

AEROJET – A GENCORP COMPANY

• P.O. BOX 97009 • REDMOND, WA 98073-9709

QUALITY ASSURANCE TERMS AND CONDITIONS

Aerojet – A GenCorp Company herein is referred to as Aerojet (Redmond).

NOTE: A copy of this form is not sent with each order. It can be accessed at www.aerojet.com\supplier\redmond\qa.php. When this form is referenced on a "Request For Quotation," the words "Request for Quotation" will be substituted for "Order" and "Purchase Order" appearing herein. **General Quality Requirements shall apply to all purchase orders.** DoD Acquisition Reform has resulted in cancellation of some military specifications, and in some cases no replacements are noted. Aerojet (Redmond) encourages its suppliers to request approval for use of alternate specifications that replace cancelled specifications. If a cancelled specification lists an alternate, that alternate does not need Aerojet (Redmond) approval.

GENERAL QUALITY REQUIREMENTS (APPLY TO ALL PURCHASE ORDERS)

AEROJET (REDMOND)/CUSTOMER/GOVERNMENT SURVEILLANCE AT SUPPLIER'S FACILITY

Aerojet (Redmond) reserves the right to assign representatives, including Aerojet's (Redmond) customer or government representatives, on an itinerant or resident basis at supplier's facility or those of lower-tier suppliers for the purpose of verifying all tests and/or inspections performed as a part of the terms and conditions of this purchase order(s). Supplier is required to provide Aerojet (Redmond) representatives with reasonable facilities and equipment and access to all areas essential to complete this task throughout all periods of performance under this purchase order(s).

GIDEP PARTICIPATION

Suppliers to Aerojet (Redmond) are prohibited from shipping material for which a GIDEP Alert has been issued.

PURCHASE ORDER SUBCONTRACTING

Purchase order(s) shall not be subcontracted without the written authorization of Aerojet (Redmond).

MATERIAL REVIEW BOARD (MRB) / NON-CONFORMANCE NOTIFICATION

Material Review Board is a panel of technically, qualified individuals appointed for the purpose of reviewing, evaluating and determining (or recommending) disposition of non-conformances to defined engineering requirements.

MRB authority for "Rework", "Return to Vendor", and "Scrap" dispositions (or equivalents as approved by Aerojet) is delegated on the purchase order unless the material for the order is supplied by Aerojet. For all other MRB dispositions (such as "Use as is" and "Repair"), and for Aerojet-supplied material, the supplier shall document the nonconformance on an Aerojet (Redmond) Supplier Nonconformance Review (SNR) datasheet (form SS40916). The SNR datasheet is available at www.aerojet.com/supplier/redmond/qa.php. The supplier's own nonconformance report may be submitted provided that it addresses the root cause and corrective/preventive action.

The completed form shall be submitted to Aerojet Procurement for Aerojet MRB review and approval. **NONCONFORMING ITEMS SHALL NOT BE SHIPPED UNLESS SPECIFICALLY AUTHORIZED BY THE AEROJET PROCUREMENT REPRESENTATIVE VIA THE AEROJET SNR PROCESS.** A copy of the approved SNR shall be included with the shipment and the SNR number shall be referenced on the supplier's Certification of Conformance.

NOTICE OF PREVIOUS REJECTION

The supplier's shipping paperwork for material submitted to Aerojet (Redmond) in response to a Return to Vendor (RTV) or Rework disposition on a Suppliers Nonconformance Report (NCR) or Aerojet (Redmond) Supplier Nonconformance Review (SNR) datasheet (form SS40916) shall include items 1 and 2 and may include item 3 as required.

1. A statement identifying whether the material was replaced or reworked.
2. The Suppliers NCR and/or Aerojet's SNR number.
3. If reworked, a description of the rework performed. If material is serialized, add the letter R after the serial number on both the paperwork and the hardware.

