

MWI 8730.3
REVISION I-1
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MARSHALL WORK INSTRUCTION

QD01

MSFC MATERIAL REVIEW SYSTEM *With Change 1 (6/29/22)*

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DOCUMENT HISTORY LOG

Status (Baseline/ Revision/ Change/ Revalidation/ Canceled)	Document Revision/ Change	Effective Date	Description
Baseline		5/14/99	Document converted from MSFC-P13.1-C01 to a Directive. Previous history retained in system as part of canceled or superseded ISO Document files.
Revision	A	8/16/99	Changed organizational references to reflect MSFC's reorganization. Added definitions for critical, major, and minor. Clarified requirements for Project MRBs to document membership in the Project Quality Plan. Replaced reference to MSFC-STD-555 with reference to MWI 8040.3. Changed paragraph 6.1.1.d to indicate that the responsible design engineer is to be contacted if a discrepancy disposition requires a design change. In paragraph 6.1.2, deleted the reference to the specific paragraph in MWI 5100.1.
Revision	B	5/9/03	Document updated to be in compliance with AS9100 and current practices. Updated the Master List URL in the footer.
Revision	C	10/15/2004	Revised to bring document in compliance with the HQ Rules Review Action (CAITS: 04-DA01-0387). Changes were also made to reflect S&MA organizational name changes (i.e., QS to QD). Paragraph 6.2.4 revised for clarity.
Revision	D	8/4/2005	6.1.3 Corrected number of MRBs, 6.1.3.1b corrected nomenclature, 6.1.4 added responsibility for naming voting members, 6.2.2 and 6.2.3 clarified and deleted redundant requirements, 9. Added record retention detail.
Revision	E	3/23/2009	Revised 2. Applicability statement to address the applicability of this directive to the Michoud Assembly Facility. This MWI is not applicable to MAF.
Revision	F	4/4/2013	Revised to new format, updated Authority document, removed unnecessary "shall" statements, added Acronyms appendix.
Change	I	6/16/2014	On 6/16/14, at the request of the OPRD, an administrative change was made replacing references to MPR 8040.1, "Configuration Management, MSFC Programs/Projects," which has been Cancelled, to MPR 7123.1, "MSFC Systems Engineering Processes and Requirements."
Revision	G	5/5/2016	Revised to replace reference to "MPR 7123.1" to "program/project configuration management plans." Updated Applicable Documents and Forms and made minor editorial changes. Revised the definition of Contracting Officer. Deleted 5.1.3. Added maintenance of MRB membership lists in Appendix D. Added note to 5.1.2 for clarification.
Revision	H	1/27/2017	Revised 5.2.4.1 and 5.2.5 to allow SMA Mission Services Contractor personnel membership with SMA Director approval. Added TOC. Clarified wording. Clarified P.1, P.5.1.1.3, P.5.1.1.4. P.5.2.5, P.5.2.6 and P.5.2.7. Corrected D.1.1. D.1.3 added NRRS citation and corrected retention.
Revision	I	6/24/2020	In Section 4, updated Tag-10 title f and removed references no longer in use. Rewrote section 5.0 language. Revised sections 5.1.1.2 and 5.1.1.3 to eliminate major/minor characteristic terminology. Split requirement 5.1.2 to add 5.1.3. Replaced reference to MWI 5100.1 with MPR 8730.3 for additional details on acceptance of discrepant purchased products. Added Section 5.2.8 (requirement moved from MPR 8730.3). Appendix A deleted no-longer used definitions for critical, major, and minor characteristics; Specified in D.1.1 and D.1.2 that records maintained at the QRC may be transferred to the project for retention. Updated retention schedules to reflect NRRS 8/103 and NRRS 1/78/F/1.
Change	I	6/29/2022	On 6/29/22, at the request of the OPRD, and administrative change was made to correct the reverence to MPR 8730.3 in section 5.0 from

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			paragraph 2.2.15 to 2.2.17; to replace the words discrepancy record with the acronym DR in section 5.1.3; correct the term in Appendix A from Discrepancy Record to Discrepancy Report; and spell out the acronym FRC as Federal Records Center in D.1.1.
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1. PURPOSE

To provide for processing of minor nonconforming items as defined in MPR 1280.10 and MPR 8730.3.

