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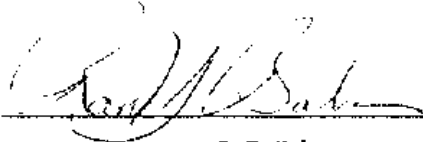
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**"MDA's Supplier Requirements For  
Facility-Wide Material Review Authority"**

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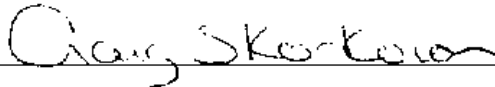
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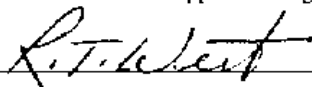


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## **MDA'S SUPPLIER REQUIREMENTS FOR FACILITY-WIDE MATERIAL REVIEW AUTHORITY**

### **1.0 INTRODUCTION**

#### **1.1 SCOPE**

This MDA report specifies supplier facility-wide Material Review Authorization (MRA) system requirements for the control and dispositioning of nonconforming material at MDA supplier facilities. The requirements specified herein are the minimum requirements in order to be approved for supplier Material Review Authorization by McDonnell Douglas Aerospace - Tactical Aircraft and Missile Systems. Program requirements may be included in the applicable contract which may modify or add to the requirements included herein.

#### **1.2 APPLICABILITY**

This MDA Report is applicable in situations when:

- a) the supplier's management with executive responsibility has defined, documented, and approved its procedures and processes for the control and dispositioning of nonconforming material (which meets the requirements of the supplier and this report), and
- b) the MDA supplier has a MDA approved MRA system by means of a letter from a member of the Supplier Quality Management (SQM) team or their designee (MRA coordinator or cognizant SQM Representative), and
- c) SPOC 2021 is called out on the applicable MDA contract.

### **2.0 DEFINITIONS/INFORMATION**

#### **2.1 Definitions**

2.1.1 **General** - The definitions in MIL-STD-973 may be used as a reference for this report.

2.1.1.1 The following definitions also apply to this report and take precedence in case of inconsistencies with referenced or other industry/supplier standards.

2.1.2 **Material Review** - In a broad sense, a function for the identification, segregation, and disposition of nonconforming items. In a narrow sense, (and for the purposes of this document), actions taken by the supplier's Material Review Board (with MDA Material Review Authority) following Preliminary Review.

2.1.3 **Material Review Board (MRB)** - A board consisting of technically qualified and authorized representatives of MDA Suppliers necessary to determine the proper disposition of nonconforming material referred to them.

2.1.4 **Nonconformance** - A departure from the requirements specified in the contract, specification, build-to-media, or other approved product description.

2.1.5 Nonconformance, Critical - a nonconformance which adversely affects safety.

2.1.6 Nonconformance, Major - a nonconformance which adversely affects any of the following as determined by Supplier, MDA SQM, or Engineering personnel:

- a) health;
- b) performance (affecting contract line item or spare requirements);
- c) contract specified system requirements affecting interchangeability, reliability, or maintainability;
- d) effective use or operation;
- e) weight or appearance (when a factor);
- f) nonconformances pertinent to safety of flight, fracture and/or maintenance critical, fracture critical traceable, durability critical parts or assemblies.

2.1.7 Nonconformance, Minor - a nonconformance which does not adversely affect any of those factors listed for a Critical or Major Nonconformance (may exist after an approved repair is effected which has reduced a major nonconformance to a minor nonconformance).

2.1.8 Nonconforming Material - Any item, part, or product with one or more characteristics which depart from the requirements in the contract, specification, build-to media, or other approved product description.

2.1.9 Post-Review of MRB Actions - Post-Review is a process whereby the supplier is authorized by the Government to proceed unilaterally with the disposition and repair associated with a nonconformance documented on the supplier's Material Review Document (MRD).

2.1.10 Preliminary Review (PR) - The action taken by supplier appointed personnel when nonconforming material is initially discovered, and prior to referral to the supplier's MDA approved MRB.

2.1.11 Repair - The subjection of nonconforming material to an approved procedure designed to reduce but not completely eliminate the nonconformance. The purpose of repair is to bring nonconforming material into an acceptable condition. Repair is distinguished from rework in that the item after repair still does not completely conform to the applicable build-to media, specifications, or contract requirements.

