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# Common Supplier Quality Clauses SEP-01-01-W03-CCI

## NOTE

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STANDARD ENTERPRISE PRACTICE

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### DOCUMENT HISTORY

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Various		Incorporated Customer's prohibited material references. This version is based on Rev E of SEP-01-01-W03(I) - To be Obsoleted		Added paragraph QC117a – Prohibited Materials in accordance with MIL-DTL-23200 (BPMI) MIL-DTL-917 (NNSB) and NNSB Appendix B	
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## **1.0 Purpose**

The purpose of this document is to identify common quality clauses used on Purchase Orders (POs) by DRS Technologies facilities using this document, hereinafter referred to as DRS.

## **2.0 Introduction**

This procedure applies to all DRS sites and its suppliers. It is intended to establish common language for supplier quality requirements related to DRS generated POs.

### **3.0 Process Owner**

DRS Quality Department

## **4.0 Responsibility**

The DRS Quality Organization using this document is responsible for the development and control of common supplier quality clauses.

It is the responsibility of the supplier to review all identified quality clauses and ensure compliance to the specified requirements (most current revision). When there is any confusion or conflict between identified clauses or other DRS documentation, then it is the supplier's responsibility to contact the DRS site buyer to resolve those issues prior to initiating work.



## **5.0 Stakeholders**

The stakeholders are the Quality and Supply Chain personnel at each DRS site who use these clauses.

## **6.0 Referenced Documents**

No specific revision numbers of documentation are called out in this document. The latest revision of the referenced document should be used.

## 7.0 Acronyms and Definitions

ABL	As Built List
CCA	Circuit Card Assembly
C of A	Certificate of Analysis
C of C	Certificate of Conformance (or Compliance)
C of T	Certificate of Test
COTS	Commercially available Off-The-Shelf (as defined in FAR 2.101)
DSR	Designated Supplier Representative
ESD	Electrostatic Discharge
M&TE	Measuring and Test Equipment
MHP	Mandatory Hold Points
MRB	Material Review Board
PCB	Printed Circuit Board
PO	Purchase Order
PWB	Printed Wiring Board
QA	Quality Assurance
QMS	Quality Management System
QPL	Qualified Products List
RAB	Registrar Accreditation Board
SCAR	Supplier Corrective Action Request
UID	Unique Identification

## 8.0 Procedure for Using Quality Clauses

### 8.1 Quality Clause Structure

The Quality clauses are categorized into 100, 200, and 300 series numbers. Quality Clauses shall be identified on all material POs.

The 100-series clauses are standard requirements for all DRS Sites. The 200-series clauses are commodity specific. The 300-series clauses are assigned to specific item numbers, POs, contracts or site locations.

Note: When there is a conflict between quality clauses on a purchase order, the higher number clause will take precedence (e.g., QC200-series clause takes precedence over a QC100-series clause).

### 8.2 QC 100 DRS Common Quality Clauses

**QC100 – Quality Management System:** The seller shall maintain a Quality Management System that complies with the requirements of AS9100, ISO 9001 or a DRS approved Quality Management System (RAB accredited registrar are preferred).

**QC101 – Identification, Preservation, Packaging, and Packing:** Unless otherwise noted on the PO, packaging and packing of all products shall be in accordance with Standard Commercial Packaging Practice ASTM D3951-10. All items are to be wrapped, cushioned, or packed compartmentalized to avoid physical or mechanical damage and deterioration during handling and shipping. Any single item weighing over 5 pounds (lbs.) shall be individually packaged. Parts shall not be intermingled unless otherwise specified. It is the supplier's responsibility to ensure that additional commercial carrier packaging requirements (Fed-Ex, UPS, DHL, Etc.) are taken into consideration when shipping DRS products. For example, "container must be able to withstand a 4' drop without causing damage to contents". Each box or container shall be labeled and have, as a minimum, the following information:

- Part number and revision;
- PO number;
- PO Line item;
- Quantity;
- Manufacturer's identification.

**QC102 – Source of Supply:** Suppliers are responsible to ensure compliance for materials used to manufacture parts supplied to DRS. Suppliers will only purchase materials from Original Equipment Manufacturers (OEMs), Original Component Manufacturers (OCMs) or the OEM/OCM authorized distributors. Purchasing from independent brokers or other sources is not authorized unless approved in writing by DRS.

Suppliers of electronic components shall have an established counterfeit avoidance program in compliance with SAE AS5553 Counterfeit Electronic Parts; Avoidance, Detection, Mitigation and Disposition. Distributors of electronic components shall certify that franchise agreements and/or written OEM/OCM reseller authorization is on file for all parts provided.

**For Broker part(s):** if the required items cannot be procured from the OCM, or the OCM's Authorized Distributors, DRS approved Independent Distributors (Brokers) may be used after receiving specific written approval. The Supplier must present a complete test plan for each part being procured in compliance with AS6081 Fraudulent/Counterfeit Electric Parts; Avoidance, Detection, Mitigation, and Disposition or CCAP101 Certification for Counterfeit Components Avoidance Program. The test plan must ensure the parts procured are functional and new

authentic parts. This test plan must be approved by DRS and referenced on the subject PO. Test results must be maintained by the supplier and presented to DRS upon request. Suppliers must be AS6081 or CCAP101 certified by an independent registrar.

**QC103 – Measuring & Test Equipment:** It is the seller's responsibility to ensure all equipment; including Customer Furnished Equipment (CFE), and Government Furnished Equipment (GFE), used to test and inspect DRS supplied parts are maintained and traceable to the National Institute of Standards and Technology (NIST) requirements. A calibration system in accordance with ISO 10012-1 Quality Assurance Requirements for Measuring and Test Equipment, ANSI/NCSL Z540-1 Calibration Laboratories and Measuring and Test Equipment – General Requirements, or equivalent will be used by the supplier.

**QC104 – Control of Quality Records:** All records related to the manufacturing, testing and inspection of parts supplied to a DRS PO will be maintained for a minimum of seven (7) years from delivery and final payment, unless otherwise specified by the individual DRS Company. These records shall be accessible, upon request, to DRS, DRS customers, or to regulatory and statutory authorities. All records submitted are subject to DRS review and approval prior to acceptance.

The Supplier must notify the Buyer before the destruction of quality records.

**QC105 – Supplier Material Review Board (MRB) Authority:** The Supplier does not have MRB authority to accept or repair nonconforming products being delivered. Any nonconformance on the final deliverable product to the purchase order, drawing, specifications or applicable documents must be submitted to DRS for approval prior to usage or shipment, unless otherwise documented.

**QC106 – Shelf Life:** No materials will be shipped to DRS with less than 80% of the full shelf-life as determined by the original manufacturer unless previously approved in writing by DRS. The expiration dates shall be clearly recorded on the packaging and shipping documents.

**QC107 – Temperature Sensitive Material:** The Supplier must identify each shipment of temperature sensitive material with the manufacture date, storage temperature and recommended shelf life. In addition to the normal identification requirements of name, type, size, lot/date code, and quantity identification, special handling conditions also must be recorded on the shipping document.

