that are not genuine, original, and unused, or not otherwise suitable for the intended purpose. This includes, but is not limited to, materials that are defective, suspect, or counterfeit; materials that have been provided under false pretenses; and materials or items that are materially altered, damaged, deteriorated, degraded, or result in product failure.

Types of material, parts, and components known to have been misrepresented include (but are not limited to) fasteners; hoisting, shackles, turnbuckles, cable clamps, wire rope, rigging, and lifting equipment; cranes; hoists; valves; pipe and fittings; electrical equipment and devices; plate, bar, shapes, channel members, and other heat-treated materials and structural items; welding rod and electrodes; and computer memory modules. The Supplier's warranty also extends to labels and/or trademarks or logos affixed, or designed to be affixed, to items supplied or delivered to the Contractor. In addition, because falsification of information or documentation may constitute criminal conduct, the Contractor may reject and retain such information or items, at no cost, and identify, segregate, and report such information or activities to cognizant Department of Energy officials. Supplier shall provide a written statement that “all items furnished under this Purchase Order/Contract Order are genuine (i.e., not counterfeit) and match the quality, test reports, markings and/or fitness for use required by the Purchase Order/Contract Order.

The statement shall be on supplier letterhead and signed by an authorized agent of the supplier. Any materials furnished as part of this Purchase Order/Contract Order which have been previously found to be suspect/counterfeit by the Department of Energy shall not be accepted. For further information on suspect/counterfeit items, reference the Department of Energy (DOE) Guidance at: [http://www.hss.doe.gov/sesa/corporatesafety/sci/index.html](http://www.hss.doe.gov/sesa/corporatesafety/sci/index.html). Additional information may also be found by referring to: Managing Suspect and Counterfeit Items (SCI) in the Nuclear Industry; International Atomic Energy Agency Guide IAEA-TECDOC-1169.

**Instructions**

Related Clause: B79
Clause B76 applies to all procurements of equipment, components and assemblies, including procurements for repair and maintenance of equipment, which may include suspect/counterfeit items.
B79 CERTIFICATE OF CONFORMANCE

The Supplier shall provide a legible/reproducible Certification of Conformance. Supplier’s authorized representative responsible for quality shall sign the Certification of Conformance. This Certification of Conformance shall, as a minimum:

1. Identify the appropriate Purchase Order/Contract Order number under which the material, equipment, item or service is being supplied.
2. Each Order/shipment shall include a C of C unique to that shipment.
3. The quantity of each Line Item shipped shall be identified on the C of C.
4. The COC shall identify the specific procurement requirements to be met by the purchased item or service. The procurement requirements identified shall include any approved changes, waivers, or deviations applicable to the item or service.
5. For OCRWM-related items only, the COC shall also identify any procurement document requirements that have not been met together with an explanation and the means for resolving the nonconformances.
6. The COC shall be signed or otherwise authenticated by a supplier’s representative. For Quality Level 1 & 2 and OCRWM-related items, the person signing the COC shall be the one who is responsible for this QA function and whose responsibilities and position are described in the supplier’s QA program.
7. One copy of the documentation, unless otherwise specified, shall accompany the applicable item shipped. For subsequent shipments on this Purchase Order/Contract order, reference may be made to documentation provided with earlier shipments, instead of duplicating such documentation.

Instructions

Clause B79 is invoked for procurements where objective evidence in the form of a written document from the supplier is required to certify that the requirements of the Purchase Order/Contract Order have been met. To invoke the suspect/counterfeit items clause use B76.
Informational Comment: The requirements in the current clause are taken from the definition of a C of C from ASME NQA-1.
B80  CERTIFICATE OF CONFORMANCE FOR COMMERCIAL GRADE SURVEYED PROCUREMENTS
The Supplier shall provide a legible/reproducible Certificate of Conformance (C of C). The Supplier's authorized representative for quality whose responsibilities and position are described in the Supplier's QA program shall sign and date (or otherwise authenticate) the Certificate of Conformance. This Certificate of Conformance shall at a minimum:

1. The following Critical Characteristics (Input the Critical Characteristics) are verified in accordance with the program, process or controls (Input the Quality Program Criteria e.g., Processes or Controls including document and revision number) and documented on the C of C under which the product was manufactured.

2. Identify the appropriate Purchase Order/Contract Order number under which the material, equipment, item or service is being supplied.

3. Each order/shipment shall include a C of C unique to that shipment. For subsequent shipments on the same purchase order/contract order, reference may be made to documentation provided with earlier shipments, instead of duplicating such documentation.

4. The quantity of each line item shipped shall be identified on the C of C.

5. The C of C shall also identify any procurement documentation requirements that have not been met together with an explanation and the means for resolving the nonconformances.

One copy of the documentation, unless otherwise specified, shall accompany the applicable item shipped.