CALIBRATION SYSTEM REQUIREMENTS (Not Applicable to Distributors)

The supplier shall maintain a calibration system that complies with one of the following specifications (or an equivalent): ANSI Z540.1 or ISO/IEC 17025. This provision shall be applicable to all inspection, test and measuring equipment supplied by Aerojet (Redmond) for use by supplier, as well as the supplier's own equipment. All test equipment and gages used for calibration must be traceable to NIST standards.

PACKAGING REQUIREMENTS: Packaging shall first conform to all requirements specified on drawings, specifications and the purchase order and secondly to the following:

- All material shall be wrapped, bagged, and enclosed in cartons, boxes, or other containers to the extent necessary to provide protection from hazards of contamination and physical damage encountered in general handling, shipping and storage.
- When material consists of several piece parts or is an assembly with external hardware, it shall be packaged together as a set in a unit package. No bulk packaging of piece parts or hardware is acceptable.
- Material of different part numbers or revision, or items that are re-submittals in response to Return To Vendor disposition on an Aerojet (Redmond) Nonconformance Report, shall not be mixed in a single container unless they are segregated in properly identified intermediate containers.
- Specified identification markings shall be clear and legible and applied to all outside containers as well as to all intermediate containers or wraps, and indicate, as a minimum, the part number, purchase order number, quantity and special handling, as applicable. If the shipment consists of more than one outside container, each container shall be identified relative to the total number of containers, e.g., 1 of 3, 2 of 3, 3 of 3, etc.
- Bare metal material having surface protective treatment such as plating, painting, anodizing, conversion coating, etc., shall be wrapped separately in chemically-neutral craft paper or equivalent.
- Handling, protection, or packaging shall not be accomplished using tapes which have glass beads in the tape or on the tape as a separator. This requirement shall be placed in purchase order(s) to your sub-tier suppliers.

The following quality assurance requirements are applicable when the clause number is specified on the face of the Purchase Order and/or subcontract document. For example: "THE FOLLOWING SPECIFIC QUALITY REQUIREMENTS APPLY TO THIS ITEM: 3A, 30".

QUALITY ASSURANCE SYSTEM REQUIREMENTS

[1] CONFIGURATION CHANGES

Supplier and its sub-tier supplier(s) agree not to make any change in materials, process or design details which would affect the part or any component part thereof with regard to: (a) part number identification, (b) physical or functional interchangeability, and (c) performance without prior written approval of Buyer. Copies of the revised drawings, specifications or ATP's (Acceptance Test Procedure) shall be forwarded to Buyer. This clause shall be placed in purchase orders to sub-tier suppliers.

[2] Unassigned.

[3] CONTROL OF QUALITY

The supplier shall maintain a system that complies with one of the following specification(s) as stipulated by the purchase order. Compliance with the provisions of this clause in no way relieves the supplier of the final responsibility to furnish acceptable supplies or services as specified herein. This system shall be subject to audit by Aerojet (Redmond), Aerojet (Redmond) customers, and/or government representatives. Aerojet suppliers should not support audits on Aerojet subcontracts (records) without Aerojet representatives present.

- A) AS9100 (Aerospace)
- B) QS9000 (Automotive)
- C) Registered ISO 9001 — Quality Systems - Model for Quality Assurance in Design, Development, Production, Installation and Servicing
- E) ISO 9001 Compliant (with exceptions noted as required)
- F) AS9003
- H) Aerojet (Redmond) Approved and/or Unspecified Quality System, Limitations may apply

[3] D) Superseded by [3] E). [3] G) Superseded by [3] F). [3] J) Deleted.

[4] Unassigned.

[5] THREADED METALLIC FASTENERS

Threaded metallic fasteners must be manufactured by a source which supplier's quality assurance personnel have surveyed (method optional), or who is currently ISO 9001 registered by a registrar accredited by the National Accreditation Program of the American National Standards Institute and the ASQ Registrar Accreditation Board (RAB) or equivalent.

[6] COMPONENT LEAD SOLDERABILITY TESTING

Components received by Aerojet (Redmond) may be subjected to solderability testing per IPC J-STD-002 on a sample basis. Rejected lots may be returned to the supplier at the supplier's expense.