**QC108 – Test and Analysis Data:** The data from any qualification testing, functional testing, analysis test and/or lot acceptance test required for the manufacturing of DRS parts shall be maintained for a minimum of seven (7) years, and available upon request from the buyer.

#### **QC109 – Deleted**

**QC110 – Notification Responsibility:** The Supplier shall inform DRS immediately when there is a reason to suspect that products previously supplied to DRS may not be in accordance with the DRS drawing(s), specification, or purchase order requirements. The Supplier shall promptly inform DRS of any circumstance related to materials, manufacturing, processing, methods, design, etc. which may make a product susceptible to premature failure or otherwise place the safe operation of that product at risk. The notification shall describe the nature of the discovered anomaly, its applicability to DRS part number(s), quantities affected and the probable impact to the proper function/performance of the item supplied. DRS shall also be immediately notified in writing of any change to the Supplier's Quality Management Team responsible for company products, other significant changes in the Supplier's organization, changes in financial condition, changes in location, or change in ownership of the Supplier.

**QC111 – Control of Lower-Tier Suppliers:** The Supplier shall flow-down all applicable DRS purchase order requirements, including, but not limited to Terms and Conditions Federal

Acquisition Regulations (FAR), Defense Federal Acquisition Regulations Supplements (DFARs), and Quality Clauses to sub-tiers performing work involving this purchase order.

**QC112 – Supplier Corrective Action Request:** A Supplier Corrective Action Request (SCAR) shall be forwarded by DRS to a Supplier when corrective action is required. Upon notification of the nonconformance, the supplier shall take immediate containment action and complete the analysis of cause and proposed corrective action within ten (10) days or within the due date assigned to the SCAR. Failure to respond in a timely manner may result in the removal of the Supplier from the Approved Suppliers List. Upon notification of the nonconformance, shipments may be suspended until containment processes are enacted.

**QC113 – Certificate of Compliance, or Conformance (C of C):** Supplier shall submit with each shipment either on their packing list, or attachments, a certificate of conformance or certificate of compliance, which shall be dated and bear the signature and title of an authorized Suppliers Quality Representative, stating that the materials furnished to DRS are in conformance with the applicable requirements of the contract, drawings, and specifications. It shall also state that the supporting documentation is on file and will be made available to DRS, its customer(s), Government Representative, or any other regulatory or statutory agency upon request. Certification must include the following:

- The supplier's full name and address;
- DRS purchase order number;
- DRS part number, revision, and as applicable, serial numbers;
- PO quantity ;
- Quantity shipped;
- Lot / Date Code;
- Name of lower-tier supplier and description of service provided (if applicable);
- Authorized signature and date;
- Certificate or C of C by the supplier declaring the product or service has met all the requirements of the purchase order, including drawings and specifications at the prescribed revision level.

An example of an acceptable statement of Certificate of compliance/conformance is as follows: "This is to certify that all items noted are in conformance with the contract, drawings, specifications, and other applicable documentation, and that all process certifications, chemical and physical test reports are on file at this facility and are available for review by DRS Technologies"

If the Supplier is not the original fabricator, processor, or assembly source of the product(s) which makes up the deliverable end item, the Supplier shall obtain and maintain lower-tier supplier/processor C of Cs documentation on file for a minimum of seven (7) years. Unless specifically required per purchased order, the Supplier's lower-tier supplier/processor C of Cs shall be made available to DRS, DRS customer(s), authorized Government Representative, or any other regulatory or statutory agency upon request.

**QC114 – Parts Substitution:** Part substitutions are not authorized unless DRS and/or DRS customers have approved them in writing as evidenced by a formally released DRS alternate parts document, other document or instruction. The supplier shall notify DRS of any End of Life, obsolete or Form, Fit, or Function issues for ten (10) years beyond the award date of the purchase order.

**QC115 – Material Safety Data Sheet (MSDS):** Operational Safety and Health Administration (OSHA) Global Harmonized System (GHS) (formerly MSDS and label requirements): Each purchased product shipment shall contain appropriate hazard and precautionary information using Safety Data Sheets (formerly MSDS), and labels shall be in accordance with GHS requirements. Receiving Inspection shall forward a copy to the DRS site Safety Department.

**QC116 – Right of Access:** During the performance of the order, DRS, DRS Customers, and/or a regulatory or statutory agency including Government Representatives, reserve the right to attend, review, and participate in the Supplier's Quality System and associated manufacturing processes including inspection and testing of any work related to this contract. DRS, DRS Customers, and/or regulatory or statutory authorities shall be afforded the right to verify at the supplier's premises (or Supplier's subcontracting premises) that the supplier's product conforms to all specified requirements.

**QC117 – Mercury Prohibition:** The supplies furnished under this Purchase Order shall not contain functional mercury. Furthermore, external contamination by metallic mercury or mercury compounds shall be cause for rejection. The Supplier shall notify DRS prior to proceeding with manufacturing or shipping, if the presence of mercury or mercury contamination is suspected. The Supplier shall perform a suitable test to verify the suspicion. The deliverable materials shall not come into direct contact with mercury containing devices employing only a single boundary of containment. A single boundary of containment is one which is not backed by a second seal or barrier to prevent contamination in the event of rupture of the primary seal or barrier. This requirement does not preclude the use of fluorescent lighting fixtures or fixtures employing mercury vapor lamps, which contain no more mercury per lumen than a comparable fluorescent lamp.

**QC117a – Prohibited Materials:** Unless specifically called out by DRS procurement documents or approved drawings, the materials listed in Table 1 shall not be used in the manufacture of items delivered to DRS CCI.

Exceptions may be made subject to the following notification, evaluation, review and approval process.

*Where there is no suitable substitute material and performance, function, reliability, maintainability, life cycle or cost of the item would be adversely affected, the supplier shall notify DRS in writing prior to production and identify the type, location and amount of material to be used. The notification shall include an evaluation of all alternatives considered.*

**Table 1: Prohibited Materials**

Adhesive Tape	Lithium
Aluminum Electrical Conducting Wire	Low Melting Point Metals
Antimony and Alloys	Magnesium
Asbestos	Mercury & Mercury Compounds (see QC117)
Barium	Ozone Depleting Substances
Bismuth and alloys	Polychlorinated Biphenyls (PCBs)
Boron Trifluoride	Polyvinyl Chloride (PVC)
Brass with Pb > 1%	Radioactive Materials
Bronze with Pb > 1%	Selenium
Cadmium	Silicone
Chromium & Chromium Compounds	Silver
Corrosion Inhibitors	Teflon
Flammable materials	Thermal compound (for electrical connectors and socket mounted components)
Fragile or Brittle materials	Thiosulfate
Freon solvents	Tin and alloys
Fungus Susceptible materials	Toxic Pyrolytics
Lead and alloys	Zinc, alloys and chromates
Liquid masking material (for electrical connectors and socket mounted components)	

**QC118 – Government Furnished Material / Customer Furnished Material:** (Ref. FAR Part 45, Subpart 245) When applicable, material supplied by DRS customer(s), and/or material supplied by the Government to be incorporated into the Supplier’s finished product shall be inspected upon receipt for evidence of acceptance, and will be maintained throughout the manufacturing process. Equipment, tools, gauges, etc. supplied by DRS, DRS customer(s), and/or the Government to be used while processing the Supplier’s finished product shall be inspected upon receipt for evidence of acceptance, calibration, etc., and will be maintained throughout the manufacturing process.

