Supplier Material Review Board
Authority Guidelines

SG-0100

10/21/13

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Northrop Grumman Aerospace Systems
## Revision Record

<table>
<thead>
<tr>
<th>Revision</th>
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## Primary Change Summary

- Updated Project ID’s to 5 characters
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1. General

Northrop Grumman or Customer Designed Parts

Suppliers do not have MRB authority for Northrop Grumman designed part numbers or any of its customer’s (i.e. – Boeing, Lockheed) designed items unless specifically authorized in writing by the buyer.

The supplier’s MRB shall not make any disposition on any nonconformance to Northrop Grumman or Customer designed parts that affect form, fit, function, weight, interchangeability, maintainability, reliability, unique key characteristics or safety. These nonconformances shall be submitted to the Northrop Grumman MRB on the specified nonconforming material control document as specified by the business area.

Supplier Designed

Program Specific Requirements


Suppliers of products for these projects that retain design authority to a Source/Specification Control Drawing (SCD) or Customer Performance Specification do not have Independent Material Review (MRB) authority but may elect to obtain authority. Suppliers who elect to apply shall request independent MRB authority by following the procedural steps that follow.

Suppliers who do not apply for independent MRB shall submit nonconformances to the Northrop Grumman MRB on a Supplier Material Review Report (SMRR) in accordance with the requirements in Table 3 of SQAR.

b) All other project ID’s:

Suppliers of products for these projects that retain design authority to a Source/Specification Control Drawing (SCD) or Customer Performance Specification and are ISO9001:20xx or AS9100 certified may use dispositions of use-as-is or repair, as long as the nonconformity does not result in a departure from the requirements of the SCD/Customer Specification. This includes those suppliers that produce products of proprietary design.

Northrop Grumman reserves the right to perform an audit of the supplier’s MRB process even though they may have design authority to a Source/ Specification Control Drawing (SCD) or Customer Performance Specification.

Material Review Board authority will not be granted to suppliers who do not have design and/or design control capabilities as defined in ISO9001: 20xx or AS9100, Section 7.0 Product Realization.

Northrop Grumman reserves the right to perform surveys of the supplier’s MRB process based on their overall performance and/or product complexity.

Northrop Grumman and/or the Customer retain the right to not accept Supplier MRB dispositions or product that has had MRB dispositions incorporated.

Suppliers wishing to obtain MRB authority shall contact the appropriate Northrop Grumman Aerospace Systems (NGAS) business area buyer.
2. Data package requirements for all Business Areas
   a) Procedures for the identification, control and disposition of non-conforming materials that establish compliance with Mil-Std-1520 and ISO9001: 20xx or AS9100.
   b) Procedures for the implementation of Corrective and Preventive Action to preclude recurrence of nonconformances.
   c) Roster of Quality and Engineering personnel proposed for MRB membership accompanied by resumes of their education and experience.
   d) Flowcharts and Organizational Charts which support the procedural outline.
   e) Internal forms.
   f) Evidence of the local Government Representatives concurrence with the above items.
   g) Data packages shall be submitted to the appropriate NGIS business area buyer.

3. Business Area specific requirements for supplier MRB authority requests
   a) Military Aircraft Systems formerly BMESD, or AGS/BMS and AEW/EWS.
      1) Suppliers shall follow the procedural steps in Quality Operations Standard QOS-0043, NGAS Independent Material Review Board Requirements to be considered for Independent MRB authority. This document is posted on NGAS’ QASIS website.
      2) Requests for MRB authority shall be submitted to the appropriate NGAS buyer.

4. Application Process
   a) Suppliers wishing MRB authorities shall contact the NGAS buyer within the Business Area to initiate the MRB assessment process.
      1) Approvals may be limited within the Business Area for only specific programs, projects or actual part numbers.
   b) Any limitations identified or placed upon the supplier’s MRB authority will be identified in the MRB assessment and Letter of Delegation that will be sent to the supplier.

5. Approval Oversight:
   a) NGAS oversight
      1) Onsite MRB audits, Process/Product Assessments.
         o Suppliers will be subjected to an onsite initial MRB assessment audit prior to being granted MRB authority.
         o MRB evaluation audits will be performed periodically throughout the period of performance to ensure compliance to MRB procedures.
      o Suppliers are required to have Letters of Delegation from the Business Area DCMA office on file, prior to local office DCM personnel accepting their MRB dispositions.
      o Supplier MRB approval delegations with any limitations for existing or future procurements are maintained within the business area.