[7] REQUIREMENTS FOR CONTROL OF NON-DELIVERABLE SOFTWARE USED IN AUTOMATED MANUFACTURING OR TESTING OF DELIVERABLE HARDWARE

Prior to its use in production of hardware, the software purchased or developed for use in automated manufacturing or testing equipment must be listed in supplier's configuration control system and controlled by assigning release and revision identification codes. Records must be kept to document software release and revision dates, and must be made available for review by Aerojet (Redmond).

Numbers 8 through 9 unassigned.

PROCESS REQUIREMENTS

[10] SPECIAL PROCESSES

Supplier shall complete and submit Aerojet (Redmond) Form SS40809, "Special Processes Certification," to Aerojet (Redmond) for review **within 30 days of acceptance of the purchase order or prior to start of parts fabrication/processing, whichever comes first**. This form can be found at www.aerojet.com/supplier/redmond/qa.php. Aerojet (Redmond) retains right of disapproval of sources and adequacy of certification.

This supersedes [10] A) and B).

[11] AUTHORIZED AEROJET (REDMOND) REPRESENTATIVE

An authorized Aerojet (Redmond) representative (manufacturing, M&P, quality engineer or quality field representative) shall be present during this process. Evidence shall be provided with shipment.

[12] GLASS BEADS

- A) Items on this purchase order (or parts used to make items on this purchase order) shall not be cleaned using glass beads.
- B) When glass beads have been used for processing Aerojet (Redmond) hardware, the hardware shall be cleaned and inspected for glass bead contamination in accordance with Aerojet Process Instruction Sheet 02-00-001-00 prior to shipment to Aerojet (Redmond). Shipping containers used for returning hardware to Aerojet (Redmond) shall be identified in such a way as to indicate a potential for glass bead contamination.

[13] STATIC SENSITIVE MATERIAL

Material supplied against this purchase order shall be manufactured, handled, received, stored, and shipped in a manner to preclude damage from electrostatic discharge (ESD) in accordance with MIL-STD-1686/IPC-A-610 (whichever applies). Containers shall be appropriately identified to show electrostatic protection.

This supersedes [13] A) and B).

[14] WELD SCHEDULE

The supplier shall develop a weld schedule, otherwise known as a Weld Process Specification (WPS) which must be demonstrated to be capable by producing weld samples that meet all requirements. The WPS must be approved by Aerojet (Redmond) prior to start of production. WPS(s) will be required for every weld joint and weld type. The WPS shall identify the process parameters and settings required for acceptable production including any information required by the engineering drawing or any applicable specifications. All WPS(s) must be developed by either an AWS (American Welding Society) certified weld inspector or equivalent, and/or an AWS (American Welding Society) certified weld engineer or equivalent.

[15] TIN COATINGS – TIN WHISKER MITIGATION

Unless otherwise specified, material manufactured or supplied against this purchase order shall not incorporate tin coatings which contain more than 97% tin.

Numbers 16 through 19 unassigned.

CERTIFICATION AND DATA REQUIREMENTS

[20] RECORD KEEPING

- (A) Supplier shall keep on file records reflecting that all materials and finished items were controlled and tested in accordance with and met the specifications. Such records shall be subject to Aerojet (Redmond) examination. Unless the record retention period is specifically modified by the purchase order, records shall be retained 10 years after final payment. Records shall be maintained for the retention period in a manner that prevents damage from fire, moisture, pests, or other deteriorating effect. Buyer shall be notified if conformance to this requirement cannot be certified. Aerojet shall be notified prior to destruction of records related to Aerojet orders.
- (B) Supplier shall keep on file records reflecting that all materials and finished items were controlled and tested in accordance with and met the specifications. Such records shall be subject to Aerojet (Redmond) examination. Unless the record retention period is specifically modified by the purchase order, records shall be retained 15 years after final payment. Records shall be maintained for the retention period in a manner that prevents damage from fire, moisture, pests, or other deteriorating effect. Buyer shall be notified if conformance to this requirement cannot be certified. Aerojet shall be notified prior to destruction of records related to Aerojet orders.