**QC119 – Specifications:** Products supplied shall be in strict compliance to specifications and drawings identified on the Purchase Order, including but not limited to the most current revision of Military Specifications, specified, other specifications, as specified, processes/procedures, referenced documents or requirements that may be required by the PO. Only approved drawings can be used to demonstrate product acceptance.

**QC120 – Foreign Object Debris (FOD) Prevention and Part Cleanliness:** The Supplier shall conduct production processes appropriate to prevent, detect, and remove all FOD from product(s)



during manufacture and provide parts clean and free of all FOD prior to shipment to DRS. FOD contamination will be cause for rejection of material.

**QC121 – First Article Inspection:** A first article inspection in accordance with AS9102 or a DRS approved process is required for this purchase order if one of the following apply:

- First time submission (part or new supplier);
- Revision change affecting form, fit, or function;
- A process change used to manufacture the part;
- Change in manufacturing location (facility);
- 24 months or longer have passed since the supplier is last produced part;
- As requested by DRS.

All first article inspections performed by the seller will be accompanied with a First Article Inspection Report (FAIR) and all other approved documentation showing conformance to the contract, purchase order, drawing, or performance requirements specified by DRS.

Note: This clause does not apply to COTS Items.

### 8.3 QC200 DRS Commodity Specific Quality Clauses

**QC201 – Solderability:** All parts that require soldering shall meet industry standards for hand and machine soldering. The supplier shall ensure compliance to IPC/EIA J-STD-002 Solderability Tests for Component Leads, Terminations, Lugs, Terminals and wires. Components that require tinning shall be tested and certified to IPC/EIA J-STD-002 Section 4.3.1 Test "E" Wetting Balance Test (Leaded Components); Section 4.3.2 Test "F" Wetting Balance Test (Leadless Components); and, IPC/EIA J-STD-013 Implementation of Ball Grid Array and Other High Density Technology Outlines for Ball Grid Arrays. The Supplier shall retain all records of assembly and inspections/tests verifying compliance and shall make these records available upon request for a period of seven years following the last delivery on the applicable PO.

The Supplier shall verify that all Moisture Sensitive Devices (MSD) provided and/or purchased must comply with the baking requirements of IPC/JEDEC J-STD-033 Standard for Handling, Packing, Shipping, and Use of Moisture/Reflow Sensitive Surface Mount Devices and IPC/JEDC J-STD-020 Moisture/Reflow Sensitivity Classification for Non-hermetic Solid State Surface Mount Devices.

**QC202 – Electrostatic Discharge (ESD) Control:** All electrostatic sensitive devices shall be packaged, marked and handled in compliance with ANSI/ESD S20.20 Protection of Electrical and Electronic Parts, Assemblies and Equipment (Excluding Electrically Initiated Explosive Devices), or equivalent.

**QC203 – Printed Wiring Boards (PWBs):** PWBs will comply with IPC-A-600 Acceptability of Printed Boards unless otherwise specified.

Note: The supplier will default to Class 3 requirements if the class is not otherwise specified on the PO or other DRS supplied documentation.

Note: This clause does not apply to COTS Items.

**QC204 – Circuit Card Assemblies (CCAs):** CCAs will comply with IPC-A-610 Acceptability of Electronic Assemblies unless otherwise specified.

CCAs will comply with IPC-J-STD-001 Requirements for Soldered Electrical and Electronic Assemblies unless otherwise specified.

Note: The supplier will default to Class 3 requirements if the class is not otherwise specified on the PO or other DRS supplied documents.

Note: This clause does not apply to COTS Items.

**QC205 – Wiring Harnesses:** Cables and wiring harnesses will comply with IPC/WHMA-A-620 Requirements and Acceptance for cable/Wire Harness Assemblies unless otherwise specified. Cables and wiring harnesses must be 100% electrically tested per IPC/WHMA-A-620. Note: The supplier will default to IPC/WHMA-A-620 Class 3 requirements if the class is not otherwise specified on the PO or other DRS supplied documents.

Note: This clause does not apply to COTS Items.

**QC206 – Rework/Repair Authorization of Circuit Card Assemblies:**

- Rework shall be in accordance with IPC-7711/7721 Rework, Modification and Repair of Electronic Assemblies.
- Repair shall be in accordance with IPC-7711/7721 Rework, Modification and Repair of Electronic Assemblies, only after approval by DRS. (Reference QC105.)

**QC207 – Moisture Sensitive Components:** The supplier shall ensure packaging and handling of all moisture sensitive components, as classified by, and in accordance with IPC/JEDEC J-STD-033 Standard for Handling, Packing, Shipping, and Use of Moisture/Re-flow Sensitive Surface Mount Devices and IPC/JEDC J-STD-020 Moisture/Reflow Sensitivity Classification for Non-hermetic Solid State Surface Mount Devices, or other documented procedure.

**QC208 – Magnetic Core Packaging Requirement:** Magnetic Cores shall be bagged/boxed in a manner to prevent contact with each other.

**QC209 – Deleted**

**QC210 – Certification of Special Processes:** If drawings and/or specifications listed in this purchase order require special processes at the seller or the seller's sub-tier, these processes shall be documented, reviewed and approved by DRS prior to production. Changes to any previously authorized procedures require resubmittal, review and authorization. These processes include, but are not limited to, the following:

- Soldering and Cleaning of Printed Wiring Assemblies;
- Welding;
- Destructive Testing;
- Rubber Bonding;
- Alloy Identification;
- Brazing;
- Bonding;
- Casting;
- Chemical Surface Treatments;
- Plating;
- Painting;
- Ultrasonic Inspection;
- Conformal Coating;

- Metal Heat Treating;
- Programming/verification of programmable memory devices;
- Software procedures (other than equipment specific);
- Others as specified on Purchase Order.

#### 8.4 QC300 DRS Specific Quality Clauses

**QC301 – Certificate of Analysis (C of A):** A C of A is required to accompany all materials supplied to an individual purchase order. The C of A will include:

- Manufacturer's name;
- Country of origin/melting/smelting;
- Specification number;
- Material grade;
- Material condition;
- Size;
- Heat lot;
- Date Code;
- Chemical analysis;
- Physical properties applicable to the procured material.