6. Withdrawal/Re-approval process:
a) How notified:
   When a supplier’s MRB disposition is found to be unacceptable, or that they have exceeded their authorization, the supplier’s MRB privilege will be put on probation or suspended. Formal notification will be imposed via a change in the Letter of Delegation.

b) Examples of reasons for probation or suspension:
   1) Processing of major waivers by the supplier board.
   2) Minor waivers not signed by approved board members and the local government representative.
   3) Inadequate engineering dispositions.
   4) Lack of positive corrective action.
   5) Lack of nonconforming material segregation.
   6) Misuse of standard repairs.
   7) Use of repair dispositions that results in a departure from contractual requirements.

c) Supplier’s MRB authorization may also be suspended or the supplier placed on probation if their Scorecard performance rating falls below a Green rating, unless effective corrective action and verification of corrective action takes place within thirty days of the rating change.
   1) Supplier’s who maintain a Green rating may have their MRB approval cycle extended to a two-year review.

d) For any suspension or withdrawal of MRB authority the supplier will be subjected to an onsite re-audit and approval cycle prior to be re-granted authority. For any probation notifications the supplier maybe subjected to an onsite assessment to validate the continued validity of their MRB program.
   1) In either case the supplier will be required to provide objective corrective action that causal factor(s) have been rectified.

7. Glossary:
   • Audit- Review of the corrective action and disposition system for nonconforming material for compliance to contractual requirements and to ensure effectiveness.
   • Corrective Action- Action that corrects the cause of an actual or potential nonconformance, prevents its recurrence, purges the system of defective material, and documents the activity.
   • Corrective Action Board- A board consisting of management representatives of appropriate contractor organizations with the level of responsibility and authority necessary to ensure the prevention of non-conformances to manage quality improvement efforts as appropriate to assess and manage nonconformance cost elimination, to ensure that causes of non-conformances are identified and to ensure that corrective actions are effected throughout the organization.
   • Corrective Action Request (CAR)- A request for a corrective action investigation to determine cause.
   • Cost of Rework or Repair-The cost based on appropriate established standards multiplied by the estimated rework or repair hours.
• **Defect**- Any nonconformance of a characteristic with specified requirements.

• **Detailed CAR Investigation**- An investigation to determine the cause and corrective action of the nonconforming condition.

• **Deviation**- Written customer authorization granted prior to the manufacture of an item that allows temporary departure from drawings, specifications, or other contract requirements. Deviation authority does not connote revision of contract requirements.

• **Engineering Liaison**- The Engineering department representing Engineering on the Material Review Board with the responsibility and authority for disposition of nonconforming material.

• **Failure**- A malfunction detected during functional testing or flight operations.

• **Fatigue Critical Parts**- Parts located in areas of the primary aircraft structure, the failure of which could lead to the destruction of the aircraft, and which are designated as “Fatigue Critical” by Engineering. These parts are excluded from Supplier MRB authority.

• **Formal Corrective Action**- That, which is requested by notification to the supplier requiring a written response. Action taken when a repetitive nonconformance is identified.

• **Fracture Critical Parts**- Specific parts, the single failure of which could cause a safety of flight condition to exist, and which are designated “Fracture Critical” by Engineering. These parts are excluded from Supplier MRB authority except as specified in the letter of delegation.

• **Functional Equipment**- Any part or assembly which requires a functional test as part of its acceptance criteria, or which includes internal moving components and is essential to the operation of the aircraft or one of its systems.

• **In-House**- Within a Northrop Grumman facility. Opposite of “Offsite”.

• **Item**- Generic term to describe assemblies, subassemblies, detail parts, raw material, process material or other substances used in production.

• **Interchangeability**- Applies to interchangeable items that are manufactured with the aid of control media and require only the application of attaching means for their installation. Interchangeable items are capable of being readily installed, removed or replaced without alteration, misalignment or damage to items being installed or to adjoining items or structure.

• **Lower Control Limit**- The statistically established unacceptable quality limit for each process.

• **Major/Critical Nonconformance**- A nonconformance other than minor that cannot be completely eliminated by rework or reduced to a minor nonconformance by repair.

• **Material**- Same as “Item”.

