Goddard Procedures and Guidelines

DIRECTIVE NO.	GPG 1710.1A	**APPROVED BY Signature:**	*Original Signed By*
EFFECTIVE DATE:	October 6, 1998	**NAME:**	A. V. Diaz
EXPIRATION DATE:	October 6, 2003	**TITLE:**	Director

Responsible Office: 300/Office of Systems Safety and Mission Assurance

Title: CORRECTIVE AND PREVENTIVE ACTION

Preface

P1. PURPOSE

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

P2. APPLICABILITY

This procedure applies to all GSFC products and processes covered by the scope of the GSFC Quality Management System.

P3. AUTHORITY

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

P4. REFERENCES

a. GPG 1060.1, Management Responsibility

b. GPG 5100.2, Supplier Performance Records

c. GPG 5340.2, Control of Nonconforming Product

d. GPG 5340.3, Preparation and Handling of Alerts and Safe Alerts

e. GPG 8730.4, Quality System

f. GPG 9980.1, Internal Audit System

P5. CANCELLATION

GPG 1710.1, Corrective and Preventive Action

Procedure

1. DEFINITIONS

a. Product Design Lead (PDL) - The manager or leader with overall responsibility for managing the design activity, managing the technical and organizational interfaces identified during design planning, and where required, forming and leading the Product Design Team (PDT). The term refers to flight project managers, mission managers, instrument managers, subsystem technical managers, integrated product development team leaders, lead engineers, etc.

b. Material Review Board (MRB) – Individual(s), identified in applicable product management plans (see GPG 8730.4), authorized to evaluate and disposition nonconforming product and determine corrective action.

c. Corrective Action – Action taken, including remedial action, to eliminate the causes of an existing nonconformity, defect, or other undesirable situation in order to prevent recurrence.

d. Remedial Action – Identification and correction of previously accepted or current product affected by, but not immediately associated with, an identified nonconformance.

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

f. NCR/CA Database – An inter-active on-line database, accessed via the GSFC Quality Management System web-site, used to document and track the status of identified nonconformance reports (NCRs) and associated corrective action (CA).

2. IMPLEMENTATION

Corrective Action

2.1 Corrective action shall be determined and implemented for nonconformances, identified in the NCR/CA database in accordance with GPG 5340.2, which meet one or more of the following criteria:

a. The nonconformance was discovered as a result of an internal or supplier audit;

b. The nonconformance was identified via a customer complaint;

c. The nonconformance affects the safety of the mission or personnel;

d. The nonconformance is known or suspected to have occurred previously on the same or similar product;

e. The nonconformance, if undetected, would have posed a significant risk to mission success in terms of performance, resources, or schedule;

f. The nonconformance is a known or suspected result of a design flaw which could affect future product.

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

Regardless of product disposition, NCR's generated as a result of incoming inspection and test shall, as a minimum, be provided through the GSFC Contracting Officer to the applicable supplier for the supplier's information. If the nonconformance in such cases meets one or more of the criteria above, the GSFC MRB Chairperson shall request (through the GSFC Contracting Officer) the supplier to provide documented corrective action to GSFC. Supplier-oriented NCR's and corrective action responses shall be considered during supplier performance evaluation in accordance with GPG 5100.2.

2.1.1 For NCR's documenting product nonconformances, corrective action shall be determined, documented and approved in the NCR/CA database by the applicable MRB chair as defined in project nonconforming product evaluation and disposition procedure(s) (see GPG 5340.2). 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 Office.

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

2.1.2 For NCR's generated as a result of an audit, the representative of the audited organization/function shall determine, document and approve corrective action in the NCR/CA database.

2.1.3 Verification of corrective action implementation and effectiveness shall be scheduled and approved by the MRB chair (for product nonconformances), the cognizant Directorate Office (for customer complaints concerning the product of dissolved projects), or the representative of the audited organization/function (for supplier or internal audit findings). The need for and performance of independent follow-up corrective action verification of audit NCR's shall be determined by the Lead Auditor in accordance with GPG 9980.1.

2.1.4 An NCR which requires corrective action is considered closed when corrective action has been verified as being implemented and effective.

2.1.5 The Chief, Code 302 Systems Safety and Reliability, shall monitor nonconformances and corrective actions for cross-organizational problem areas and make applicable recommendations to the QMSC for inclusion in Management Review of the Quality Management System (see 2.2.1).

2.2 Preventive Action

2.2.1 The Chief, Code 302, shall retrieve appropriate data from the NCR/CA database for analysis to determine the extent of systematic problems, trends, and patterns in nonconformances and corrective actions and provide the results to the Quality Management System Council (QMSC) for inclusion in Management Reviews.

2.2.2 Results of the analysis of NCR/CA data, and associated preventive action recommendations, shall be presented at Center management reviews of the QMS in accordance with GPG 1060.1.

2.2.3 The Center Director shall determine what, if any, action item(s) for preventive action shall be initiated. This action, including responsibilities and schedules, shall be recorded as part of the Management Review (see GPG 1060.1).

2.2.4 Unless otherwise indicated by the action item, preliminary results of the action item shall be submitted to the QMSC for review and follow-up verification of effectiveness. The QMSC shall prepare the final action item response and submit it to the Center Director for approval.

3. RECORDS

a. NCR/CA database (Maintained by Code 302)

b. NCR Data Analysis (Maintained by Code 302)

c. Preventive Action Action Items (Maintained by Code 100 Directorate Office)

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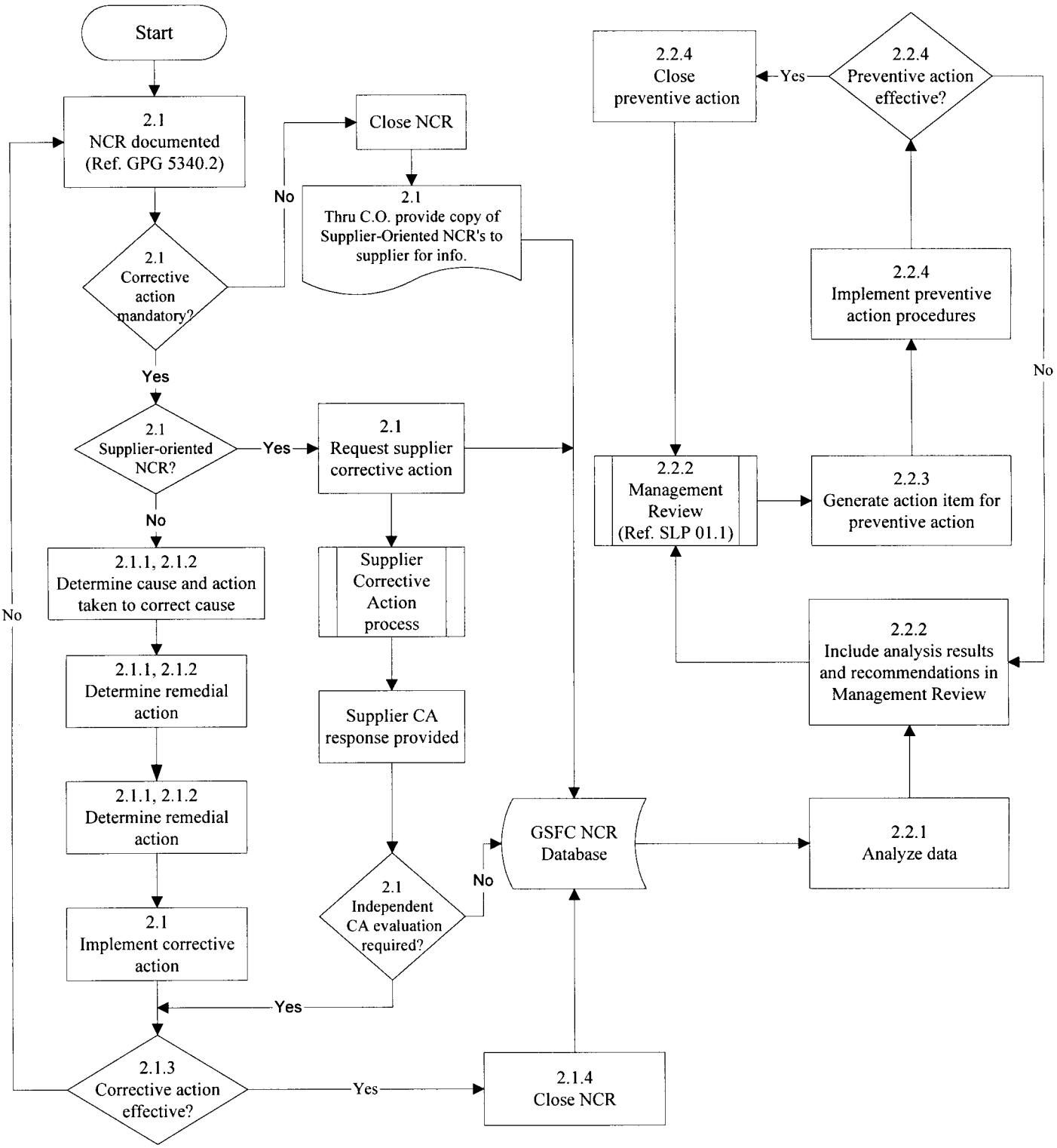
Corrective and Preventive Action Flowchart



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CHANGE HISTORY LOG

Revision	Date	Description of Changes
Baseline	8/12/98	
A	10/6/98	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.