The Supplier shall ensure that all personnel performing special processes such as welding, soldering, and non-destructive testing are certified to perform the special process in accordance with the requirements of the referenced PO, and any specifications referenced directly or indirectly therein. The Supplier shall ensure the associated equipment used for these processes is certified, as appropriate.

**QC302 – Certificate of Test (C of T):** All parts supplied to this purchase order will be accompanied by a C of T. The C of T will be dated and signed by the responsible company representative certifying the supplied parts meet all purchase order, specification, and drawing requirements from the buyer. Certifications must include the following:

- DRS PO Number;
- DRS Part Number, Revision, Serial Numbers and Date/Lot Codes where applicable;
- Purchase Order Quantity;
- Quality Shipped;
- Name of approved lower-tier supplier and descriptions of service provided (if applicable);
- Authorized signature and date;
- Test Results;
- Name and Address of the tester or independent laboratory;
- Date and run time, if applicable.

**QC303 – Unique Identification (UID) marking requirements:** Unique Identification (UID) marking on labels, decals or metal plates shall be per MIL-STD-130 Identification Marking of U.S. Military Property. The UID marking shall have a minimum of Grade B when verified per ISO/IEC

15415 Information Technology Automatic Identification and Data Capture Techniques. Bar Code Symbol Print Quality Test Specification – Two-Dimensional Symbols. Sampling of the verification of the UID marking requirements shall be per ANSI/ASQC Z1.4 Sampling Procedures and Tables for Inspection by Attributes using general Inspection Level II and single sampling plans for reduced inspection at an Acceptance Quality Limit (AQL) of 1.0. The first and last UID marking on labels, decals or metal plates of the lot shall be part of the samples that are verified.

For deliverables: a C of C stating that the labels, decals or metal plates were manufactured in accordance with MIL-STD-130 Identification Marking of U.S. Military Property and verified per ISO/IEC 15415 Information Technology, Automatic identification and data capture techniques—Bar Code Symbol Print Quality Test Specification –Two-Dimensional Symbols. The C of C shall also state the Grade that was achieved when verified per ISO/IEC 15415: A legible and reproducible copy of the verification that was performed on the labels, decals or metal plates of the sample shall be included with each shipment.

**QC304 – Personnel and Equipment Certifications:** The Supplier shall ensure that all personnel performing special processes such as welding, soldering, plating, non-destructive testing, etc. are certified to perform the special process in accordance with the requirements of the specification, the P.O., or any specifications referenced directly or indirectly therein. The Supplier shall ensure the associated equipment used for these processes is certified as appropriate.

**QC305 – Qualified Products List (QPL):** The supplier providing products such as primers, enamels, oils, welding rod, batteries, switches, regulators, etc., direct to DRS Integrated Master Scheduling (IMS) are responsible to furnish these products as listed on the applicable Qualified Products List (QPL), or have been approved for inclusion on such list. They must substantiate the qualification by listing the product, the name of the manufacturer, the QPL number, revision and date of the applicable QPL. If there is shelf life for the product, the expiration date must be noted. The QPL information must be noted on the certification for QPL products shipped to IMS. Results of tests shall be requirements by the supplier in accordance with the requirements of Section (7) of the QPL. The supplier accomplishing final surface finishing operations such as painting or who install component parts or assemblies using QPL products, as outlined above, must substantiate the qualification by listing the product, the name of the manufacturer, the QPL number, revision, and the date of the applicable QPL on the certification (C of C) for component parts or assemblies shipped to DRS IMS. If there is a shelf life for the product, the expiration date must be noted on the certification and the product.

**QC306 – Printed Wiring Boards (PWBs):** PWBs shall be fabricated and tested in accordance with the applicable drawing. Solderability testing shall be in accordance with J-STD-003 Solderability Tests for Printed Boards. 100% Net List Testing is to be performed on all lots.

PWBs shall be rejected if all of the following are not provided:

- One coupon per panel is to be maintained by the supplier. (Reference QC104.)
- Each PWB, and its associated coupon, shall be marked with a serial number traceable to the production panel.
- A copy of the lot inspection and acceptance data.
- A microsection report with the plated through hole copper thickness recorded for each inspection lot.
- A serial number list showing the final disposition of all PWBs/panels in the production lot.
- PWBs shipped to DRS must be packaged with desiccant and a moisture indicator.
- Date codes on PWBs must not exceed 365 days before the date of shipment to DRS.

NOTE: PWBs with date codes exceeding 365 days may be shipped to DRS with prior written approval. If the PWBs pass solderability testing, the boards will be accepted.

Note: This clause does not apply to COTS Items.

**QC307 – Cable Harness Testing:** Supplier shall provide to DRS the continuity test detailed results for all short and open connections that verify conformance to specifications.

**QC308 – Calibration Requirements:** The item(s) on this purchase order shall be calibrated in accordance with the requirements of ANSI/NCSS Z540-1 Requirements for the Calibration of Measuring and Test Equipment or ISO 10012-1 Quality Assurance Requirements for Measuring Equipment and traceable to the National Institute of Standards and Technology (NIST). The subcontracting, assigning, or transferring of any activities covered by this purchase order to another supplier facility/location or sub-supplier shall be approved by DRS site's Quality Department.

The following information is to be submitted to DRS for each item of Material & Test Equipment (M&TE) completed.

a) Certification of Calibration and/ or Record of Calibration shall contain the following information:

- Title of document.
- Supplier's name and address.
- DRS name and address.
- Description and unique identification of the item calibrated.
- Condition of the item calibrated if not operational.
- Date calibration performed.
- Identification of the procedure(s) used.
- Identification of the calibration service provider's equipment, standards used and last calibration date.
- Environmental conditions (temperature and humidity).
- Test Report detailing As-Found and As-Left conditions.
- Reference to any independent Out-Of-Tolerance Condition Report.
- Signature and title of the person who performed the calibration.
- Statement that supplier equipment and reference standards utilized to calibrate DRS M&TE are traceable to NIST.

b) Attach the calibration sticker to the face area of any stackable equipment where the sticker will not impede visibility or functionality. Sticker must indicate the next calibration due date at a minimum.

**QC309 – As-Built List (ABL):** The Supplier shall track and record the as-built configuration by serial number including serialized lower level subassemblies. An ABL including the part number, serial number (when applicable), lot control numbers (when applicable), quantities, completion date and ship-to location shall be provided with the shipment.

**QC310 – Flow Plan – Manufacturing, Inspection, and Test:** The Supplier shall provide a flow plan (any format: diagram, traveler, etc.) which documents the sequence, location, and description

of manufacturing processes, inspections, and tests. The Flow Plan shall be submitted for DRS approval within thirty (30) days prior to use.

**QC311 – Circuit Card Assembly (CCA) Test:** The Supplier shall perform 100% electrical testing on the CCAs as required by purchase order to identify manufacturing defects prior to delivery. Tests such as In-circuit Test (ICT), Bed-of-Nails, Flying Probe or other Manufacturing Defect Analyzer (MDA) may be used. CCA Test Reports including the CCA Test procedures conducted, pass/fail results by serial number, and authorization by a representative of the Supplier's Quality function shall accompany each shipment.