Instructions

Clause B80 is invoked when a Commercial Grade Survey for the item has been satisfactorily completed. It is necessary for the vendor to produce the ordered item under the same administrative controls that were qualified in the Commercial Grade Survey. State in the procurement document the critical characteristics and the vendor's documented program, process or controls (Input the Critical Characteristics) and (Input the Quality Program Criteria e.g., Processes or Controls including document and revision number) from the Commercial Grade Survey report that the item must be prepared under.

Notes: Personnel engaging in this procurement must identify the part number, model number or serial number in the procurement so as to notify the vendor.

B82  RECOMMENDED SPARE PARTS LISTING
The Supplier shall submit, with or prior to item shipment, a recommended spare parts list. The list shall provide the name and address of the original supplier of the replacement part, and the part's drawings, specification, or catalog identity including applicable change or revision information.

Instructions

Clause B82 is invoked when items are being ordered for which a spare parts inventory is considered necessary.
B83 CERTIFICATE OF CONFORMANCE FOR RESPIRATORY PROTECTION EQUIPMENT

The Supplier/Manufacturer shall provide a Certificate of Conformance (C of C) meeting the following requirements.

1. Each order/shipment shall include a C of C;
2. The C of C shall be on the Supplier’s/Manufacturer’s Letterhead;
3. The C of C shall be legible and reproducible;
4. A statement that the items provided meet the requirements of the Purchase/Contract Order;
5. BUYER’s Purchase/Contract Order number;
6. A statement, certifying that the items provided are approved by one or more of the following organizations;
7. National Institute for Occupational Safety and Health (NIOSH)
8. Others as approved by the Mission Support Alliance Respiratory Protection Program Administrator or designee.
9. A statement, certifying that all items provided are new, and were purchased directly from the original equipment manufacturer (OEM);
10. Quantity of items provided;
11. When Identification of Age Control Items (B43) procurement clause has been imposed, a Statement certifying that all items being supplied have 75% of the shelf life remaining at the time of shipment will be required;
12. Signature of the Supplier’s/Manufacturer’s authorized representative responsible for quality;
13. Identification of the item to which the Certificate of Conformance applies.

Instructions

Related Clause B70
When procuring air purifying cartridges B43
Clause B83 is invoked for procurements of Respiratory Protection Equipment where objective evidence in the form of a written document from the supplier that the items provided are approved by NIOSH, or others as approved by the RPPA, and purchased directly from the OEM (B70).
Verify that the Certificate received meets the following requirements as a minimum:

1. The C of C is legible and reproducible
2. The C of C is on the Supplier’s/Manufacturer’s Letterhead
3. The C of C identifies the PO/Contract number
4. Identification of the item or items being supplied.
5. A statement that the items provided meet the PO requirements
6. A statement that the items provided are NIOSH, or RPPA approved
7. A statement that the items provided are purchased directly from the OEM
8. The C of C identifies the quantity of each item supplied
9. A statement that 75% of shelf life remains when B43 Clause has been imposed
10. The C of C is signed

**B85  PACKAGING/SHIPPING PROCEDURES**

The Supplier shall prepare and submit for approval, prior to use, a procedure or plan for the packaging and shipping of items during the performance of this Purchase Order/Contract Order. The procedures shall include as appropriate cleanliness inspections prior to packaging, use of preservatives and coatings, descriptions of specially designed shipping containers, handling and rigging procedures, final inspections, and the type of transfer and shipping vehicles, as applicable to workscope. Examples of the packing and shipping inspection forms shall be included in the procedure or plan. Additional guidance may be found in ASME NQA-1-2008, *Quality Assurance Requirements for Nuclear Facility Applications*, Subpart 2.2, *Quality Assurance Requirements for Packaging, Shipping, Receiving, Storage, and Handling of Items for Nuclear Power Plants*.

6. **Instructions**

Clause B85 is invoked when normal commercial packaging may be inadequate or when extended storage is anticipated after receipt.

Clause B85 requires a Supplier to prepare packaging and shipping procedures. It is a general clause and additional specifics, such as the time of anticipated storage after receipt, the level of storage, and the storage conditions should be included in the procurement document. This clause is invoked only when the items shipped are unusually susceptible to damage during shipping and handling.

**B88  DIRECT DROP SHIPMENT**

This Purchase Order/Contract Order is issued on the condition that all specified material, certifications, and test reports shall be drop-shipped, by the ASME certified manufacturer directly and only to the Buyer per P.O./C.O. requirements.

Each item of property shall be clearly and permanently marked with an individual serial number which shall also appear on each specified certification and test report.

The above stated condition shall appear, unchanged, on Suppliers/or Suppliers orders to the ASME certified manufacturer.

**Instructions**

Related Clause: B07

Clause B88 is invoked for the procurement of ASME type materials. It may be applied when procuring materials from a supplier who represents an ASME authorized company, but who does not hold an ASME certificate himself. The supplier handles contractual items, billings, etc. but does not physically handle the items or materials.