• **Material Review Board (MRB)**- A formal board established for the purpose of establishing Material Review policy and for reviewing and determining disposition of referred nonconforming material.

• **Minor Nonconformance**- A nonconformance which does not adversely affect any of the following: health or safety, performance, interchangeability, reliability, maintainability, effective use or operation, and weight or appearance when a factor.
Note: Multiple minor non-conformances, when considered collectively, may raise the category to a major or critical nonconformance.

- Missed Corrective Action- A condition where a supplier has failed to respond to both an initial and a follow-up request for cause determination and corrective action within the timeframes specified in the request.

- MRR (Material Review Record)- A nonconformance report that has been re-identified with the letters “MRR” stamped or printed on the form and which contains a disposition affecting the next assembly or covering more than one assembly unit.

- Nonconformance- The failure of a characteristic to conform to the requirements specified in the contract, drawings, specifications, purchase order or other approved product description.

- Nonconforming Material- An item, part or product with one or more characteristics which depart from the requirements in the contract, drawings, specifications, purchase order or other approved product description.

- Nonfunctional Part- Hardware which contains no internal moving parts and which does not require a functional test as part of its acceptance criteria.

- Occurrence: The first time a nonconformance is detected on a specific characteristic of a part or process. All nonconformances attributed to the same cause and identified before the date, item, unit, lot number or other commitment for effective corrective action are considered occurrences. To determine and document the number of occurrences, defects are to counted against a part or assembly considering data from previous units, sample to be established, (e.g. hole drilling, fastener installation) and cause (e.g. workmanship, tooling, methods, engineering).

- Preliminary Review- An initial action taken by authorized personnel to determine if material should be submitted for MRB action or a disposition as; Rework to Specification, Remove and Replace, Return to Supplier, Standard Repair or Deferred Scarp should be made.

- Preventive Action- Action taken to eliminate the causes of a potential nonconformity, defect or other undesirable situation in order to prevent recurrence.

- Preventive Costs- The cost of all activities planned or intended to reduce the possibility of defects from occurring.

- Quality Improvement- A program to provide for the implementation of variability reduction and control techniques in the manufacturing process in order to improve process and product quality.

- Quality Improvement Project (QIP)- An activity charted and monitored by a CAB to investigate technology, methods, and procedures to find a more efficient and effective means of carrying out contractual responsibilities with the objective of enhancing quality and productivity.

- Recurrence- A repetition of a nonconformance that does not fit the definition of an occurrence.

- Repair- Action which subjects nonconforming material to a planned manufacturing process designed to reduce but not completely eliminate the nonconformance. After repair, the material is treated as normal material. Except for SRs, proposed repairs approved by the customer are for use on a one-time basis.
• **Repaired Material**- Nonconforming material presented by the contractor for acceptance after it has been subjected to a planned manufacturing process designed to reduce, but not completely eliminate the nonconformance.

• **Repetitive Condition**- A condition which continues to exist due to ineffective corrective action.

• **Replaceability**- Replaceability applies to replaceable items that are manufactured with the aid of control media, the installation of which requires alteration of the items in addition to the normal applications and methods of attachment. Such alterations may include drilling, reaming, cutting, etc.

• **Rework**- Same as Rework to Specification.

• **Rework to Specification**- Action which subjects nonconforming material to a planned manufacturing process that restores all nonconforming characteristics to the requirements in the contract, drawings, specifications, purchase order or other approved product description.

• **Safety Critical**- Is defined as, but not limited to, significant risk of accident or misoperation or whose outcome of an incident could result in personnel injury or illness, a release to the environment, non-compliance to a contractual regulation or standard or serious damage to equipment, test articles or facilities.

• **Safety of Flight Item**- An item having a major effect on the safety of operating the Aircraft. Suppliers are not granted MRB for Safety of Flight items.

• **Scrap Part**- Material or components that have been determined by authorized personnel to be unsuitable for their intended use and are unsalvageable.

• **Standard Disposition**- A standard, documented disposition procedure, which has been demonstrated to be an adequate and cost effective method for repair when properly, applied to a nonconformance. Standard disposition procedures are developed by the supplier, review and approved by the Organization’s MRB with concurrence by the Government.

• **Standard Repair**- A documented repair technique which, when properly applied, has been demonstrated to be an adequate and cost effective method for repair of a nonconformance. Standard repairs are developed by the supplier and approved by the Organization’s MRB.