Unless otherwise specified, [20] A) is the default if only [20] is noted in the purchase order.

[21] Unassigned

[22] ELECTRONIC WORKMANSHIP

The supplier shall meet requirements of:

- A) IPC-A-610 Class 3 — Acceptability of Electronic Assemblies
- B) IPC-J-STD-001 Class 3 — Requirements for Soldered Electrical and Electronic Assemblies
- C) NASA 8739.3 – Soldered Electrical Connections

CERTIFICATION AND DATA REQUIREMENTS (Continued)

[23] SCANNED PWB ARTWORK

If the supplied photographic artwork needs to be digitally scanned to create working artwork, the created electronic data file along with a photoplot set of artwork shall be forwarded to Aerojet (Redmond) for review and approval for incorporation into the released drawing package before use.

- A) PWB shall comply with Aerojet (Redmond) document 09-02-000-00, Grade A.
- B) PWB shall comply with Aerojet (Redmond) document 09-02-000-00, Grade B.
- C) PWB shall comply with Aerojet (Redmond) document 09-02-000-00, Grade C.
- D) PWB shall comply with Aerojet (Redmond) document 09-02-000-00, Grade D.

[24] MANUFACTURING TRAVELER

Supplier shall submit documentation defining manufacturing technique (traveler) to Aerojet (Redmond) prior to the manufacture and/or processing of material defined in this purchase order for:

- A) Aerojet (Redmond) approval (may be at supplier's facility).
- B) Aerojet (Redmond) information. Aerojet (Redmond) may direct that changes be made.

[25] MANUFACTURING/QUALITY CONTROL PLAN

Supplier shall submit a copy of the Manufacturing/Quality Control plan for the material to be produced on this order. The plan shall show all operations, including inspection/test points, special processes, storage and transfer steps, process control points, special packaging etc., all in their normal sequence of occurrence leading to a finished article. Controlling documents such as drawings, process specifications, operation sheets, inspection plan, test plan, etc. and the type of manufacture, inspection, and/or test at each point must be identified. The plan shall be submitted to the buyer not less than three (3) weeks prior to the start of manufacture of the material. All changes to the plan shall be submitted to the buyer. Aerojet (Redmond) retains disapproval rights and may direct that changes be made.

- A) Submit for Aerojet (Redmond) approval.
- B) Submit for Aerojet (Redmond) information.

[26] Unassigned.

[27] INSPECTION STAMP

Each part supplied against this purchase order shall show evidence of supplier inspection via an imprint of a supplier's inspection stamp and date of inspection.

[28] TEST REPORTS

Each shipment shall be accompanied by a legible copy of actual test results for tests indicated on the P.O. Reported results must be identifiable with test parameters, specifications, and material(s) to product(s) delivered. Reports must bear the date and signature of a responsible representative of the agency performing the test(s). The specifications must be listed, including the revision letter(s) or revision number(s). When parts are serialized, serial numbers must appear on the report(s).

- A) Chemical Test (Actuals)
- B) Physical Test (Actuals)
- C) Functional Test
- D) Pressure or Leak Test
- E) Nondestructive Test
- F) Process Sample Evaluation Test
- G) Metallurgical Test
- H) Environmental Test
- J) Chemical Test (Typicals)
- K) Physical Test (Typicals)
- L) Electrical Test
- N) Destructive Physical Analysis (DPA) test results
- P) N-Ray (ASTM E748) The supplier shall provide N-Ray film for Aerojet approval prior to shipment of the parts.
- Q) X-ray (ASTM E1742) The supplier shall provide x-ray film for Aerojet review with the shipment of the parts.
- R) Acceptance Test
- S) Qualification Test

[28] M) deleted.

CERTIFICATION AND DATA REQUIREMENTS (Continued)

[29] CERTIFICATION OF CONFORMANCE

Each shipment shall be accompanied by a legible certification which states that the items were produced, processed, and/or tested in accordance with stated applicable purchase order or subcontract requirements, including revision level(s) as appropriate. Key characteristics/critical features shall be monitored and recorded, as appropriate. Signature of a supplier representative and date signed is required. When parts are serialized, serial numbers shall appear on or be attached to the certification. The supplier may use the Aerojet C of C template available at www.aerojet.com/supplier/redmond/ga.php or the supplier's equivalent (provided it contains all the required information).