2. APPLICABILITY

- a. This MWI applies to Center personnel, programs, projects, and activities, including contractors and resident agencies to the extent specified in their respective contracts or agreements. (“Contractors,” for purposes of this paragraph, include contractors, grantees, Cooperative Agreement recipients, Space Act Agreement partners, or other agreement parties.)
- b. This MWI does not apply to the Michoud Assembly Facility.
- c. This MWI applies the following: all mandatory actions (i.e., requirements) are denoted by statements containing the term “shall.” The terms: “may” or “can” denote discretionary privilege or permission; “should” denotes a good practice and is recommended, but not required; “will” denotes expected outcome; and “are/is” denotes descriptive material.
- d. This MWI applies the following: all document citations are assumed to be the latest version unless otherwise noted.

3. AUTHORITY

MPR 8730.3, Control of Nonconforming Product

4. APPLICABLE DOCUMENTS AND FORMS

- a. NRRS 1441.1, NASA Records Retention Schedules
- b. MPR 1280.10, Marshall Quality Management System
- c. MPR 1440.2, MSFC Records Management Program
- d. MSFC Form 460, Discrepancy Record
- e. MSFC Tag-10, Withhold Tag (Hardware)

5. INSTRUCTIONS

When nonconforming items are referred to the Material Review Board (MRB) for review, either a Center-wide MRB or a project MRB shall provide disposition. Paragraph 2.2.17 of MPR 8730.3 may be implemented to authorize further processing of the nonconforming product when documented in writing by the Chief Engineer on the Discrepancy Report (DR).

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Note: The Center-wide MRB is established by SMA and exists as the default MRB for any projects that have not designated and documented their own Project MRB.

5.1 General Provisions.

5.1.1 DRs will be reviewed by the performing organization and the responsible design organization to determine the appropriate disposition.

5.1.1.1 Items dispositioned as Repair or Use-As-Is shall require MRB approval.

5.1.1.2 Do not request MRB disposition for nonconformances that – following all remedial actions – affect one or more system level requirements, characteristics, documents, or responsibilities that are baselined under the program/project configuration control plan. The MRB chair may dismiss the nonconformance from MRB consideration if the chair concludes that a Deviation Approval Request (DAR), is required.

Note: A DAR is typically required for a nonconformance that – following all remedial steps – affects one or more of the following:

- a. Approved Program/Project Specification or software requirements*
- b. Interface characteristics, documents, or responsibilities with other system hardware*
- c. Affects configuration-controlled support equipment, flight system operational trainers, or training devices/equipment/documentation*
- d. Qualification or Acceptance Requirements*
- e. Safety or reliability*
- f. Interchangeability, substitutability, or replaceability at any planned level of use*
- g. Requires retrofit of other units*
- h. Other criteria defined by the Program/Project*

5.1.1.3 The MRB or its constituent members may review and comment upon proposed remedial action used to mitigate a nonconformance in preparation for submitting a DAR, but shall not record these discussions or recommendations as MRB disposition.

5.1.1.4 If the program/project or MRB determines a design problem is indicated, the responsible design engineer will be contacted for change processing.

5.1.2 Nonconformances documented by the fabrication services contractor may be presented to an MSFC MRB for disposition of minor nonconformances in accordance with the governing project plan and/or quality plan.

5.1.3 Discrepant purchased products may be dispositioned by MRB provided the Contracting Officer (CO) authorizes acceptance on the Inspection and Acceptance Request. The product will be dispositioned on a DR and may be handled by MRB. Refer to MPR 8730.3 for further details on acceptance of discrepant purchased products.

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5.2 Specific Instructions.

5.2.1 Overall and timely implementation of the material review system is assured by the Safety and Mission Assurance (SMA) Directorate.

5.2.1.1 A Center-wide MRB shall be established and documented by SMA, with an SMA provided chairperson and alternate chairpersons.

5.2.1.2 A Quality Records Center (QRC) is provided by SMA for Center-wide and in-house project MRBs.

5.2.1.3 MRB nonconformance dispositions, deviations, and waivers to support the as-built configuration status system (ABCSS) are recorded on the parts tag by SMA.

5.2.1.4 A secure Material Review Crib (MRC) to store impounded items shall be established and maintained by SMA.

a. Items that are too large for the MRC or cannot be relocated there shall be conspicuously tagged with an MSFC Tag-10, Withhold Tag.

b. Access to the MRC is controlled by SMA personnel and shall be limited to current MRB members and technical specialists escorted by MRB members.

c. The MRC shall be locked when unattended.

d. Items shall be logged in and out by SMA.

5.2.1.5 MRB meeting schedules and notification to all members are established by SMA.

a. Members shall legibly print and sign their names to each MRB disposition. Electronic signatures may be authorized.

5.2.1.6 MRB functions are performed by all Directorates as required by project MRB requirements and this MWI.

5.2.2 A list of personnel (and their alternates) designated to serve on the Center-wide MRB and delegated with the authority to represent and sign all material review dispositions that fall within their organization's responsibilities is provided by all Directorates to the SMA Directorate upon request.

5.2.2.1 Project Offices. Project Office personnel shall obtain concurrences from the customer for use-as-is and repair dispositions when required by the customer agreement or when the nonconformance results in a departure from customer requirements.

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5.2.3 Project MRB. Projects may appoint and document project-level MRBs to act in lieu of the Center-wide MRB. The Project Quality Plan will define MRB membership and specific members will be provided by a Project memo; however, the chairperson and alternate chairperson shall be named by SMA.

5.2.4 MRB Members

The MRB shall be a committee consisting of members identified as follows:

5.2.4.1 SMA Member. Serves as chairperson and represents and signs for all elements within the SMA Directorate. SMA support services contractor personnel may serve as SMA Member with SMA Director approval.

5.2.4.2 Engineering Directorate. Provides four voting members for the Center-wide MRB representing and signing for materials, manufacturing (mechanical), stress, and manufacturing (electrical), respectively. Only those disciplines needed to address the specific discrepancy will be requested to sign the disposition.

5.2.5 Contract Members. The manufacturing contractor's quality engineering and technical engineering personnel will provide consultation to the MRB when requested to do so by the MRB.

5.2.6 Consulting Members. Specialists from technical disciplines or Directorates will provide assistance to the MRB when requested to do so by the MRB.

5.2.7 The MRB Chairperson may, at his/her discretion, request that consulting members sign the disposition also. This provides evidence that this consulting member technical expert participated in the MRB decision.

5.2.8 MRB Chair shall provide the final resolution when the MRB cannot reach unanimous approval for a nonconformance.

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6. CANCELLATION

MWI 8730.3H, MSFC Material Review System, dated January 27, 2017.

Electronically approved by

Jody Singer
Director

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APPENDIX A. Definitions

Contracting Officer (CO). A person, appointed in accordance with the Federal Acquisition Regulations (FAR)/NASA FAR Supplement (NFS), with the authority to enter into, administer, change, and/or terminate Government contracts and make related determinations and findings within the limits of their certificates of appointment.

Discrepancy Report (DR). The record of a hardware/software nonconformance. Dispositions to accomplish required remedial actions are recorded on the record copy of MSFC Form 460. The Fabrication Services Contractor in Building 4705 may present non-conforming product on the contractually-approved DR form.

Material Review Crib (MRC). Controlled access area for storage of nonconforming items designated for review.

Minor Discrepancy. A nonconformance of a minor characteristic.

Performing Organization. Directorate elements responsible for operations (e.g., receiving, manufacturing, or test) and subject to SMA inspection or test monitoring activities.

Repair. A procedure that makes a nonconforming item acceptable for use. The purpose of the repair is to reduce the effect of the nonconformance. Repair is distinguished from rework in that the characteristics after repair still do not completely conform to the applicable drawings, specifications, or contract requirements. Nonstandard repair procedures are authorized by MRB action for use on a one-time basis only. All repairs require MRB approval prior to implementation.

Use-As-Is. Nonconforming product containing minor discrepancies determined by engineering evaluation to be completely usable without rework or repair may be accepted “Use-As-Is” with the written approval by the governing MRB membership.

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APPENDIX B. Acronyms

ABCSS As-built Configuration Status System

CO Contracting Officer

DAR Deviation Approval Request

DR Discrepancy Report

FAR Federal Acquisition Regulation

FRC Federal Records Center

MRB Material Review Board

MRC Material Review Crib

NFS NASA FAR Supplement

NRRS NASA Records Retention Schedules

QRC Quality Records Center

SMA Safety and Mission Assurance

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APPENDIX C (Reserved for Verification Matrix)

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APPENDIX D. Records

D.1 The following records will be maintained in accordance with NRRS 1441.1 and MPR 1440.2.

D.1.1 Completed copies of fabrication services contractor MRB dispositioned DRs will be retained in the QRC for the life of the project when provided in accordance with the contract or Letter of Delegation, then retired to Federal Records Center (FRC) 1 year after end of project and destroyed 10 years after the end of the project in accordance with NRRS 8/103. Such records in the QRC may be transferred to the custody of the Project for retention.

D.1.2 Center-wide MRB records not included in the Discrepancy Report (e.g. membership lists) will be maintained current and records maintained in the SMA Director's Office. Destroy 2 years after termination or dissolution of Board in accordance with NRRS 1/78/F/1.

D.1.3 Project MRB membership lists will be maintained current and records maintained by the project. Destroy 2 years after termination or dissolution of Board in accordance with NRRS 8/103.

D.2 DRs are maintained in accordance with MPR 8730.3.