**QC312 – Deliverable Data – Nondestructive Test (NDT) Report:** The Supplier shall provide a copy of any NDT reports (radiographic, ultrasonic, penetrant, etc.) for each item, authorized by a representative of the Supplier's Quality function, with each shipment.

**QC313 – Deliverable Data – Dimensions:** The Supplier shall provide a final inspection report of critical dimensions for each item in Supplier format, and as authorized by a representative of the Supplier's Quality function with each shipment.

**QC314 – Deliverable Data – Dimensions:** The Supplier shall provide a final inspection report of dimensions for each item in Supplier format, and as authorized by a representative of the Supplier's Quality function, with each shipment.

**QC315 – Acceptance Test Procedures (ATP):** The Supplier shall generate an ATP for final acceptance testing. The ATP shall include equipment lists, equipment calibration status, and test procedure and data sheet(s) necessary to verify the functional requirements, weight, and outline of dimensions required by the equipment specification. This ATP and any subsequent changes must be submitted for approval within thirty (30) days prior to testing deliverable end items.

**QC316 – Deliverable Data – Acceptance Test Procedures (ATP):** The Supplier shall provide final complete detailed ATP data for each item, in Supplier format, and as authorized by a representative of the Supplier's Quality function with each shipment.

**QC317 – Deliverable Data – Repair Report:** The Supplier shall provide a repair report, authorized by a DRS representative and the Supplier's Quality function, that documents the materials, reason for repair and activities utilized in returning the equipment to fully functional status.

**QC318 – Test/Inspection Report Data:** When specified on the drawing or specification, test/inspection report data sheets are required with the product shipped. The data must include the actual measured value and be traceable to the product lot code or serial number.

Test/Inspection records shall be retained by the seller for a minimum of seven (7) years, or longer if indicated in the Purchase Order. These records shall be available upon request, to DRS, or the DRS Customer(s). Supplier must notify Buyer before destruction of quality records. As an alternative to the retention requirement, the Supplier may submit test/inspection records with the shipment. Test/Inspection records data must be identified as to the material furnished by PO number and part number, and signed (including title) by the Supplier's authorized representative.

All records submitted are subject to DRS review and approval prior to acceptance.

**QC319 – Source Inspection at Seller's Facility:** Parts and materials supplied to this PO require source inspection by DRS or Government Representative prior to shipment. This requirement must not be bypassed without written authorization from the DRS buyer. The Supplier shall notify the DRS at least ten (10) days in advance of the date material is expected to be ready for inspection. Mandatory Hold Points (MHP) may be required. DRS may designate MHP defining operations in the Supplier's manufacturing and/or inspection sequence that are required to be witnessed by DRS or its Customer prior to completion by the Supplier. This activity shall be

performed in such a manner to not disrupt normal processing and shall be conducted on a non-interference basis. If any inspection or test is made by DRS, and/or DRS customers, of a Supplier or a subcontractor, the Supplier without additional charge, shall provide a safe place to work and reasonable facilities and assistance for the convenience of DRS, and/or its Customer(s) in the performance of their duties. If DRS and/or DRS Customer(s) requires that an inspection or test is made at a point other than at the premises of the Supplier or a subcontractor, it shall be at the expense of the DRS except as otherwise provided in the PO; Provided that, in case of rejection, DRS shall not be liable for any reduction in value of samples used in connection with such inspection or test.

**QC320 – Government Source Inspection (GSI):** If specified in the PO, Government Source and/or Process Inspection (GSI) shall be required prior to shipment from the Supplier's facility. Upon receipt of this order, promptly notify and provide a copy of this purchase order to the Government Representative who normally services the facility so that appropriate planning for Government inspection can be accomplished. In the event the representative cannot be located, Supplier shall contact the DRS Purchasing Representative. Unless otherwise agreed to in writing, the Supplier shall provide the Government Representative with:

- a. Ten (10) working days advance notification of readiness for performance or witnessing of government designated inspections or test.
- b. All applicable documents requested and reasonable conditions for conducting or witnessing the inspection or test.

**QC321 – Machined Parts:** When the following parts, characteristics or processes are required by drawings, the supplier shall comply with the following additional instructions:

- a. Serial Numbers: The supplier must contact the DRS Purchasing Representative and request serial numbers before manufacturing begins. Serial numbers are controlled and issued by DRS to avoid duplication and meet specification requirements.
- b. Anodize: When MIL-A-8625 Anodic Coatings for Aluminum and Aluminum Alloys is invoked by drawing, the sealing must be done only in boiling, de-ionized water to provide natural appearance when performing compliance to Paragraph 3.8.1.1 of the standard unless otherwise specified by the drawing.
- c. Machined Springs: Three extra slugs, suitable for hardness testing are to be heat treated with the lot of parts and delivered with the shipment. Note: These should be made by cutting one rough machined slugs into three (3) approximately equal pieces. The Certificate must list the hardness and three (3) slugs. Additional requirements per "Detector Parts" also apply as follows:
  - Detector Parts: QC323 applies to: Bodies (most are machined from forgings), Core Guides and Fittings and/or End caps, including parts that become assembled to the body or guide (aka "Internals").
  - Revision Controls: Revisions listed in the applicable Mil-Spec Index apply to the specifications invoked by the drawings and procedures for detector parts. The supplier must comply with these revisions. The majority of specifications affect raw materials and processes including but not limited to inconel, stainless steel, anodizing, heat treating, dye penetrant, ultrasonic testing, etc. The Supplier must contact the DRS Purchasing Representative and request the applicable revision controls before manufacturing begins.
  - Cleanliness: Pay special attention to the bottom of Blind or Tapped holes.

Note: This clause does not apply to COTS Items.

**QC322 – Material Control System (MCS-6B):** When the part number listed on the Purchase Order contains the suffix “MCS6B” then the supplier (and their subcontractors) are required to control raw materials and parts at all times, to maintain traceability to the material certifications, test data, inspections and any processing performed, in accordance with the detailed methods of DRS documented plan as specified by the PO. Serial numbers and codes are controlled and issued by DRS Integrated Defense Systems. Supplier must contact the DRS purchasing agent to request serial numbers before manufacturing begins. Supplier shall generate records that document clear, unquestionable traceability from serial numbers (S/Ns) or DRS assigned codes to test data and inspections performed. Objective evidence of traceability control shall be on file, and may be subject to DRS review and/or audit. Parts are to be shipped in “MARKED” containers supplied by DRS. Additional requirements per “Detector Parts” also apply per QC323.

**QC323 – Critical Control Systems:** This applies to “Detector Parts” per QC321. The Supplier shall establish and maintain a manufacturing, inspection, and test program, audited and approved by DRS as meeting the requirements of MIL-STD-2041 Control of Detrimental Materials; MIL-STD-1370 (Controlled Distribution) Materials and Process Standard for Instrumentation and Control Equipment; MIL-STD-1308 Material Application and Processing Requirements, and/or as otherwise invoked in the purchase order. Any changes to programs must be submitted to DRS for review and approval prior to implementation in accordance with the purchase order.