This supersedes [29] A) and D).

[30] HEAT AND/OR MELT IDENTIFICATION

A heat number or heat lot number shall identify all material and applicable documents by the supplier.

[31] HEAT TREATMENT

For heat treatment (including stress relief, annealing, etc.), provide a legible copy of the temperature versus time record with hardware shipment to Aerojet (Redmond). Definition of chart scale factors and type of furnace atmosphere used shall be marked on the record.

[32] TRACEABILITY

- A) Materials used must be identifiable by lot number, material type, heat number, and specification with applicable change level, and traceable to records of acceptance. Material fabricated by the supplier shall be traceable to a lot of material used. The supplier shall make all possible efforts to minimize the number of lots included in each shipment (if possible, one lot per shipment is preferred). If more than one lot of material is provided, each lot shall be segregated for packing and shipment to Aerojet. Traceability records shall be available for review by an Aerojet (Redmond) representative.
- B) The supplier's Certificate of Conformance (C of C) shall include identification of the manufacturer and the specific production lot(s) of the material supplied. Lot identification shall be clearly titled as lot number, batch code, date code, date of manufacture, or equivalent. The supplier shall make all possible efforts to minimize the number of lot/date codes included in each shipment (if possible, one lot/date code per shipment is preferred). If more than one lot number of material is provided, each lot shall be segregated for packing and shipment to Aerojet. Traceability records shall be available for review by an Aerojet (Redmond) representative.

[33] CRITICAL PARTS TIME/CYCLE REPORTING

The supplier shall record and report time/cycle information for material specified in this purchase order. The supplier shall ensure that material specified as critical in this sense shall have its total non-operating life, operating life, and/or operational cycle recorded, as applicable. Life/time/cycle recording, as applicable, shall start at the time of final fabrication or assembly. Time/cycle report shall be submitted with the material at delivery.

[34] CERTIFIED CALIBRATION REPORT

Calibration report should be in accordance with ANSI Z540, including As Received & As Left status, environmental conditions of lab during test (temperature and humidity), a unique report number, the technician's signature and title, and traceability to NIST. Unless otherwise specified, data is required only for: a) anything specified received out of tolerance (this requires both before and after data); b) identified reference standards; c) pressure transducers; d) accelerometers; e) temperature probes; and f) flow meters. If repairs or adjustments are needed, evaluation and quote for the additional service must be provided and approved before commencement or completion of the work, and a detailed service report must be provided.

[35] RAW MATERIAL SPECIFICATIONS

Raw materials, procured by the supplier named on this purchase order, to be used in material delivered on this purchase order shall have objective evidence that applicable raw material specifications have been met. The supplier named on this purchase order shall have recorded data at their plant demonstrating applicable chemical and physical testing required by the material specification has been satisfied. When it is a requirement of the raw material specification, chemical/physical test reports shall be obtained by the supplier and compared to specification requirements to verify conformance. The reports shall be directly traceable to the raw material used and shall be made available for Aerojet (Redmond) review upon request.

[36] Unassigned.

[37] QUALIFIED PRODUCTS LIST (QPL) SOURCE

By accepting this order, the supplier certifies that the material supplied is from a manufacturer on the current applicable Government Qualified Products List, and that records to substantiate this statement are on file and available for review by Aerojet (Redmond) or customer/government representatives. Parts and/or material furnished *must* be manufactured *only* by those suppliers specified in the Purchase Order, drawings, specifications, or applicable Qualified Products List (QPL). Certifications that accompany the shipment *must* provide traceability to the approved directed sources.

[38] SHIPMENT CONTROL BY SERIAL NUMBERS

- A) Supplier shall identify by serial number the material shipped, and packing sheets shall show list of serial numbers included in the shipment. The supplier shall assign serial numbers to all delivered items. Serial numbers shall *not* be duplicated.

CERTIFICATION AND DATA REQUIREMENTS (Continued)

- B) When serialization requirements are imposed by Aerojet (Redmond), all goods, including spares, test units, etc., with a single basic family number (e.g.: 1B54321) will be assigned sequential numbers, regardless of configuration (dash numbers). Serial numbers assigned will contain no duplications and will not exceed ten digits. Goods reworked to a new configuration with the same basic number will retain the original serial number and these will show a letter R after the serial number. Supplier may use its own serialization system within the limitations outlined above, unless otherwise specified by Aerojet (Redmond). Supplier will indicate serial numbers on all shipping reports. Listing serial numbers by ranges is acceptable providing that any breaks in the range are so noted (e.g.: S/N 1-10, 12-20, 25-30 for a total of 25 units/parts). If goods are delivered in multiple shipments, only the serial numbers of the goods in a given shipment will be listed in the shipping report for that shipment.
- C) Serial numbers of delivered items shall be assigned by Aerojet (Redmond). Contact Aerojet (Redmond) buyers unless the assigned serial number(s) is already noted on the purchase order. Serial numbers shall not be duplicated and shall provide full traceability to all material, fabrication, assembly, inspection, and test documentation.

[39] IDENTIFICATION OF SHELF LIFE/TEMPERATURE-SENSITIVE MATERIALS

Each item, package, or container shall reflect the specification, drawing, nomenclature, or other design description required by Purchase Order. Cure or manufacturing dates, assembly dates, expiration dates, temperature limits, compound number, and manufacturing identification will be recorded on the certifications and shipping documents, as appropriate. Items received with less than 75% shelf life remaining shall be cause of rejection unless otherwise specified by the Purchase Order. Temperature-sensitive materials shall be maintained within the limits prescribed in the applicable document during storage and shipment. Material required to be shipped/stored at 40° F or less requires special temperature labels to be attached to exterior of each package. Label shall reflect the words "temperature sensitive material" and the maximum material storage temperature allowed.

[40] SOLDERABILITY TEST CERTIFICATION – SHELF LIFE COMPONENTS

Certification for this order shall show that the material or its container(s) have either a lot date code or solderability testing data to within the time frame specified, prior to the date of shipment to Aerojet (Redmond). Solderability testing shall be per MIL-STD-202, Method 208, MIL-STD-750, Method 2026, or IPC J-STD-002.

- A) 12 months
- B) 18 months
- C) 24 months
- D) 36 months

[41] SOLDER COMPOSITION

Supplier must certify that solder contains <.01% phosphorus and <.001% sulfur, with minimum .2% antimony.

- A) IPC J-STD-002
- B) IPC J-STD-004004

Numbers 42 through 49 unassigned.

INSPECTIONS

[50] SOURCE SURVEILLANCE/INSPECTION (INPROCESS AND FINAL)

All items covered by this purchase order are subject to source surveillance inspection by Aerojet (Redmond) quality representative. This may include surveillance of the supplier's product throughout fabrication and final acceptance test to verify requirements of the purchase order are adequately satisfied. The supplier is required to provide the Aerojet (Redmond) quality representative with reasonable facilities and equipment to accomplish this task. The Aerojet (Redmond) quality representative may specify mandatory Aerojet (Redmond) inspection points in supplier's fabrication and testing documentation. Aerojet (Redmond) source surveillance inspection is mandatory for final acceptance testing unless specifically waived by Aerojet (Redmond) quality assurance. The Aerojet (Redmond) buyer shall be notified a minimum of five working days (excluding weekends and holidays) in advance to schedule such inspections. Evidence of source inspection shall be included with the order.

[51] SOURCE INSPECTION (FINAL INSPECTION)

All deliverable items covered by this purchase order require final acceptance inspection and/or test verification at the supplier's facility by an Aerojet (Redmond) quality representative or his delegate prior to shipment. The supplier shall make available to the Aerojet (Redmond) quality representative, at time of presentation of items, the supplier's inspection, manufacturing, traceability and material review records. The Aerojet (Redmond) buyer shall be notified a minimum of five working days (excluding weekends and holidays) in advance to schedule such inspections. Evidence of source inspection shall be included with the order.