2.1.12 Rework - The reprocessing of nonconforming material to make it conform completely to the build-to media, specifications, and contract requirements.

2.1.13 Scrap - Nonconforming material that is not usable for its intended purpose or cannot be economically reworked or repaired.

2.1.14 Standard Repair Procedure (SRP) - A documented technique, for repair of a specific type of nonconformance, that has been developed for specific applications, and is approved by the supplier's MDA approved Material Review Board. Unless otherwise specified by the MDA contract, the supplier shall be solely responsible for the final approval of the technical content and appropriateness of the repair.

2.1.15 Use-as-is Dispositions - A disposition of material with minor nonconformances when the material is determined to be satisfactory for its intended purpose in its present state without further processing.

2.1.16 Waiver - A written authorization to accept a configuration item or other designated item which is found, during production or after submittal for inspection, to depart from specified requirements but nevertheless is considered suitable for "use-as-is" or rework by an approved method.

## **2.2 Information, General**

2.2.1 Design Cognizance - Material review authorization is intended for MDA supplier contracts wherein the products being procured are supplier designed and not off-the-shelf (i.e., non-cataloged items).

2.2.1.1 Build-to-Print Considerations - MDA programs may elect to authorize Material Review for certain suppliers with MDA designed, build-to-print (e.g., major assemblies/structures) contracts. Such authorizations including limitations and special controls require MDA-SQM to obtain specific contract approval by the program. The MDA SQM Representative is not authorized to approve build-to-print suppliers for material review authorization. The supplier may request to be considered for MDA Material Review Authorizations on build-to-print by submitting a request to the manager of MDA SQM, the cognizant Supplier Manager/Buyer, or the cognizant MDA Program Quality Manager.

2.2.2 MDA SQM Reviews - After the initial review/approval, the supplier's Material Review system will be reviewed at least once per year (see par. 3.1.2 for requirements).

2.2.2.1 Updating Approvals - The SQM Representative will issue a letter (annually) to the supplier recognizing the continuing approval of the Supplier's facility-wide MRA, if review indicates an acceptable supplier Material Review system.

2.2.2.2 Disapproval of Supplier's MDA Material Review Authority - The MDA SQM Representative may disapprove, in writing to supplier management, the MDA Material Review Authority. The MDA SQM letter disapproving the MDA approved Material Review Authority will include the scope of the disapproval and provide reasons for disapproval. The supplier should coordinate with the SQM Representative to correct deficiencies.

2.2.2.3 Challenging Disapproval - The supplier may elect to challenge such disapproval's by contacting the manager of MDA SQM, the cognizant Supplier Manager/Buyer, or the cognizant MDA Program Quality Manager. The supplier may also use the process identified in the disputes clauses contained in the contract.

## **3.0 REQUIREMENTS, PRELIMINARY/ MATERIAL REVIEW**

### **3.1 Procedures - General**

3.1.1 Control of Nonconforming Material - The supplier's management shall establish and maintain a documented system which will identify, segregate (or control if segregation is not practical) and properly disposition nonconforming material, including disposal of scrap.

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3.1.2 MDA Review of MRB Procedures - As part of the initial and subsequent reviews, the supplier's MRB procedures, records, and process shall be made available upon request by a representative of MDA SQM. If the supplier is not serviced by an MDA SQM Representative, the procurement agent should be contacted for direction. The supplier will need to provide sufficient support to the MDA SQM Representative to allow an effective and efficient review of the supplier's MRB process (this requirement applies to MRB delegations with the supplier's sub-tiers as described in paragraph 3.6.2). MDA may have the SQM Representative review the procedures on-site or forward them to MDA in order to determine if the supplier's Material Review system is acceptable.

3.1.2.1 Submittal of Changes to MRB Procedures - If any changes are made to the supplier's MRB procedures which are applicable to the MDA contract, the supplier shall notify the MDA SQM Representative of the change and make the procedures available upon request. The MDA SQM Representative will review the change and notify the supplier and MDA SQM management if there are any issues which adversely affect the previously granted MDA Material Review Authority.

3.1.3 Deviations - contract requirements and configuration change proposals cannot be processed under the provisions of this document (see contract management requirements for instructions).