**QC324 – Naval Nuclear (NN) Purchase Order Requirements:**

1.0 Rights in Technical Data and Computer Software (NN)

The following clauses and provisions of the FAR and DFARS, as indicated, in effect as of the date of this order, are incorporated by reference, with the same force and effect as if the clause(s) were provided in full text. The incorporated provisions may contain prefaces providing direction on implementation; in such instances, the clause alone applies and the implementation direction remains inapplicable. The definitions and meanings at Article 1 to these terms and conditions, to include meaning b (3) and its note, shall specifically apply to the following clauses and provisions, as modified:

a. DFARS 252.227-7013, Rights in Technical Data - Noncommercial Items is changed as follows:

1. Paragraphs (f) (2) through (f) (5) are deleted and replaced as follows:

Except to the extent explicitly set forth in this order, the only authorized markings will be in accordance with Attachment 1, paragraph 1.

2. Paragraph (h) is deleted and replaced as follows:

(h) Removal of Unauthorized Markings

Notwithstanding any provision of this order concerning inspection and acceptance, Buyer and the Government may correct, cancel, or ignore any marking not authorized by the terms of this order on any technical data furnished hereunder in accordance with the clause of this order entitled “Validation of Restrictive Markings on Technical Data”.

3. Correction of nonconforming markings is not subject to this clause entitled “Validation of Restrictive Markings on Technical Data”. The Buyer and/or the Government may, at the Seller’s expense, correct any nonconforming markings. If Buyer or the Government notifies the Seller and the Seller fails to correct the nonconforming markings within sixty days.

4. Paragraphs (l) and (m) are added as follows:

(l) Post Award Negotiation

If, after exhausting all reasonable efforts, the parties fail to agree on the apportionment of the rights in technical data furnished under this order by the date established in the order



for agreement, or within any extension established by Buyer or the Government, then Buyer or the Government may establish the respective data rights of the parties. Challenges shall be in accordance with this Article 10 (i) DFARS 252.227-7037. However, nothing shall excuse the Seller from proceeding with the order pending resolution of any such challenge.

(m) Technical Data Pertaining to Nuclear Propulsion Plant Systems

Pursuant to subparagraph (b)(1) above, it is agreed that all technical data pertaining to nuclear propulsion plant systems have been, or will be developed exclusively with Government funds, and that all technical data generated under this order, and all technical data required to meet order requirements shall be provided to the Government with unlimited rights.

It is further agreed that promptly after delivery of all purchase order deliverables, or after any termination of all work under this purchase order, the Seller shall submit a letter report to the Buyer listing and providing a brief description of all items of technical data, pertaining to the deliverables developed or prepared under this purchase order. The Seller shall furnish in the Seller's format, and at the cost of reproduction, with unlimited rights, copies of the items of technical data so reported or which should have been reported, as the Buyer may require in writing from time to time. However, nothing in this requirement shall require the Seller to retain any item of such technical data beyond the period provided for in this purchase order, including the specifications, and other documents incorporated by reference, applicable to the item or type of technical data involved.

- b. DFARS 252.227-7014, Rights in Noncommercial Computer Software and Noncommercial Computer Software Documentation is changed as follows:
  1. Paragraphs (f) (2) through (f) (5) are deleted and replaced as follows:  
Except to the extent explicitly set forth in this order, the only authorized markings will be in accordance with Attachment 1, Paragraph 2.
  2. Paragraph (h) is deleted and replaced as follows:  
(h) Removal of Unauthorized Markings
  3. Notwithstanding any provision of this order concerning inspection and acceptance, Buyer and the Government may correct, cancel, or ignore any marking not authorized by the terms of this order on any computer software/computer software documentation furnished hereunder in accordance with the clause of this order entitled "Validation of Asserted Restrictions-Computer Software".
  4. Correction of nonconforming markings is not subject to this clause entitled "Validation of Asserted Restrictions-Computer Software". The Buyer and/or the Government may, at the Seller's expense, correct any nonconforming markings if Buyer or the Government notifies the Seller and the Seller fails to correct the nonconforming markings within sixty days.
  5. Paragraphs (l) and (m) are incorporated here the same as added paragraphs (l) and (m) to DFARS 252.227-7013 in Article 10.a. above, except that all paragraphs (l) and (m) references to "technical data" are deleted and replaced with "computer software and computer software documentation".
- c. DFARS 252.227-7015, Technical Data - Commercial Items
- d. DFARS 252.227-7016, Rights in Bid or Proposal Information
- e. DFARS 252.227-7019, Validation of Asserted Restrictions - Computer Software

- f. DFARS 252.227-7025, Limitation on the Use or Disclosure of Government-Furnished Information Marked with Restrictive Legends
- g. DFARS 252.227-7027, Deferred Ordering of Technical Data or Computer Software
- h. DFARS 252.227-7030, Technical Data - Withholding of Payment, modified as follows:  
Subparagraph (a) at the end of the first sentence, delete “or amount unless a lesser withholding is specified in the contract” and insert “or \$100,000.00, whichever is less”.
- i. DFARS 252.227-7037 Validation of Restrictive Markings on Technical Data

#### 2.0 Patent Rights - Acquisition by the Government (NN)

- a. This Article applies only to (i) POs or amendments thereto, regardless of tier, placed with businesses other than small business firms and/or nonprofit organizations (ii) for the performance of experimental, developmental, or research work (includes “design” and “design and furnish” scopes of work). With regard to this latter condition, if any part of this order or amendment is for the performance of experimental, developmental or research work then this clause applies.
- b. The Government shall retain the Patent Rights set forth in FAR 52.227 13, Patent Rights – Acquisition by the Government, however, the meanings at Article 1, Definitions and Meanings to these terms and conditions, to include meaning b(3) and its note, shall specifically apply.

#### 3.0 Patent Rights - Small Business Firm or Nonprofit Organization (NN)

- a. This Article applies only to (i) POs or amendments thereto, regardless of tier, placed with small business firms and/or nonprofit organizations (ii) for the performance of experimental, developmental, or research work (includes “design” and “design and furnish” scopes of work). With regard to this latter condition, if any part of this order or amendment is for the performance of experimental, developmental or research work then this clause applies.
- b. Patent rights shall be retained under this order as set forth in FAR 52.227 11, Patent Rights – Retention by the Contractor (Short Form), however, the meanings at Article 1, Definitions and Meanings to these terms and conditions, to include meaning b(3) and its note, shall specifically apply.

#### 4.0 Fraud or Falsification (NN)

- a. This Purchase Order and activities hereunder are within the jurisdiction of the Department of Energy and/or the Navy. Any knowing and willful act to falsify, conceal or alter a material fact, or any false, fraudulent or fictitious statement or representation in connection with the performance of work under this Purchase Order may be punishable in accordance with applicable Federal Statutes.
- b. Seller agrees that all employees engaged in the performance of this Purchase Order will be, if they have not been previously, informed in writing prior to commencing performance of work under this Purchase Order that there is a risk of Federal criminal penalties associated with any falsification, concealment or misrepresentation in connection with work performed under this Purchase Order. Seller agrees that a signed statement shall be, if it has not been previously, obtained from said employees prior to their commencing performance of work under this Purchase Order that they have been so informed. Such statements shall be retained by the Seller for at least three years after final payment on this Purchase Order. An acceptable form for such a statement is substantially as follows:

"This company/division/department/branch performs work under contracts which are within the jurisdiction of departments of the United States Government. Some of the work performed under these contracts affects the national security of the United States and the requirements of these contracts are designed to ensure that essential attributes of the work are carefully

checked or inspected and that records accurately reflect the results of all work. Any falsification, concealment or alteration of any material fact, or any false, fraudulent or fictitious statement or representation in connection with the work under any contract within the jurisdiction of the Government is not only prohibited by company policy, but may also be punishable under Federal Law. Please acknowledge by your signature that you have read and understand the above."

- c. Seller must also agree to include the following statement preprinted on each manufacturing, inspection or test record used in conjunction with the subject subcontract:

Note: The recording of false, fictitious or fraudulent statements or entries on this document may be punishable as a felony under Federal Statute.

- d. Seller shall include all provisions of this Article including this sentence in all lower-tier contracts under this Purchase Order. Any inability or unwillingness of a lower-tier supplier to comply with this provision should be documented in writing and submitted to the Buyer.
- e. The Buyer provides goods and services in support of the Department of Defense of the United States of America. As such, Seller warrants that Seller's employees visiting or performing services at Buyer's facility shall be U.S. citizens or naturalized U.S. citizens and do not represent a foreign interest or foreign company. Visits or performance of services by Seller's employees who are not U.S. citizens requires prior written approval by the Buyer's Facility Security Officer and if approved, will require a Buyer appointed escort.

#### 5.0 Disclosure of Information (NN)

- a. General Requirements. The Seller shall not release to anyone outside the Seller's organization any unclassified information, regardless of medium (e.g., film, tape, document, display brochure, etc.), regardless of purpose (e.g., P.O. Performance, advertising, promotion, etc.) pertaining to any part of this Purchase Order or any program related to this Purchase Order unless:
  - (1) The Buyer has given prior written approval; or
  - (2) The information is otherwise in the public domain before the date of release.
- b. Request Format and Timing. Requests for approval shall identify the specific information to be released, the medium to be used, and the purpose of the release. The Seller shall submit its request to Buyer at least forty-five days before the proposed date for release.
- c. Exception/Approval. In accordance with Paragraph (a) (1) above, approval is granted to Seller so that, as necessary, it may disclose unclassified information, including sensitive unclassified information, to entities under subcontract either actually or prospectively, (including sub-tier orders), regardless of tier, under the Purchase Order for the provision of Naval Nuclear Propulsion Program (NNPP) supplies or services, entities of the Federal Government; and other entities performing NNPP work. This authority does not authorize Seller to release any information under or related to the subject Purchase Order to any entity not specified above, or not specifically affiliated with Seller under the subject purchase order through a contractual or prospective contractual relationship. Moreover, approval for release of information to sub-tiers and other entities with which Seller has a contractual or prospective contractual relationship does not extend to those entities who, regardless of relationship, do not have in place proper safeguards and procedures for receipt and handling of the sensitive information. The requirements of paragraph (a) and (b) above remain in effect as set forth and Seller must receive approval for release to any entity not covered by the authority set forth in this paragraph (c).

- d. **Litigation.** Should any information described in (a) above be requested, subpoenaed, or otherwise sought by a court or other judicial or administrative authority, this should be promptly brought to the attention of the Buyer to permit appropriate measures to be taken to protect the information.

Under no circumstances should information, other than paragraph (a) (2) information, be released to such authority without prior notification to, and agreement of, Buyer.

- e. **Survivability.** Seller agrees that the requirements of this Article 6, to include Seller's obligation to obtain prior Buyer approval of any release other than a paragraph (a) (2) or (c) release, shall survive the Purchase Order and that Seller shall not for a period of twenty years subsequent to the issuance of the purchase order either directly or indirectly issue any such release without the requisite approval of Buyer, its successors or assignee.
- f. **Mandatory Pass Down.** Seller shall include all provisions of this Article 6 in all sub-tier orders under this Purchase Order. Sub-tier requests for authorization to release information shall be submitted through Seller to Buyer.

**6.0 Cost Support and Certification Relative to Amendments (NN):** (applicable only to POs Equal to or exceeding \$650,000 where cost or pricing data may be required in support of the U.S. Naval Nuclear Program)

- a. Except where Seller demonstrates upon sufficient evidence that a FAR 15.403-1(b) exception applies, Seller shall furnish cost or pricing data at the threshold specified in FAR 15.403-4 (a) (1) via a properly executed NN-P47, Contract Pricing Proposal Cover Sheet, for (i) any proposed amendment to this order with a price impact aggregating in excess of this threshold; (ii) in support of final price agreements or termination settlement agreements which exceed this threshold.
- b. Seller shall furnish properly executed SFs 1428 through 1440 in support of final price agreements and termination settlement agreements.
- c. Upon completion of negotiations relative to the proposals described in a (i) and (ii) above, Seller shall, within five working days, submit an updated NN-P47 and an NN-P34, Certificate of Current Cost or Pricing Data.

**7.0 Naval Nuclear Information (NN)**

NN-801 – Control and Protection of Unclassified Naval Nuclear Propulsion Information,

NN-802 – Control and Protection of Classified Naval Nuclear Propulsion Information,

NN-817 – Naval Nuclear Propulsion Information (NNPI) Guide

**QC325 – Commercial Nuclear Quality Assurance (NQA):**

**1.0 Qualification of suppliers, sub-tier vendors including special processes (Nuclear Quality Assurance, NQA)**

Suppliers and sub-tier vendors providing the following products and services are to be a DRS approved source for which the supplier will have to be audited by DRS Quality Assurance (QA) prior to the initiation of a purchase order. DRS reserves the right of access to suppliers and sub-tier vendor's facilities for the purpose of performing a commercial grade survey and source surveillance/inspection as applicable. Suppliers are required to flow this requirement down to sub-tier vendors, including Bare Printed Wiring Boards; Circuit Card Assemblies, Test Services, Engineering Services, Transformers; Power Supplies; Plating; Painting; Welding/Brazing; electromagnetic interference (EMI) Filters; Relays; Sheet Metal Fabricators; and, others as required by PO.

Note 1: Certificate of Conformance is required for all items listed above:

Note 2: Test Data is required as applicable for each product type.

## 2.0 Notification of Significant Defects and Deficiencies in Supplied Product (NQA)

The supplier shall notify DRS QA in writing within five (5) days of the discovery of any defect or deficiency in design, material, or manufacture of any item shipped to DRS under the PO. The notification shall describe the nature of the discovered anomaly, its applicability to DRS part number(s), quantities affected, and the probable impact to the proper function/performance of the item supplied.

## 3.0 Certification of Test and Inspection Personnel (NQA)

All supplier test and inspection personnel performing activities on this purchase order shall be trained and certified to a DRS QA approved training and certification program. Such a program shall contain, as a minimum, a procedure detailing the requirements for individualized training and certification for specific test/inspection activities, records of personnel education level, work history/experience, training sessions attended, and a record of certification signed by Quality Management attesting that the individuals have received the proper training/experience commensurate with the activities performed.

## 4.0 Certification of Test Fixtures and Inspection Aides (NQA)

All test fixtures, jigs, go/no-go devices, templates, mock-ups, and any and all other inspection/measuring aides that do not require a calibration under the supplier's M&TE program shall be certified in a manner acceptable to DRS QA. The method and results of certification shall be documented and traceable to the devices utilized. DRS QA may require that such certification/recertification of said devices be performed in their presence upon request.

## 5.0 Calibration Program

In addition to meeting QC308 Calibration requirements above, the suppliers or sub-tier suppliers performing calibration activities must maintain a calibration program in accordance with ISO/IEC 10725.17025 General Requirements for the Competence of Testing and Calibration Laboratories. The supplier shall have a documented process for qualifying their external calibration service providers. Examples of acceptable qualification methods include third party certification by NAVLAP/A2LA, on-site surveys by the supplier, etc.

## 6.0 Right of Access:

Before, during and after the performance of this order, DRS, DRS Customers, and/or a regulatory or statutory agency including Government Representatives, reserve the right to attend, review, and participate in the Supplier's Quality System and associated manufacturing processes including inspection and testing of any work related to this contract. DRS, DRS Customers, and/or regulatory or statutory authorities shall be afforded the right to verify at the supplier's premises (or Supplier's subcontracting premises) that the supplier's product conforms to all specified requirements.

**QC326 – Quality Program Requirements (NQA):** This is a safety related order. The seller shall maintain a Quality Management System that complies with the requirements of 10CFR, Part 50, Appendix B; 10CFR, Part 21 and NQA-1, 1994.

**QC327 – Seal, Gasket, O-Ring, etc. (Newport News):** When the drawing requires the use of DRS Procedure JBL60 Procurement Requirements for Non-Metallic O-Rings and Gaskets, and "contacts system fluid" or "wetted" then additional Quality Clause QC318 applies.

Age Control of rubber seals and gaskets in assemblies is required as follows:

- A. A tag shall be attached to each assembly containing rubber (elastomeric) parts which are not in their final compressed state and shall contain the following information for each rubber (elastomeric part):
1. Manufacturing specification or standard of the rubber (elastomeric) part.
  2. Cure date – quarter and year (e.g., 3Q85).
  3. Expiration date based on the cure date and shelf life imposed by the age control requirements invoked by the rubber (elastomeric) specification.
- B. Rubber (elastomeric) parts furnished with an assembly but not inserted in the assembly or used on the external portion of an item shall be packaged and tagged as follows:
1. Each O-ring, quad-ring, v-ring seal, and/or packing ring shall be separately packaged in an envelope consistent with the size of the ring in accordance with Section in 3.2 of Military Specification MIL-P-4861 (Packing, Preformed, and Rubber Packaging of). Packages shall be opaque and sealed greaseproof/waterproof bags as specified in Sub-Method IC-1 of Military Specification MIL-P-116 (Military Specification Preservation, Methods of). No preservative is to be added. The packages shall be securely attached to each assembly by taping or other suitable means.
  2. Opaque packages for each item shall be marked on the exterior with the following information:
    - a. DRS purchase order and item number.
    - b. Manufacturing specification or standard.
    - c. Cure date – quarter and year (e.g., 3Q85).
    - d. Expiration date based on the cure date and shelf life.
    - e. Vendors part number/identification number.

**QC328 – Control of Special Processes Qualified Supplier List:** Suppliers and sub-tier vendors performing a special process listed below must be audited, qualified and listed on the DRS Qualified Suppliers List. Contact the DRS Purchasing Representative for a list of qualified suppliers.

- Soldering and/or Cleaning
- Conformal Coating
- Welding
- Special or Nondestructive Testing
- Rubber Bonding
- Alloy Identification
- Brazing
- Programming/verification of programmable memory devices
- Software procedures (other than equipment specific)
- Heat Treating
- Painting
- Plating

- Flame Spay
- Others as specified on Purchase Order

Note 1: X-ray film, inspection data, test results, heat treat charts and certificates of compliance for special processes performed must be shipped with the material.

Note 2: The Supplier shall flow-down all applicable DRS site Quality Assurance Requirements to lower tier suppliers performing work involving the purchase order.

Note 3: If the supplier or sub-tier vendor requires the use of a supplier that is not qualified by a DRS site the supplier must submit Supplier Variation Request (SVR) to the applicable DRS site for approval.

**QC329 – CCA Quality Procurement Requirements (QPR):** DRS QPRs for CCAs applies to material on the PO.

**QC330 – Returned Supplier Material:** Supplier material delivered on the PO that is rejected and returned to the Supplier on a supplier Return Material Authorization (RMA) for evaluation and rework/repair, shall be shipped by the Supplier with a rework/repair report that documents the failure description, detailed failure causes, and repair actions taken to restore the material to the PO requirements. The Supplier shall reference the RMA number on the shipping documents. If the material is subject to GSI, it shall be resubmitted to the Government for acceptance prior to shipment to DRS.

**QC331 – Delegation of Verification:** The Supplier has been granted the authorization to perform verification activities on behalf of DRS. Verification is defined as any inspection or other actions necessary to ensure the product meets specified purchase requirements. Product thus supplier verified will replace the DRS Receiving Inspection function. This delegation should be viewed as a privilege, and can be revoked at any time. The following conditions shall be met:

1. Maintain status as an approved supplier to DRS.
2. Maintain a minimum of ISO 9001:2008 Quality Management System certification by an accredited agency.
3. The Supplier shall appoint personnel to act as a Designated Supplier Representative (DSR) from their Quality Assurance department. The DSR shall have experience with DRS specifications, standards, and product to assure that all requirements are met.
4. The Supplier is responsible for performing all inspections required to insure compliance of the deliverable product with all purchase document requirements.
5. Supplier's DSR shall sign and/or stamp and date the shipping document (C of C) on behalf of DRS to indicate acceptance of the item(s) being shipped.
6. Supplier verification activities do not absolve the supplier of its responsibility to comply with end customer source inspection and/or GSI requirements.

DRS may suspend delegation when a supplier:

1. Exhibits an unacceptable quality level.
2. Failure to respond to corrective action request(s).
3. Unauthorized or improper acceptance of product(s).
4. Change in ownership or location.