[52] SOURCE INSPECTION — GOVERNMENT

Government source inspection is required prior to shipment from your plant. Upon receipt of this order, promptly notify and furnish a copy to the government representative who normally services your plant so that appropriate planning for government source inspection can be accomplished. The government representative shall be notified 7 days in advance of the required inspections or tests. Government source inspection shall not constitute acceptance, nor shall it in any way replace supplier inspection or otherwise relieve supplier of responsibility to furnish an acceptable product. In the event that the representative cannot be located, the Aerojet (Redmond) buyer shall be notified immediately. Evidence of government source inspection must be shown on the shipping document.

INSPECTIONS (Continued)

[53] SOURCE INSPECTION — GOVERNMENT (NASA)

All work on this order is subject to inspection and test by a government quality representative. The government quality representative who has been delegated NASA Quality Assurance functions on this procurement shall be notified immediately upon receipt of this order. The government representative shall be notified 7 days in advance of the required inspections or tests. Government source inspection shall not constitute acceptance, nor shall it in any way replace supplier inspection or otherwise relieve supplier of responsibility to furnish an acceptable product. In the event that the Representative cannot be located, the Aerojet (Redmond) buyer shall be notified immediately. Evidence of government source inspection must be shown on the shipping document.

[54] FOR USE IN MANNED SPACE FLIGHT

Material, manufacturing, and workmanship of the highest quality standards are essential to astronaut safety. If you are able to supply the desired item with a quality which is higher than that of the items specified or proposed, you are requested to bring this fact to the immediate attention of the purchaser. This note must be included in any purchase order to your subtier suppliers for products or special processing used in the manufacturing or processing of this order.

[55] FIRST ARTICLE INSPECTION (FAI)

The supplier shall complete one FAI report for each revision of the Aerojet (Redmond) or customer drawing unless this requirement is waived by written authorization from Aerojet (Redmond) (include a copy of the waiver with the shipping paperwork). Other events which require a FAI are defined in Aerojet First Article Inspection procedure, MP-P02-9801, which is available at www.aerojet.com/supplier/redmond/ga.php. This procedure also identifies the required First Article Inspection Report content. First article inspection shall be on a single completed article that is clearly labeled as the "first article". All parameters and notes shown on the drawing(s) must be inspected or tested and reported on supplier's format. Refer to AS9102, Aerospace First Article Inspection Requirements, for FAI guidelines and possible format. Each individual part number must be addressed including all dash numbers and manufacturing numbers. When applicable, first articles shall be identified to show which tool-serial number or cavity number was used (when more than one cavity is used, submit a FAI report from each cavity). If the supplier has produced this item within the past 24 months, and the drawing revision has not changed, a FAI report is not required.

A) First article inspection shall be witnessed and/or performed by Aerojet (Redmond) representative at the supplier's facility.

[56] SOURCE INSPECTION — CUSTOMER OF AEROJET (REDMOND)

All work on this order is subject to inspection and test by a customer's quality representative. Upon receipt of this order, promptly notify and furnish a copy to the customer quality representative so that appropriate planning for the source inspection can be accomplished. The customer representative shall be notified 7 days in advance of the required inspections or tests. Customer source inspection shall not constitute acceptance, nor shall it in any way replace supplier inspection or otherwise relieve supplier of responsibility to furnish an acceptable product. In the event that the representative cannot be located, the Aerojet (Redmond) buyer shall be notified immediately. Evidence of customer source inspection must be shown on the shipping document.

Numbers 57 through 60 unassigned.

STATISTICAL PROCESS CONTROL

[61] STATISTICAL PROCESS CONTROL (SPC)

Supplier shall validate the acceptability of the product being manufactured/processed (at supplier's facility or at a subtier supplier's facility) on this order using statistical process control (SPC) techniques which meet the intent of American National Standards Institute (ANSI) z1.1, z1.2, and z1.3. A plan for the implementation of SPC shall be submitted by the supplier for review and approval by Aerojet (Redmond) prior to the initiation of production. As a minimum, all characteristics identified as critical by Aerojet (Redmond) must be included in the SPC plan. Statistical evidence of product acceptability in the form of control charts shall be prepared for each characteristic identified in the approved SPC plan. The supplier must also demonstrate that the manufacturing process is capable of maintaining a Cpk of 1.33 or greater on all characteristics identified in the SPC plan (as a minimum on all characteristics identified as critical by Aerojet (Redmond)). Any characteristics identified in the SPC plan which is not shown to be stable with a Cpk of 1.33 or greater must be screened 100% and objective evidence must be provided with each shipment that the order was screened 100% for that characteristic.

AEROJET (REDMOND) FLOW DOWN REQUIREMENTS

Numbers 62 through 64 unassigned.

[65] HARDWARE - SPECIAL PROCESSING

Supplier shall utilize only special process sources approved by Aerojet (Redmond) or its customers. The supplier shall flow down this requirement to its subcontractors. The supplier shall retain documented evidence of compliance to this requirement for review by Aerojet (Redmond) or its customers upon request.

[66] TOOLING – AEROJET FURNISHED TOOLING TO SUPPLIERS

The supplier shall be responsible for proper handling, storage, maintenance, and usage of the tools provided by Aerojet (Redmond). Any tool provided by Aerojet (Redmond) that is lost, damaged, or is otherwise unsuitable for use (including expired calibration date) shall be recorded and reported to Aerojet (Redmond) immediately. The tools provided by Aerojet (Redmond) shall be returned with the parts upon completion of PO (Purchase Order) or immediately upon request by Aerojet (Redmond).

Numbers 67 through 69 unassigned.

PACKAGING REQUIREMENTS

[70] PACKAGING

B) INDIVIDUAL UNIT PACKAGING

Material is to be packaged in individual containers and the container shall be marked with supplier's part number and, if any, the applicable Aerojet (Redmond) part number.

C) O-RINGS

O-rings shall be individually packaged and no substitution of the parts allowed without Aerojet (Redmond) written approval. The individual packaging must be marked with manufacturer's part number, material specification number and revision level, manufacturer's name, quarter and year of manufacture/cure date, manufacturer's batch number, seller's name, and shelf-life (or expiration date). No foreign material is allowed on o-rings, i.e., powder or lubricant. Material supplied against this P.O. shall be packaged in accordance with SAE ARP-5316.

[71] HAZARDOUS MATERIAL AND EXPLOSIVES

Suppliers shall provide Material Safety Data Sheet (MSDS) for hazardous materials with each shipment.

For Explosive materials, the following documents shall be provided:

1. Material Safety Data Sheets (MSDS)
2. Competent Authority Approval document or DOD Interim Hazardous Classification, if applicable, or;
3. Explosives in a pipe bomb (w/DOT exemption)

[72] AMMUNITION CARDS

Under the direction of MIL-STD-1168, the supplier shall furnish DD1650 Ammunition Data Cards (ADC) for each shipment (test and production) as generated from Ammunition Lot Record and Malfunction System (ALRAM). Preparation instructions can be found in DI-MISC-80043 and government-furnished software. Supplier shall furnish a signed printout of DD1650 in blue ink and electronic data at time of hardware acceptance unless otherwise directed by PO. Lot numbers for all explosive components and explosive subassemblies shall be in accordance with MIL-STD-1168, Ammunition Lot Numbering and Ammunition Data Card, and included in Block 24 of DD1650.

[73] DD250

Unless otherwise specified in the PO, the supplier shall furnish an editable electronic copy of a DD250 Material Inspection and Receiving Report at time of each delivery (test and production). Preparation instructions can be furnished upon request to the Aerojet (Redmond) Buyer.

Numbers 74 through 98 unassigned.

[99] PART-SPECIFIC QUALITY REQUIREMENT

When this note appears on the purchase order, additional requirement(s) apply specific to this part number. The supplier shall contact Aerojet (Redmond) Buyer for requirement definition.