



Goddard Procedures and Guidelines

DIRECTIVE NO. GPG 1710.1F **APPROVED BY Signature:** Original Signed by
EFFECTIVE DATE: January 17, 2003 **NAME:** A. V. Diaz
EXPIRATION DATE: January 17, 2008 **TITLE:** Director

Responsible Office: 300 / Office of Systems Safety and Mission Assurance
Title: Corrective and Preventive Action

PREFACE

P.1 PURPOSE

This procedure establishes the process for initiating and implementing corrective and preventive actions.

P.2 APPLICABILITY

This procedure applies to all Goddard Space Flight Center (GSFC) products and processes covered by the scope of the GSFC Quality Management System (QMS).

P.3 AUTHORITY

NPD 8730.3, NASA Quality Management System Policy (ISO 9000)

P.4 REFERENCES

- a. Federal Acquisition Regulations (FAR) Part 46
- b. NASA Federal Acquisition Regulation Supplement (NFS) Part 1846
- c. GPG 1060.1, Management Responsibility
- d. GPG 1060.2, Management Review and Reporting for Programs and Projects
- e. GPG 4520.2, Receiving Inspection and Test
- f. GPG 5100.2, Supplier Performance Evaluations
- g. GPG 5100.4, Supplier Quality Audits
- h. GPG 5340.2, Control of Nonconforming Product
- i. GPG 5340.3, Preparation and Handling of Alerts and Safe Alerts
- j. GPG 9980.1, Internal Audit System

P.5 CANCELLATION

GPG 1710.1E, Corrective and Preventive Action

P.6 SAFETY

Not applicable.

P.7 TRAINING

Training in the use of the Non-Conformance Reporting/Corrective Action (NCR/CA) database can be obtained from the Systems Reliability and Safety Office, Code 302. In addition, the database has a link to an extensive User Guide. A training module is also available at <http://ohr.gsfc.nasa.gov/DevGuide/ISO/home.htm> addressing the application of this procedure.

P.8 RECORDS

Record Title	Record Custodian	Retention
NCR/CA database	Maintained by Code 302 and accessible to on-site employees and contractors	*NRRS 8/36.5 - Handle as Permanent pending retention approval

*NRRS – NASA Records Retention Schedules

P.9 METRICS

Directorates report on Nonconformance Report (NCR) status (including corrective action status) in accordance with GPG 1060.2. Overall Center nonconformance reporting metrics and results of preventive action analysis are reported as part of QMS management reviews per GPG 1060.1.

P.10 DEFINITIONS

- a. Nonconformance - Non-fulfillment of a specified requirement. Nonconformances requiring corrective action are documented as major NCRs in the NCR/CA database.
- b. Nonconformance Lead (NCL) - An individual identified within the NCR/CA system (see GPG 5340.2) who has the authority and responsibility to process NCRs initiated against his/her assigned project/organization.
- c. Audit Contact - The representative of an audited organization/function who is the primary point of contact with the Lead Auditor. For internal audits he/she is the NCL, or designates the NCL, for NCRs resulting from the audit.
- d. Corrective Action (CA) - Action taken to eliminate the causes of an existing nonconformity in order to prevent recurrence.
- e. Preventive Action - Action taken to eliminate the causes of a potential nonconformity in order to prevent occurrence.

f. NCR/CA Database (NCRCAS) – An inter-active on-line database used to document and track the status of NCRs and associated corrective actions (CA).

g. Quality Management System Council (QMSC) - A group of representatives from all cognizant GSFC Directorates, chaired by the Quality Management System Representative (QMSR), responsible for advising the QMSR regarding QMS administration, maintenance, status reporting, and corrective action.

PROCEDURES

1. Corrective action shall be determined and implemented for NCRs identified as major in accordance with GPG 5340.2.

The corrective action shall define the actions to be taken, action responsibility, and a schedule for completion and follow-up verification of corrective action.

2. Regardless of product disposition, nonconformances generated as a result of incoming inspection and test (see GPG 4520.2) shall, as a minimum, be provided by the NCL through the GSFC Contracting Officer to the applicable supplier for the supplier's information. If the nonconformance in such cases is designated as major per GPG 5340.2, the NCL shall request (through the GSFC Contracting Officer) the supplier to provide documented corrective action to GSFC. The GSFC NCL is responsible for entering supplier corrective action responses into the NCR/CA system. Supplier-oriented NCRs and corrective action responses shall be considered during supplier performance evaluation in accordance with GPG 5100.2.

Note: The above requirement shall be implemented in a manner consistent with the FAR rules concerning inspection and acceptance, as well as the provisions of the applicable contract (FAR Part 46 and NFS 1846).

3. For NCRs documenting product nonconformances, corrective action (when required by 1.) shall be determined, documented, and approved in the NCR/CA database by the responsible NCL.

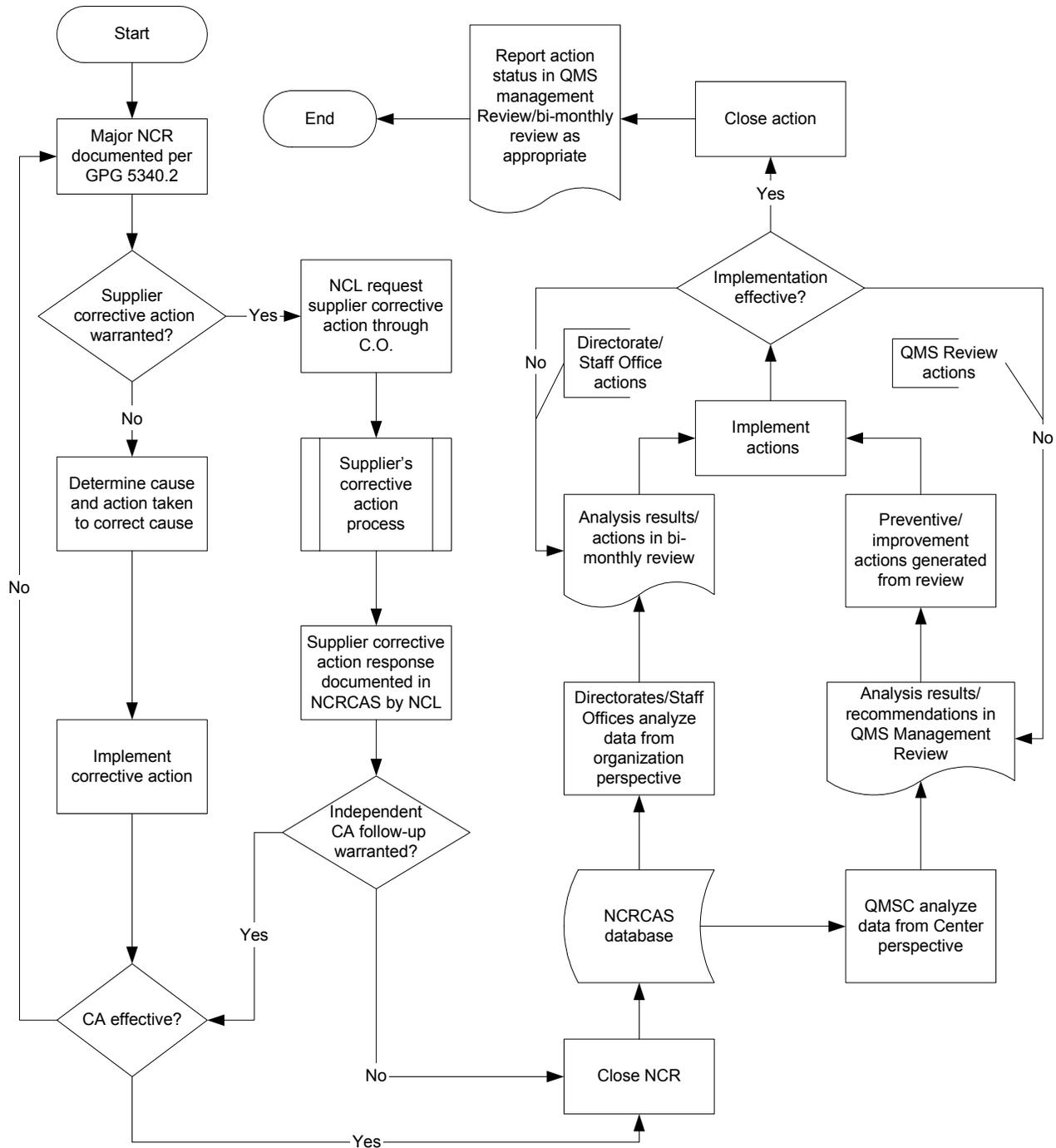
Corrective action for customer complaints received after dissolution of a Project, shall be determined, documented and approved in the on-line NCR/CA database by the cognizant Directorate organization.

Determination of corrective action shall include consideration of preparation of an Alert/Safe Alert, in accordance with GPG 5340.3, when applicable to the nonconformance.

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4. For NCRs generated as a result of an internal audit (see GPG 9980.1), the designated NCL shall determine, document, and approve corrective action in the NCR/CA database. For NCRs generated as a result of supplier audits (see GPG 5100.4), the applicable GSFC Lead Auditor is responsible for assuring that the supplier's corrective action responses are entered into the NCR/CA database.
5. Follow-up verification of corrective action implementation and effectiveness shall be scheduled and approved by the NCL in the NCR/CA system. The need for and performance of independent follow-up corrective action verification of internal audit NCRs shall be determined by the Lead Auditor in accordance with GPG 9980.1.
6. A major NCR, requiring corrective action, can be closed only when corrective action has been verified as being implemented and effective.
7. The QMSC shall review and analyze major nonconformances and corrective actions for cross-organizational problem areas, trends, or systemic problems and make applicable recommendations for preventive action or process improvement to Executive Management as part of the Management Review of the QMS per GPG 1060.1.
8. Preventive actions or process improvement actions resulting from the QMS Management Reviews shall be recorded and tracked by the QMSC in accordance with GPG 1060.1.
9. As part of bi-monthly QMS implementation and NCR status reporting required by GPG 1060.2, Directorates/Staff Offices shall review and analyze organization-specific corrective actions and report on organization trends or systemic problems and associated preventive actions and/or process improvements undertaken.

Corrective and Preventive Action



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CHANGE HISTORY LOG

Revision	Effective Date	Description of Changes
Baseline	08/12/98	Initial Release
A	10/06/98	Header and footer changes. Added 2.1.5 and indicated responsibility for NCR/CA data retrieval and analysis in 2.2.1. Identified responsibilities for maintenance of quality records.
B	04/21/99	Modified records identified in P6 and reflected the NCR/CA database's accessibility. Extensive format and content changes (primarily section 2.1). Deletion of MRB references. Addition of NCL references. Expanded details of corrective action for supplier audit NCR's. Added Note in 2.1.2. Added QMSC definition. Deleted redundant "Determine remedial action" block in flowchart. Modified 2.2.2 to indicate preventive action recommendations come from the QMSR.
C	06/23/99	Re-titled P4(d); added P4(e); P6 - revised retention period for NCR/CA records consistent with GPG 5340.2; 1(d) and 1(f) revised to eliminate reference to "defect" and "undesirable situation"; revised 2.1.1 for consistency with GPG 5340.2; 2.1.2 & 2.1.4 - added reference to GPG 5100.4; 2.1.5 added "internal" before "audit NCR's"
D	08/18/99	P1 - changed "procedure" to "process". Revised last sentence of 2.1.1 to remove "when actions are to be initiated". P6 - Added parenthetical to Preventive Action Action Items record. 2.1.1(e) - re-added safety impacts to corrective action criteria list. Added "End" bubbles to flowchart.
E	11/02/99	P4 - Added reference to GPG 4520.2 P6 - removed Preventive Action Action Items from quality records table. 2.2.1 - Analysis provided to QMSC rather than QMSR.

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CHANGE HISTORY LOG (continued)

Revision	Effective Date	Description of Changes
F	01/17/03	<ul style="list-style-type: none">- Updated to current GPG format.- P.4 – GPG 1060.2 reference added. References a and b clarified.- P.8 – Record retention schedule changed.- P.10 – Deleted Remedial Action and Product Design Lead (PDL) definitions.- Rewritten to reflect re-definition of major nonconformance in GPG 5340.2.- 7. Analysis responsibilities changed from Code 302 to the QMSC.- Directorate/Staff Office analysis/action responsibilities added.- Flowchart revised to reflect process changes.
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CHECK THE GSFC DIRECTIVES MANAGEMENT SYSTEM AT
<http://gdms.gsfc.nasa.gov/gdms> TO VERIFY THAT THIS IS THE CORRECT VERSION PRIOR TO USE.