3.1.4 Critical/ Major Nonconformance - The supplier's procedures shall ensure that nonconformances pertinent to safety of flight, fracture critical, maintenance critical, fracture critical traceable and durability critical parts or assemblies are documented on a Clear Form C (CFC; MAC Form 861R) and submitted to MDA MRB in accordance with Informal Report (IR) 0451 and/or MDC Report A4150 (see contract requirements).

3.1.5 Identification and Segregation of Nonconforming Material - The supplier's procedures are to address:

- a) material found to be nonconforming be conspicuously marked or tagged or otherwise controlled to preclude its unauthorized use in production or shipment;
- b. if it is necessary that work continues on nonconforming material, this work shall not alter the status of the reported nonconformance until Preliminary or Material Review personnel have evaluated the condition;
- c. nonconforming material to be submitted to the MRB should be moved to a controlled area designated for storage of nonconforming material unless procedures allow material to be processed as noted previously and/or it is not practical due to size, configuration, or environmental requirements;
- d. sufficient protection of designated areas to preclude unauthorized removal of the nonconforming material;
- e) the method of controlling nonconforming material shall indicate the status of the material in the disposition process.

**3.2 Preliminary Review (PR) Process**

**3.2.1 Preliminary Review** - When material is found to be nonconforming, the supplier's MRB procedures may have provisions for the material to be documented and examined by supplier appointed "preliminary review" personnel to determine if the nonconforming conditions:

- a) can be eliminated by rework;
- b) require scrapping of the material because it is obviously unfit for use and cannot be economically reworked or repaired;
- c) can be repaired by approved Standard Repair Procedure(s);
- d) require return of the material to a supplier;
- e) meets none of the above criteria and must be referred to the supplier's MRB.

**3.3 Material Review Process**

**3.3.1 Supplier's MRB Procedures** - The supplier shall establish and maintain procedures with respect to MRB which are appropriate for the systems or products being procured by MDA. The supplier's procedures need to address the following areas to ensure that the MRB:

- a) determines the proper or recommended disposition of nonconforming material referred to the MRB;
- b) approves all Standard Repair Procedures and establishes thresholds for re-evaluation by the MRB;
- c) investigates in a timely manner (e.g., failure and/or engineering analysis), all nonconforming material (except material previously dispositioned in the Preliminary Review) in sufficient depth to determine proper disposition and effectivity of other products affected;
- d) disposition nonconforming material using those dispositions allowed by the supplier's procedures.

**3.3.2 Procedures Addressing Disposition of Nonconforming Material** - The supplier's MRB procedures should include dispositioning categories (e.g., scrap, rework, repair, repair via SRP, use-as-is, contract waiver from the cognizant MDA program) as appropriate.

**3.3.2.1** Procedures should include instructions for reprocessing material after repair (including standard or non-standard repairs). Provisions for including necessary supplier inspections/validations should be addressed.

**3.3.3 Nonconforming Material Documentation/Records - The supplier shall maintain records of nonconforming material and dispositions. The supplier's procedures shall assure that these records are identified, indexed, filed, etc. to ensure timely and effective retrieval and to provide sufficient detail for performing investigations, MDA supplier MRB reviews, and trend analysis when requested.**

**3.3.4 Material Review Forms - The supplier should identify the standard form(s) for documenting and dispositioning of nonconforming material (applies to paper or electronic system). The procedures shall address the minimum requirements or data fields to be on the form (including required signatures/approvals). Detailed instructions shall be established and maintained for documenting nonconforming material, dispositions, approvals, etc. in accordance with the supplier's defined system.**

**3.3.5 Government/Customer Actions - The supplier's procedures shall include requirements for obtaining approvals and/or reviews (affecting MDA hardware) which involves repair and use-as-is dispositions (when required by the Government or Customer).**

**3.3.5.1 Any actions taken by the government (including cessation, Corrective Action Requests, etc.) or other supplier customers which affects the procedures or operations of the supplier's MDA approved facility MRB shall be brought to the attention (in writing) of MDA Supplier Quality Management.**

#### **3.4 Material Review Board**

**3.4.1 MRB Management - The supplier's facility Material Review Board should include a member of middle or upper management from both Quality Assurance and Engineering disciplines. Each MRB should be chaired and attended by one of these members (or a specific management designee(s)).**

**3.4.2 MRB Membership - The supplier's facility Material Review Board shall consist of Quality Engineering and Project/Liaison Engineering as a minimum (it is recognized that individual membership may differ depending on program requirements/organizations; MDA SQM will consider these situations during the Material Review system reviews/approvals).**

**3.4.2.1 The supplier's procedures shall require approval of each MRB member by the MRB management (see 3.4.1). Objective evidence of this approval (MRB management signatures) including the resume shall be maintained in the MRB records management system (i.e., supplier's retrievable records). Approval of members shall be specific to the MDA program(s) and a current list by MDA program must be included in the MRB/Supplier records.**

**Note: Membership approvals DO NOT require prior approval from MDA, however, the supplier should notify the MDA SQM Representative of changes as soon as possible.**

**3.4.2.2 MRB members shall be selected on the basis of their technical competence and aerospace/supplier experience. MRB members may call upon other supplier personnel for technical advice.**

3.4.3 Engineering/Quality Engineering (or equivalent function) MRB Qualifications - The supplier's procedures shall ensure that the following criteria are used for selecting, reviewing, and approving MRB personnel:

- a) **Education:** BS Engineering/Technical Degree and two (2) years related experience.

If No Degree:

Requires five (5) years Engineering assignment related to MRB authority (in technologies) being requested and, Candidates shall have either an Associates Degree in Engineering Technology or at least one (1) year of college level engineering study in a field related to the authority being requested.

- b) **Employment:** One (1) year (minimum) employment with supplier.

- c) **Training:** Evidence of Classroom or On-Job-Training in MRB procedures (including Root Cause Analysis) and MDA program specific requirements (e.g., MDA limitations, Critical Materials limitations as applicable, Repair/Standard Repair requirements, etc.).

Note: A supplier generated testing process is recommended as proof of meeting this requirement.

**3.5 Post-Review (Government's Option)**

3.5.1 Petitioning for Post Review - The supplier may elect to enter into discussions with the Local Government Representative office to petition for Post-Review of Material Review by process, product, location, etc. Once the agreements have been reached with the Local Government Representative, the supplier must submit a letter to the SQM Representative so that concurrence can be obtained from the cognizant MDA-STL Government Representative (this approval is required prior to implementation).

**3.6 Supplier Sub-tier Nonconforming Material**

3.6.1 Supplier Sub-tier Items - Sub-tier suppliers should be notified of material nonconformances discovered by the supplier (exceptions should be included in supplier's procedures either specifically or by types/families of parts). The supplier's procedures should address sub-tier supplier nonconformances found by the supplier and must be included as data or information in the supplier rating system.

3.6.2 Supplier Delegations - The supplier may delegate material review authority to sub-tier suppliers by coordinating such requests with MDA SQM (contacting the SQM representative is preferred). If MDA and the supplier elects to delegate such authority, the requirements of this report shall be flowed down either in full, or as appropriately tailored. The applicable MDA contract must include SPOC 2021 before any delegations can be considered by the supplier.

3.6.2.1 If a supplier's sub-tier (or company component) has an MDA approved facility-wide Material Review Authorization, delegations may be authorized at the suppliers discretion provided SPOC 2021 is on the cognizant MDA contract.

3.6.3 Supplier Reviews - The supplier's procedures shall require that the supplier's sub-tier MRB process (if MRA is delegated) be reviewed and results documented once per year (minimum). Provisions shall be included in the delegation/contract allowing MDA to review the sub-tier's MRB process upon request by MDA. MDA has the right to revoke supplier sub-tier MRB delegations (as applicable to MDA contracts).

3.6.4 Sub-tier MRB Delegation Disapproval - If MDA disapproves a sub-tier's MRB delegation, the sub-tier shall be required to notify all MDA SUPPLIERS from whom they have received MRB delegation.

#### **4.0 CORRECTIVE ACTION and PREVENTIVE ACTION**

##### **4.1 General**

4.1.1 Corrective and Preventive Action Procedures - The supplier shall establish and maintain documented procedures for implementing corrective and preventive action (review the applicable MDA contract for specific requirements affecting Corrective and/or Preventive Action).

4.1.2 Corrective and Preventive Actions - Any actions proposed to eliminate the causes of actual or potential nonconformances should include both economical and risk considerations.

4.1.3 Corrective and Preventive Action Records - The supplier shall maintain records of all Corrective and Preventive Actions. These records shall be made available upon request to the MDA SQM Representative.