• **Stock Review (Purge)**- An inspection of all material in stock of a given part number for a specific discrepancy identified as the result of other inspections.

• **Upper Control Limit**- The statistically established acceptable quality limit for each process.

• **Verification of Corrective Action (VCA)**- An inspection of a specific pre-selected unit performed to verify that the cause of a nonconformance condition has been rectified.
Supplier Questionnaire/ Guidance

The questionnaire below is provided to the supplier for guidance in what will be expected during an onsite audit of their respective MRB systems.

### Section 1. General Requirements

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<td>1</td>
<td>If this is a re-accreditation assessment, does the supplier have letter(s) of delegation on file from the Customer and/or Regulatory Agency?</td>
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<td>a. Are there any limitations on the authorization(s)?</td>
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<td>b. List programs for which the supplier has Material Review Board (MRB) authorization:</td>
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<td>Are there any changes to their MRB practices since the last approval has been granted?</td>
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<td>a. If <strong>yes</strong>, proceed to Section 2.</td>
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<td>b. If <strong>no</strong>, proceed to Section 4.</td>
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**Remarks:**

### Section 2. Material Review Board

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<td>If an initial or changed accreditation does the supplier have current:</td>
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<td></td>
<td>a. Documented Preliminary Review Board (PRB)/ Material Review Board (MRB)/Corrective Action Board (CAB) processes, policies and procedures</td>
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<td></td>
<td>b. PRB/MRB Flowcharts</td>
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<td>c. PRB/MRB Personnel roster and resumes</td>
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<td>c. Internal PRB/MRB forms</td>
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<td>2</td>
<td>Are nonconforming material reports/forms serialized to assure accountability and traceability, along with the ability to retrieve generated reports?</td>
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<td>Does the supplier’s procedure provide adequate disposition categories for PRB and MRB decisions?</td>
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<td>Are nonconforming materials positively controlled to prevent unintended use or delivery until such time they are dispositioned either through PRB or MRB functions?</td>
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<td>• Are scrap materials conspicuously and permanently identified and controlled until they are rendered physically unusable?</td>
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<td>Does the supplier have a method for requesting deviations or concessions from the Customer/Regulatory Agency?</td>
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6) Does the supplier have a documented procedure for timely Customer notification of delivered nonconforming product?  
   - Does notification contain a clear description of the nonconformity, parts affected, appropriate part numbers, quantity of affected parts and delivery dates?  

7) Is there objective evidence that when nonconforming product is corrected that it is subjected to re-verification to demonstrate conformity to requirements?  

8) Flow down of corrective action requirements to suppliers, when it determined that the supplier is responsible for the root cause?  

Remarks:  

**Section 3. Corrective/Preventive Action Board (C/PAB)**  
<table>
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<td>1) Has the supplier implemented a corrective/preventative action board to:</td>
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<td>a. Direct corrective and preventive actions</td>
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<td>b. Assess effectiveness of actions taken</td>
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<td>c. Periodically review effectiveness of board discussions</td>
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<td>d. Provide Top Management with reports of C/PAB actions</td>
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<td>e. Summarize C/PAB data</td>
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<td>f. Specify actions where timely or effective corrective actions have not been achieved.</td>
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Remarks:  

**Section 4. Record Assessment**  
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<tr>
<td>1) Review a random sampling of completed MRB disposition documents and validate for the following:</td>
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<tr>
<td>a. Completeness of documents</td>
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<td>b. Adequate and legible description of nonconformance</td>
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<td>c. Adequate disposition action</td>
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<td>d. Applicable cause and corrective action statements</td>
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<td>e. Approval signatures, including Customer, as appropriate</td>
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<td>f. Control part identifications, i.e. critical parts</td>
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<td>g. Any concessions received from the Customer</td>
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2) Is there objective evidence of Top Management review of nonconforming material controls and their effectiveness?  

3) Review a random sampling of completed MRB disposition documents and validate for the following:  
   a. Completeness of documents  
   b. Adequate and legible description of nonconformance  
   c. Adequate disposition action  
   d. Applicable cause and corrective action statements
e. Approval signatures, including Customer, as appropriate
f. Control part identifications, i.e. critical parts
g. Any concessions received from the Customer

4) Is there objective evidence of Top Management review of nonconforming material controls and their effectiveness?

Remarks: