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Contract NAS8-5608

DRL 067, Line Item 7
DRL 007, Line Item 7

SATURN HISTORY DOCUMENT
University of Alabama Research Institute
History of Science & Technology Group

Date ---------- Doc. No. --------

CONTRACTOR PROGRAM PROCEDURES

AERO-SPACE DIVISION LAUNCH SYSTEMS BRANC

Contract NAS8-5608

DRL 067, Line Item 7
DRL 007, Line Item 7

CONTRACTOR PROGRAM PROCEDURES

C O P Y

BD	500.21	R	Development & Control of Branch Management Report Systems	11/30/67
MD	550.23	N	S-IC Safety Program	11/2/67
MD	812.1	N	Launch Systems Branch Record System Committee	11/1/67
OP	320.4	N	Ship Loose, Ship Separate, Ship Short	11/10/67
OP	370.15	R	Control of Industrial Facilities	10/23/67
OP	500.7	R	LSB Group Management Information System	11/30/67
OP	505.12	R	High Pressure Test Facility Operating & Maintenance	11/10/67
OP	511.1	R	Reporting of New Technology Under NASA Contracts	11/14/67
OP	605.1		These procedures were either initiated or revised as a result of a study conducted by the LSB Records System Committee	11/1/67
OP	605.4			
OP	605.5			
OP	605.7			
OP	605.11			
OP	650.1			
OP	650.5			
OP	650.6			
OP	812.3			
OP	812.6			
OP	812.10			
OP	812.12	N	Traveling of Incomplete Planned & Unplanned Events	11/10/67
OP	812.13		These procedures were either initiated or revised as a result of a study conducted by the LSB Records System Committee	11/1/67
OP	812.14			
OP	812.15			
OP	812.16			
OP	812.17			
OP	840.2	R	Completed MorTP Record	9/5/67

N = New
R = Revised

SUBJECT: DEVELOPMENT AND CONTROL OF BRANCH MANAGEMENT REPORT SYSTEMS

November 30, 1967
(Supersedes issue dated March 25, 1966)

REFERENCE: (a) Branch Directive LSB 500.20, Supplement No. 1, "Launch Systems Branch Finance Services"
(b) Branch Directive LSB 500.20, Supplement No. 2, "Launch Systems Branch Industrial Relations Services"

FROM: R. H. NELSON
GENERAL MANAGER

I. INTRODUCTION

The Launch Systems Branch Management Report System will provide management visibility of the Branch's performance compared with established goals and objectives for all aspects of the Branch's operations. The report system encompasses all facets of product areas assigned to the Launch Systems Branch.

II. SCOPE

The report system includes but is not limited to the Management Status Report, Group Management Information System (GMIS) Report, Activity Reports and the Cost Performance Reviews. The Branch Planning and Reporting staff will be responsible for the development and integration of a compatible management reporting system for the Launch Systems Branch. This responsibility includes determination of formats for Management Status Reports, Group Management Information System and Activity Reports, and general arrangement of data and report sequencing.

III. REPORT SYSTEM AND RESPONSIBILITIES

A. Management Status Report

R This report will provide Branch management with status on resources, schedule, and technical performance of all Branch contracts, and cover significant administration and management items for current operations and new business activities. The report will consist of six sections: (1) Launch Systems Branch Summary, (2) Michoud Organization, (3) Michoud Activities, (4) Huntsville Organization, (5) Huntsville Activities, and (6) New Business Program. Assigned responsibilities include:

1. Branch Planning and Reporting will be responsible for the development of the Summary Section and specifying its distribution. Michoud Program Planning and Reporting (PP&R), in support of the reporting system, will maintain and distribute the Summary Section.

R 2. Michoud PP&R will develop, maintain and distribute sections of the subject report applicable to (1) Michoud Organization, and (2) Michoud Activities.

III. REPORT SYSTEM AND RESPONSIBILITIES (Continued)

R 3. Huntsville Program Management, Planning and Reporting (PMP&R) will develop, maintain, and distribute sections of the subject report applicable to (1) Huntsville Organization, and (2) Huntsville Activities.

A 4. Branch Planning and Reporting will summarize new business activities as reported by the Huntsville and Michoud Organizations and other sources, and maintain and distribute the New Business Section of the report.

B. Group Management Information System (GMIS) Report

R The GMIS Report fulfills a monthly requirement from the Space Division General Manager. The report will provide a condensed summation of Branch activity, management problems, performance against program milestones, and items of special interest. The report will consist of a narrative section and a chart section. The narrative report will be comprised of the following subsections: (1) Branch Summary, (2) New Business Activity, (3) Michoud Activity, (4) Huntsville Activity. The chart section will provide graphic aids and supporting data to facilitate comprehension of the narrative section.

R 1. The Michoud Manager will provide to the Branch General Manager a complete and final report on Michoud Activities.

2. The Huntsville Manager will provide to the Branch General Manager a complete and final report on Huntsville Activities.

R 3. The Branch Planning and Reporting Staff will be responsible for preparing the report, based on the Michoud and Huntsville Manager's reports, and transmitting the completed GMIS Report to Space Division Headquarters.

C. Weekly Activity Reports

The Michoud and Huntsville Managers will submit a weekly activity report which will be forwarded to the Space Division General Manager through the Branch General Manager. The Michoud and Huntsville reports will have the degree of uniformity necessary to enable Branch Planning and Reporting to prepare the Branch "Statistics" portion of the forwarding letter.

D. Cost Performance Reviews

The Michoud and Huntsville Finance organizations will prepare and conduct monthly organization and program cost performance reviews respective to their assigned tasks and/or functions. These reports will be documented and filed.

R IV. ADDITIONAL RESPONSIBILITIES

In addition to the responsibilities described above, the report system requires:

A. Finance organizations to support the reporting system in accordance with reference (a) with Michoud Finance responsible for collating and summarizing overall Branch financial planning and data.

B. Industrial Relations per reference (b) with Michoud Industrial Relations responsible for collating and summarizing overall Branch manpower information and statistics.

November 2, 1967

SUBJECT: S-IC SAFETY PROGRAM

REFERENCE: Document D5-13815, "S-IC Integrated Safety Plan"

FROM: H. D. Gunning
H. D. GUNNING
MICHOUD MANAGER

I. PURPOSE

This directive:

A. Establishes the S-IC Integrated Safety Program under the administration of Product Performance Assurance. This program is responsive to Boeing Corporate Policies 4E1, "Product and System Safety Engineering"; 8H1, "Health and Safety"; and, Customer requirements.

B. Requires an Integrated Safety Plan to implement the program.

C. Dissolves the S-IC Executive Safety Council and creates the S-IC Safety Board whose charter is described in the Integrated Safety Plan.

II. DIRECTION

A. Product Performance Assurance will:

1. Prepare the S-IC Integrated Safety Plan (D5-13815) which will identify and assign safety tasks to line organizations.

2. Approve organizational ancillary plans of Engineering, Operations, Quality & Reliability Assurance, Systems Test, Facilities, and Industrial Relations which are responsive to the Integrated Safety Plan. This approval is to ensure total safety integration and compatibility and is not intended to abrogate the approval authority and responsibility of organization managers for their respective ancillary plans.

3. Assure implementation of the Integrated Safety Plan by providing management surveillance and performance visibility.

4. Chair the S-IC Safety Board and provide program direction as recommended by the Board.

5. Assure the revision of command media and documents to conform to this realignment of responsibilities.

B. Engineering, Operations, Quality & Reliability Assurance, Systems Test, Facilities, and Industrial Relations will:

1. Prepare and implement organizational ancillary plans in response to the requirements of the S-IC Integrated Safety Plan detailed in document D5-13815.

2. Explicitly identify a safety function within their respective organizations as shown in the attached chart.

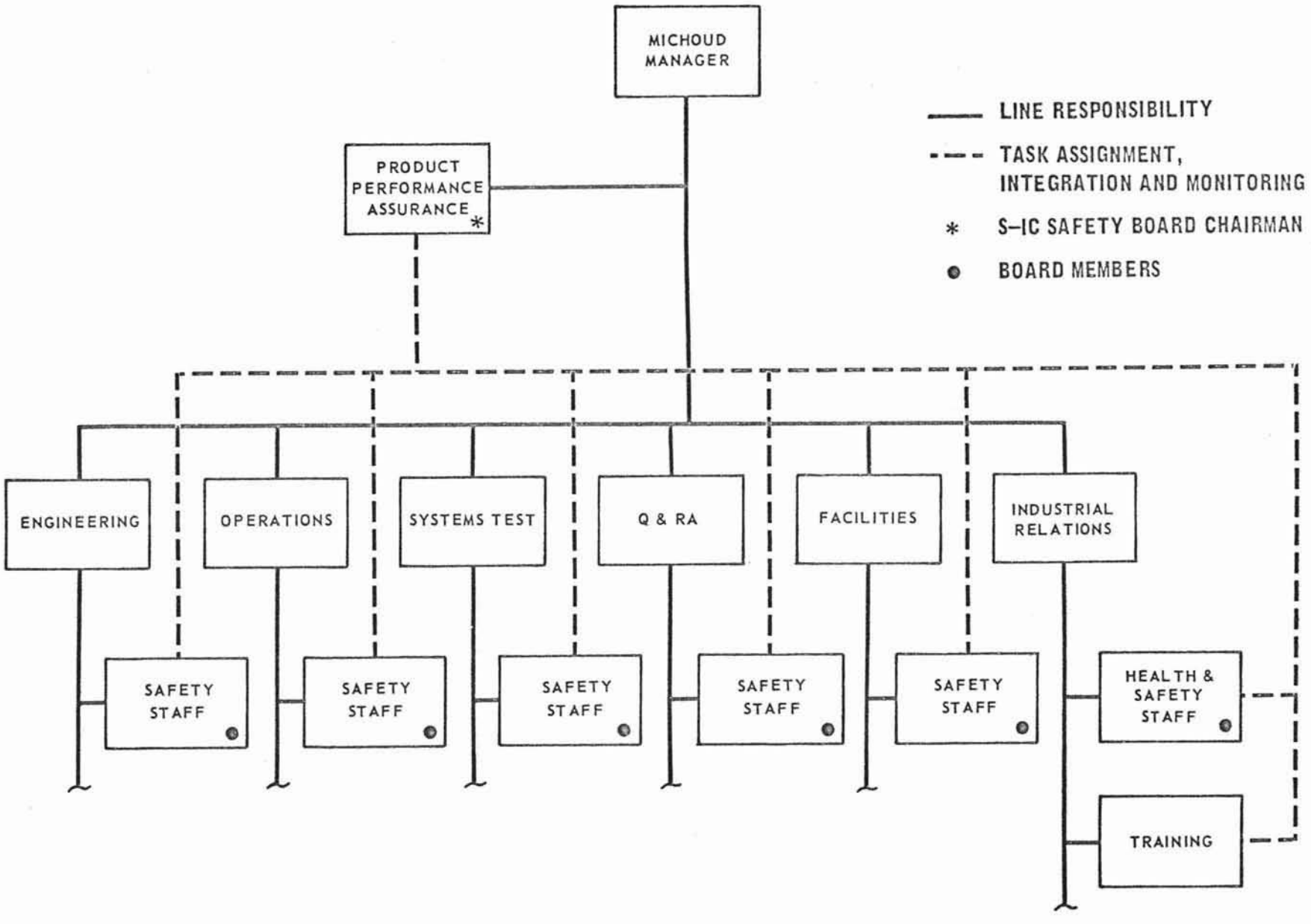
3. Assign a representative to the S-IC Safety Board.

4. Perform those specific tasks assigned by the S-IC Safety Board.

5. Revise internal organizational command media to conform to this directive.

C. The organizational relationships for integration of the Michoud Safety effort are depicted on the attached chart.

ORGANIZATIONAL SAFETY RELATIONSHIPS



SUBJECT: LAUNCH SYSTEMS BRANCH RECORD SYSTEM COMMITTEE

October 30, 1967
(Supersedes issue dated December 26, 1966)

REFERENCE: (a) Policy Statement ASG-018 "Integrated Record System"
(b) Boeing Document D5-11593, "Launch Systems Branch Records System"

FROM: R. H. NELSON
GENERAL MANAGER

I. PURPOSE

This directive establishes a uniform system of forms and disciplines for controlling product processing and configuration accounting during the production, test, and pre-delivery operational cycles of the S-IC vehicle and applicable Saturn V programs.

It defines the responsibilities and membership of the Launch Systems Branch Record System Committee.

II. SCOPE

A. The Launch Systems Branch Record System provides:

1. Manufacturing and inspection recording requirements combined in a uniform system of forms with evident continuity.

2. A single packet, or family of related packets, of all forms and data required to show progress toward the evidence of completion and acceptance for delivery purposes.

3. Traceability and retrievability of all required configuration and historical data.

4. Standard procedures for uniform application of the record system within the Launch Systems Branch.

B. The Record System Committee is responsible for the implementation and maintenance of required Operating Procedures and Boeing Document D5-11593 (reference b).

III. COMMITTEE MEMBERSHIP

A. The Michoud Manager of Quality and Reliability Assurance is the Launch Systems Branch Record System Committee Chairman.

B. The Huntsville Manager of Quality and Reliability Assurance will be represented through coordination with the Michoud Manager of Quality and Reliability Assurance.

C. The Manager of each of the following organizations will designate

a representative to the Launch Systems Branch Record System Committee:

S-IC Engineering	Huntsville Operations
Michoud Finance	S-IC Operations
Huntsville Finance	S-IC Systems Test

Each member will appoint an alternate to attend meetings in his absence. Members and alternates will have authority to act for their organizations in committee meetings.

IV. RESPONSIBILITIES

The Record System Committee is the focal point for control over the record system.

The duties and responsibilities of committee members are to:

A. Review and coordinate with their represented organizations all proposed revisions, additions, or deletions to reference (b) or the applicable LSB Operating Procedure (Reference: Figure 1).

B. Give final approval or disapproval for all revisions, additions, or deletions to reference (b) or the applicable LSB Operating Procedures (Reference: Figure 1).

C. Resolve problems encountered in the operation of the record system.

D. Implement record system controls and committee decisions within their respective organizations.

E. Act as record system advisors within their functional organizations.

F. Provide counsel, action recommendations and presentations in their areas of responsibility at committee meetings.

G. Establish appropriately scheduled revision periods for reference (b) and the applicable LSB Operating Procedures.

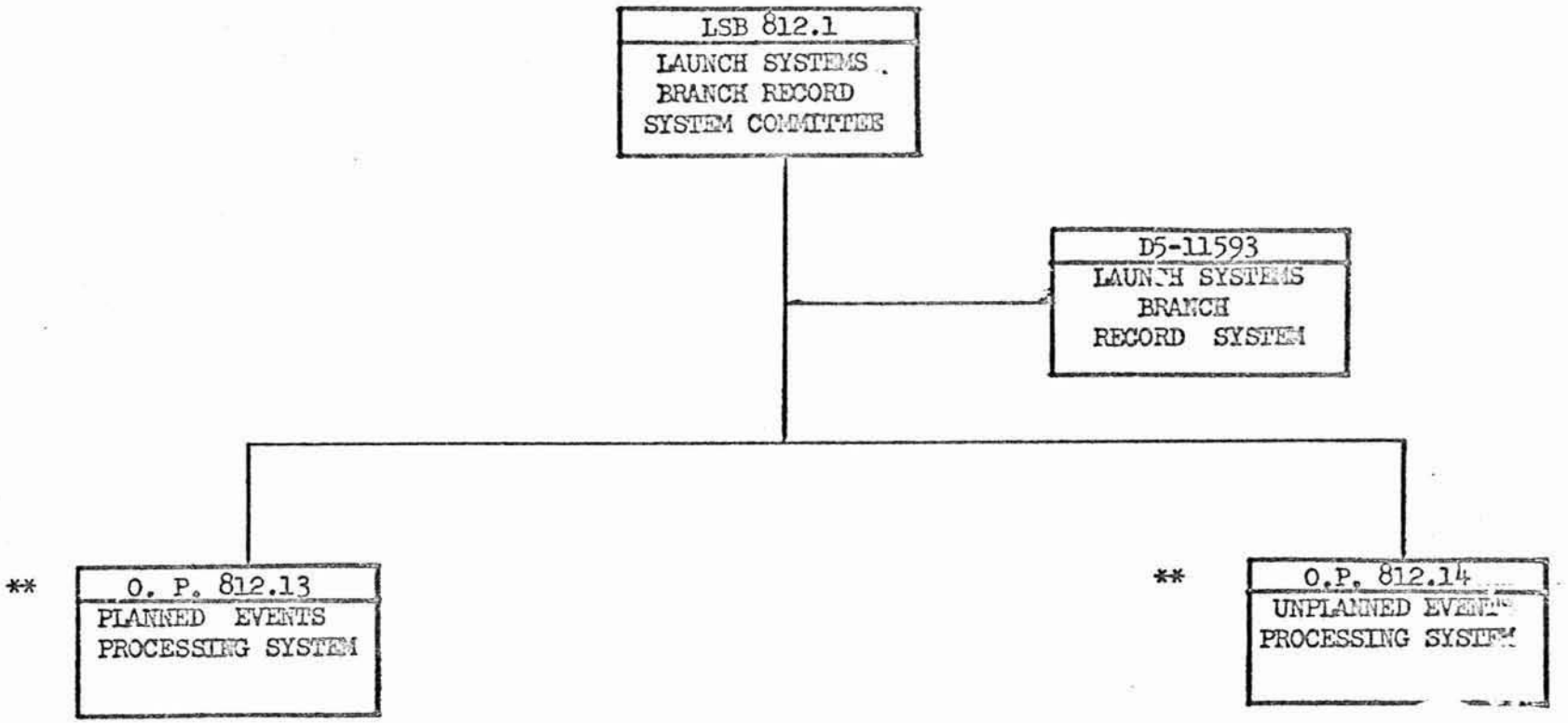
H. Ensure the initiation of compatible Operating Agreements with Boeing Atlantic Test Center.

V. GENERAL

All affected Launch Systems Branch organizations will support the Record System Committee in the proper operation of the record system.

VI. CHANGE INCORPORATION

The Committee Chairman will coordinate change incorporations with all affected Launch Systems Branch organizations by means of a letter of transmittal for each committee approved revision, addition, or deletion. The letter of transmittal shall specify the time allotted for the affected organization to incorporate the revision, addition, or deletion into its internal command media.



** Operating Procedures which form intregal parts of the processing systems specified are detailed in these procedures.

FIGURE 1. Documentation within the scope of the Launch Systems Branch Record System Committee.

SUBJECT: SHIP LOOSE, SHIP SEPARATE, SHIP SHORT (TRANSFERS AND DELIVERIES)

November 10, 1967

AFFECTED ORGANIZATIONS

Michoud Contracts
S-IC Operations
S-IC Quality & Reliability Assurance
S-IC Program Executive
S-IC Systems Test
Michoud Program Planning & Reporting

FROM: H. D. Gunning
H. D. GUNNING
MICHOUD MANAGER

I. PURPOSE

To define the division of responsibilities between organizations with respect to hardware and accountability for ship loose, ship separate and ship short items.

II. SCOPE

This procedure includes all ship short, ship loose and ship separate items and their points of transfer or delivery, but does not include shipment of Mod Retrofit Kits released from Engineering commitments. Scheduling requirements will be established by the End Item Delivery Committee and included as milestones in applicable program letters.

III. DEFINITIONS

A. Ship Separate Item - Those planned conditions existing in end items where components of the end item are not delivered from the same location and/or delivered at the same time as the remainder of the end item. Separate shipment may be planned as a convenience for the Government or because of different source locations.

B. Ship Loose Item - Those planned conditions existing in end items where components of the end item are not assembled as a part of the end item, either as a convenience for shipping purposes or to facilitiate the accomplishment of post delivery work effort. Ship loose components accompany shipment of the end item and are listed as component parts thereof on the shipper for the end item.

C. Ship Short Item - Those unplanned conditions existing in contractor furnished end items where required components of the end item are not available for delivery with the remainder of the end items.

IV. RESPONSIBILITIES

A. Transfer of Stage to Post Manufacturing Checkout (PMC)

OPERATIONS	1. Provide to Q&RA, Michoud Contracts, and S-IC Systems Test a list of all part shortages and unaccomplished work and a plan of completion.
OPERATIONS - Manufacturing	2. Provide parts and effort to establish and complete IV. A. 1.
Q&RA	3. Prepare Booster Summary Document as pertaining to ship loose, ship separate, and ship short items for transfer to S-IC Systems Test.

B. Transfer of the Stage to Static Test site.

OPERATIONS - Manufacturing	1. Provide Form 370's or 57's to pick and package ship loose parts that are "V" or "F" configuration code.
SYSTEMS TEST	2. Provide Form 370's or 57's to pick and package all ship loose "G" configuration parts. Identify "G" configuration ship separate parts.
OPERATIONS	3. Provide list of all ship short parts to Q&RA and Systems Test.
OPERATIONS - Manufacturing	4. Provide parts and effort to establish and complete IV. B. 3. for Operations commitments.
PP&R	5. Provide a listing of all major turnaround equipment included in the shipment to be returned to Michoud for use on the other stages to Systems Test and Q&RA.
OPERATIONS - Final Assembly	6. Package and identify by box number all hardware.
SYSTEMS TEST	7. Prepare loading plan.
Q&RA	8. Complete Booster Summary Document as pertained to ship loose, ship separate and ship short items.

B. (Continued)

OPERATIONS	9.	Negotiate schedule and effort to complete any "V" or "F" configuration ship short items.
OPERATIONS	10.	Provide parts and labor to support IV. B. 9.

C. Transfer of Stage from Static Test to Refurbishment Location.

SYSTEMS TEST	1.	Provide MorTP's for ship loose, ship separate items to Q&RA.
Q&RA	2.	Prepare shipping forms.
SYSTEMS TEST	3.	Package and identify by box number all hardware.
SYSTEMS TEST	4.	Prepare loading plan.
Q&RA	5.	Update Booster Summary Document as pertains to ship loose, ship short, ship separate items.
SYSTEMS TEST	6.	Return loose parts to Refurbishment location.
		a. Retain configuration responsibility of ship loose and ship separate items for delivery to Kennedy Space Center.
		b. Return to Operations reusable items no longer required, and provide their end item configuration.
OPERATIONS - Manufacturing	7.	Assume configuration responsibility for items in IV. C. 6. b.

D. Delivery of Stage to Kennedy Space Center (KSC)

OPERATIONS - Manufacturing	1.	Provide MorTP and IR to pick and package all "J" ship loose, ship separate and ship short hardware and identify to Contracts and Q&RA.
SYSTEMS TEST	2.	Provide MorTP and IR to pick and package all "GJ" and "HJ" ship loose, ship separate, and ship short hardware and identify to Contracts and Q&RA.

D. (Continued)

OPERATIONS	3.	Prepare list of all change commitments to be accomplished after delivery and the ship separate items required for their completion.
OPERATIONS - Manufacturing	4.	Provide parts and effort to establish and complete IV. D. 3.
PP&R	5.	Provide a listing of all major turnaround equipment included in the shipment that are to be returned to Michoud.
MICHOUD CONTRACTS	6.	Prepare shipping forms.
OPERATIONS - Manufacturing	7.	Package and identify by box number all hardware.
SYSTEMS TEST	8.	Prepare barge loading plan.
Q&RA	9.	Prepare Acceptance Data Package.

SUBJECT: CONTROL OF INDUSTRIAL FACILITIES

October 23, 1967
(Supersedes issue dated February 17, 1964)

AFFECTED ORGANIZATIONS

All Organizations

FROM: R. H. NELSON
GENERAL MANAGER

I. SUMMARY

All organizations are responsible for efficient use of facilities under their control and will accomplish or initiate action to reassign, transfer, share, or otherwise dispose of those facilities no longer required to effectively conduct their respective operations. The Facilities Organization is responsible for surveillance of Industrial Facilities usage and for arranging joint usage of those facilities which have low utilization or which are surplus to an organization's requirements. Finance is responsible for disposition of Industrial Facilities in accordance with customer direction or company policy.

II. DEFINITIONS

A. Industrial Facilities

Property other than material and special tooling, for use in the performance of a contract or subcontract, including land, buildings, other structures and facilities, leasehold improvements, and plant equipment.

B. Idle Industrial Facilities

Equipment on which no Category I business (authorized business) exists.

C. Surplus Industrial Facilities

Those which have been screened on a Branch-wide basis and for which there is no further requirement for Category I or Category II business.

D. Stored Industrial Facilities

Those held for Category II business requirements. This will include stored "in-place" and "on-site" industrial facilities.

E. Inconsequential Shortages

Those which do not impair the usefulness of the industrial facilities or do not render such facilities unsuitable for use, provided the shortage does not exceed ten percent (10%) of the acquisition cost of the parent item.

II. DEFINITIONS - (Continued)

F. Category I Business

Work authorized by definitive contracts, letter contracts, and formal or informal customer commitments which management considers firm, and other work authorized by division management. In general, such work is covered by Work Order Authorization or Program Directive.

G. Category II Business (highly probable extensions of Category I Business).

Work based on a realistic and conservative estimate of business to be acquired through extensions of existing programs.

H. NASA-Tagged Plant Equipment

All plant equipment procured under Contract NAS8-5606 (F), procured as overhead, and furnished by the government.

III. RESPONSIBILITIES

A. GENERAL

At Michoud, surplus industrial facilities are stored in areas controlled by Finance. The facilities are considered surplus when a "Request for Retirement" form is processed. At Huntsville, surplus industrial facilities are stored in area controlled by Facilities.

There are slight variations in the way idle industrial facilities are handled at the two locations. At Michoud, "Idle" furniture and office equipment is stored in an area controlled by Finance while "Idle" factory equipment is stored "in place" or in an area controlled by Facilities. At Huntsville, all idle equipment and furniture is stored "in place" or in an area controlled by Facilities.

B. Each Organization will:

1. Coordinate within their organization, Facilities recommendations to purge the inventory of obsolete, worn out or unneeded industrial facilities items.

2. Properly care for industrial facilities assigned to that organization and assure that modifications to industrial facilities are not made without prior authorization by the Facilities Organization.

III. RESPONSIBILITIES - (Continued)

3. Request through Facilities Organization the loan of industrial facilities items between organizations at Michoud and other Boeing locations.

4. Report lost or stolen industrial facilities items to Finance, Industrial Relations-Security and Facilities in writing within one week.

5. Upon request, advise Facilities of future needs which make keeping an industrial facility item desirable. (The request is made after an item has been idle 60 days).

6. Upon agreement between the user and Facilities, the user will release industrial facilities items of low utilization for joint usage in other areas as requested by Facilities. (In the event Facilities and using organization cannot agree on recommended joint usage, the matter will be referred to the location Manager for decision).

7. Recommend to Facilities "in-place" or "on-site" storage when either specific Category II business exists or such facilities are required according to the Facilities Master Plan.

8. Upon receipt of a request for status review from Facilities, furnish evidence to support utilization data or retention within ten (10) working days.

C. Facilities Organizations

1. Maintain surveillance of industrial facilities assigned to the Branch to assure that facilities items are utilized in the best interest of the company and customer, are properly cared for by users and are promptly declared idle or surplus by users. (In the event of disagreement of utilization or classification as idle or surplus, the matter will be referred to the location Manager for decision).

2. Periodically review idle facilities held "in-place" or "in-storage" to ensure declaration of surplus when requirements no longer exist or fail to develop as anticipated.

3. Provide industrial facilities to satisfy requirements by comparing requests for new facilities with inventory and utilization data for possible in-house availability. Procure equipment when not available within existing inventories.

4. Render technical assistance to using organizations in the selection of industrial facilities to meet requirements.

5. Obtain evaluation of capability of new industrial facility items as required.

III. RESPONSIBILITIES - (Continued)

6. Purge inventory of obsolete, worn-out or unneeded industrial facility items.

7. Develop industrial facility budget forecast for procurement, modernization, replacement or rebuild of industrial facility items.

8. Prepare long range forecast of proposed inventory utilization and coordinate with using organizations for use as a guide for future budgeting.

9. Coordinate with affected organizations on utilization, to surplus, permanently transfer, joint usage or make long-term loans from the consolidated industrial facilities inventory.

10. Provide using organizations with the following data, upon request, prior to the due date for periodic forecasts and justification.

    a) Equipment utilization by organization number.

    b) Equipment inventory.

11. Provide estimates of industrial facilities availability, utilization percentage of existing facilities items and cost to support new business proposals, when requested.

12. Provide a report to include but not limited to the information stated in B. 10 a) and b) above.

13. Establish and administer an excess Facilities Hold Area to store excess or idle industrial facilities items for reassignment, with priority remaining with the original requestor.

14. Receive equipment from using organizations which has been idle for 60 days or more.

15. Determine the condition of facilities and designate condition codes according to NASA and company criteria.

16. Reassign facilities items in accordance to agreed-upon recommendations or the Location Manager's decisions.

17. Determine whether to maintain idle facilities "in-place" or "in-storage", based upon the declaring organization's recommendations.

III. RESPONSIBILITIES - (Continued)

18. Take one of the following actions on industrial facilities that are reported idle:

a. For facilities required by another organization

1) Issue Property Transfer (P.T.) Form.

2) Cancel outstanding procurement action.

b) For facilities determined surplus:

1) Prepare Request for Retirement and technical portion of the DOD Property Record Supplementary Data Form indicating reason for retirement and completion of screening. Route original to Finance-Property Accounting.

2) Initiate Property Transfer, accomplish required preservation and packaging and route facility to Finance-Reclamation.

c) For idle facilities selected for retention:

1) Determine storage will be "in-place" or "on-site."

2) Accomplish necessary preservation and/or packaging.

3) Initiate P. T. to Finance Storage Area or Facility Storage Area for facilities stored "on-site."

4) Advise user to retain facility stored "in-place."

NOTE: At Huntsville, all idle facilities selected for retention are sent to a Facilities Storage Area.

d) For facilities space determined to be surplus:

1) Establish firm definitions of area to be deactivated including obtaining an updated detail layout.

2) Establish dates of last efforts of user to assist in preparationof a phase-out schedule.

3) Coordinate with user to establish storage requirements for tooling, GFE, etc.

4) Establish a plan for deactivation of utilities.

5) Consolidate the above into a deactivation plan for management approval.

6) Request revision to the block area layout and document IN-I-V-S-IC-65-12 from Michoud Contracts.

III. RESPONSIBILITIES - (Continued)

e) For facilities space determined to be idle:

1) Determine the deactivation requirements for utilities.

2) Determine the services to be discontinued.

3) Determine the screening requirements for evaluating any change in status to active or surplusing.

20. Maintain accountability records as required by Finance.

D. Finance will:

1. Provide a storage area for idle office equipment and furniture to be stored "on site" (applicable at Michoud only).

a) Periodically request Facilities to review industrial facilities held in"on site" storage to determine whether continued retention is justified.

b) Receive and provide storage for idle office furniture and equipment and for all surplus industrial facilities. (Applicable at Michoud only)

c) Process Request for Retirement forms.

d) Submit requests for disposition of Government-owned industrial facilities.

e) Dispose of surplus Government-owned industrial facilities as authorized by the Government and Boeing-owned facilities in accordance with good commercial practice.

f) Adjust accountability records to reflect disposition by sale, transfer, scrap, destruction or loss.

g) Maintain records of idle or surplus facilities as required.

h) Maintain surveillance to ensure proper industrial facilities accounting and accountability practices.

SUBJECT: LAUNCH SYSTEMS BRANCH - GROUP MANAGEMENT INFORMATION SYSTEM

November 30, 1967
(Complete revision; supersedes issue dated October 21, 1966)

AFFECTED ORGANIZATIONS

Branch Planning & Reporting
Michoud Manager
Huntsville Manager

FROM: R. H. NELSON
GENERAL MANAGER

REFERENCE: Branch Directive BD 500.21, "Development and Control of Branch Management Report System"

I. PURPOSE

This procedure establishes guidelines for content and delineates organizational responsibility for the preparation, approval and distribution of the monthly Launch Systems Branch Group Management Information System (GMIS) Report to Space Division Management and to the Launch Systems Branch General Manager. Provision is made for supplemental charts to support the Space Division Management Information Center (DMIC). The reports shall be identified as "Limited" information (See Administrative Procedure 133, "Limited Information," for an explanation of proper handling.).

II. FORMAT AND RESPONSIBILITIES

A. Michoud Manager

1. Prepare a letter report to the Branch General Manager on Michoud activities which shall include the following suggested topics:

   a. Program Activities
   b. Items of Management Interest
   c. Technical Problems
   d. Business Summary (Cost Performance, Incentive Earnings, Backlog, Business Acquisition)
   e. Resources Management
   f. General Interest
   g. New Business Activities

   The report should discuss major contracts ($5 million and above), minor contracts, and incoming IDWA's.

   Include charts consisting of graphic aids and support data to facilitate comprehension of the narrative.

2. Provide a narrative input to Branch Planning and Reporting on Michoud customer planning and company new business strategy.

II. FORMAT AND RESPONSIBILITIES (Continued)

3. Provide Branch summary financial charts on sales, profits, business summary, and contract cost performance in accordance with specific instructions from Branch Planning and Reporting.

4. Provide one viewgraph and one vellum copy of each of the charts selected from the GMIS Report and such additional charts as designated by Branch Planning and Reporting in support of the DMIC. In addition to the monthly cycle, intermediate updating of certain charts may be required to reflect significant changes in the Branch position.

5. Provide audio-visual and reproduction support to Branch Planning and Reporting as required for the preparation and distribution of the Branch GMIS Report.

B. Huntsville Manager

Provide reports and charts on Huntsville Activities similar to those delineated in Section II. A. above.

C. Branch Planning and Reporting

1. Provide detailed instructions, schedules, and administrative guidance to organizations participating in the GMIS reporting cycle.

2. Prepare the GMIS Report to Space Division Management based on the Michoud and Huntsville Manager's reports to the Branch General Manager and such other data as deemed appropriate. The report shall include discussion and charts in accordance with the following outline:

a. Launch Systems Branch Summary

(1) Highlights (actual program occurrences of major consequence),
(2) Items of Management Interest (potential problems and other major occurrences),
(3) New Business - Customer Trends and Branch Strategy,
(4) Business Summary (cost performance, incentive earnings, backlog, business acquisition),
(5) Resources (staffing, and facility activity).

b. New Business Activity

(1) New Business Contract Awards (summary of contract awards and brief description of contract),

II. FORMAT AND RESPONSIBILITIES - (Continued)

(2) Proposals (include proposals submitted, proposals in process and procurement cancelled, with brief descriptions of proposals),

(3) Company Sponsored Program - New Business Expenditures (summary of cumulative expenditures vs. planned expenditures with explanation of significant variances).

c. Michoud Activity (based on Michoud Manager's Report)

d. Huntsville Activity (based on Huntsville Manager's Report)

e. Charts identified to correspond with appropriate section of the narrative report

3. Review the completed GMIS Report with the Branch General Manager and obtain his approval.

4. Provide for the distribution of the Branch GMIS Report.

SUBJECT: HIGH PRESSURE TEST FACILITY OPERATION AND MAINTENANCE

November 10, 1967
(Supersedes issue dated March 6, 1967)

AFFECTED ORGANIZATIONS

S-IC Engineering
Michoud Facilities
S-IC Operations
Michoud Industrial Relations

FROM: H. D. Gunning
H. D. GUNNING
MICHOUD MANAGER

REFERENCE: D5-13695, "High Pressure Test Facility Operation Instructions"

I. PURPOSE AND SCOPE

This procedure describes the organizational responsibilities for the operation, maintenance, modification and safety of the High Pressure Test Facility.

II. GENERAL

A. Overall direction and operation of the High Pressure Test Facility is assigned to Engineering Laboratories.

B. High Pressure Test Facility maintenance and modification work is assigned to Facilities and will be performed in accordance with Facility Request Form (FRF) and High Pressure Test workbook entries (Form LSB 1160).

C. Equipment operation related directly to the testing function will be performed by Engineering Development Support. All specimen set-up and checkout will also be performed by Engineering Development Support per direction from Engineering. All of these functions and activities shall be conducted in accordance with the applicable section of the referenced document.

III. RESPONSIBILITIES

A. Engineering - Engineering Laboratories will:

1. Direct the operation and maintenance of the High Pressure Test Facility via the Facility and Operations workbooks. Unplanned maintenance repairs are to be reported to the Maintenance Work Control Unit.

2. Provide a Resident Test Conductor who will be responsible for all operations at the High Pressure Test Facility.

3. Schedule all activities at the High Pressure Test Facility in conjunction with Facilities and Operations and follow-up to assure their timely accomplishment.

4. Assure that facility logs are prepared and filed for future use.

5. Direct Engineering Development Support in trouble shooting of the Weston-Boonshaft-Fuchs electronic system as required to isolate each equipment failure.

6. Request Facility modifications, services and new equipment installation via the Facilities Request Form (FRF). Provide helium forecasts as requested by Facilities.

7. Approve all work by signing and dating workbook entries upon satisfactory work completion.

8. Assure all High Pressure Test operations are performed in accordance with the referenced document.

9. Direct all test set-up and test activity. Maintain area control during testing to assure personnel and equipment safety.

10. Maintain the reference document and route it to organizations affected for their review and approval.

B. Facilities (Facilities Design Engineering or Plant Services, as appropriate) will:

1. Perform all maintenance on the High Pressure Test Facility equipment except as noted in paragraph III. A. 5. above. Schedule all work with Engineering concurrence.

2. Perform facility modifications in accordance with approved Facility Request Form.

3. Perform facility maintenance requested by the Facility workbook entries in accordance with the referenced document.

4. Provide supplies of GN_2, LN_2, helium and Dowtherm in their respective containers to meet the logistic requirements of the test programs. These operations will be accomplished per the referenced document.

5. Maintain configuration control of the facility.

6. Maintain required spare parts for the facility and replace, as required.

A 7. Make four (4) facility inspections during each off-duty shift and record significant data which is to be provided to the Resident Test Conductor upon his arrival for resumption of normal operations.

C. Operations - Engineering Development Support will:

1. Operate the electronic control systems, instrumentation, hot and cold line conditioning systems and facility Dowtherm heating system in accordance with Engineering direction. These operations will be performed in accordance with the referenced document.

R 2. Maintain surveillance of the facility during normal operations and keep a log of significant operating events and facility data.

D. Industrial Relations - Health and Safety will:

1. Provide health and safety surveillance and direction as requested by affected organizations and on a random basis.

November 14, 1967
(Supersedes issue dated August 16, 1963)

SUBJECT: REPORTING OF NEW TECHNOLOGY UNDER NASA CONTRACTS

AFFECTED ORGANIZATIONS

All Organizations

FROM: R. H. NELSON
GENERAL MANAGER

REFERENCE: Space Division Directive SDD-1019, "Reporting of New Technology Developed Under NASA Contracts"

I. PURPOSE

This procedure establishes the responsibilities in reporting New Technology developed in performance of NASA contracts held by the Launch Systems Branch.

II. GENERAL

Reporting of New Technology under NASA contracts is required by the New Technology clause and the Property Rights in Inventions clause in all NASA contracts. In the broad sense these clauses require that all new inventions, improvements and discoveries of a technical nature must be documented and promptly reported to NASA.

III. ASSIGNMENTS OF NEW TECHNOLOGY REPRESENTATIVES

A. Practically all organizations originate New Technology as defined by the New Technology clause of our NASA contracts. The reporting of New Technology is a management function and is to be considered as a contract end item. To assist organizational managers in this task, full time New Technology Representatives will be assigned to certain Michoud and Huntsville organizations depending on anticipated flow of New Technology items. In some cases, New Technology Representatives assigned to one organization will also be expected to cover other organizations.

B. Organizational Assignments - New Technology Representatives

1. Michoud

a. S-IC Operations will assign one (1) New Technology Representative who will cover that organization and Michoud Facilities.

b. S-IC Quality & Reliability Assurance will assign one (1) New Technology Representative who will cover that organization and S-IC Systems Test.

c. S-IC Engineering will assign one (1) New Technology Representative to cover that organization, Michoud Program Planning and Reporting, and Michoud Information Management.

III. ASSIGNMENTS OF NEW TECHNOLOGY REPRESENTATIVE - (Continued)

2. Huntsville

a. Huntsville Engineering will assign one (1) New Technology Representative to cover that organization as well as Huntsville Operations, Saturn V/S-IC Advanced Development Programs and the S-IC tenant organizations.

b. Saturn V T.I.E. Manager will assign one (1) New Technology Representative to cover that organization and Huntsville Program Management, Planning and Reporting.

IV. RESPONSIBILITIES

A. New Technology Representatives shall:

1. Through continuous study of appropriate literature, become knowledgeable of the definitions of New Technology and remain abreast of its changing nature.

2. Monitor the research, experimental, design, engineering, or development activities being performed in those organizations to which assigned and properly report all items of New Technology.

3. Forward all New Technology reports to the Launch Systems Branch New Technology Office.

4. Conduct periodic reviews to uncover items of New Technology not yet reported (within the organizations to which assigned) in accordance with contractual requirements.

5. Satisfy, when feasible, technical inquiries from NASA Technology Utilization Offices concerning previously submitted reports.

6. Promote the publishing by NASA of branch-originated New Technology items when considered in the best interest of the company, NASA and the general public.

B. Launch Systems Branch New Technology Office

1. The position, "Assistant for New Technology Utilization," reporting to the Launch Systems Branch General Manager, is established as the focal point for New Technology reporting within the branch.

IV. RESPONSIBILITIES - (Continued)

2. The Assistant for New Technology Utilization shall:

a. Serve as focal point within the branch for NASA Technology Utilization Offices on all matters relating to the technical and administrative aspects of the Technology Utilization program.

b. Serve as the focal point within the branch for the company Corporate Patent Services Office on all matters relating to the Technology Utilization program except the legal aspects.

c. Assist the New Technology Representatives within the Launch Systems Branch as required.

d. Actively promote the Technology Utilization concepts to insure maximum benefits to the company, NASA and the general public.

e. Review all items of New Technology from the aspects of determining reportability (quality, definition and documentation).

f. Forward all items to Corporate Patent Services.

g. Provide evidence of (f) above to the Launch Systems Branch Central Coordinator and the Huntsville Central Coordinator as appropriate.

C. Michoud Contracts

1. Michoud Contracts Manager shall appoint an individual within Michoud Contracts organization to serve as Launch Systems Branch Central Coordinator.

2. Launch Systems Branch Central Coordinator shall:

a. Insure that an adequate log of New Technology items transmitted to NASA is maintained in order to show contractual compliance.

b. Make the necessary interim, annual and final New Technology summary reports to Corporate Patent Services.

c. Provide necessary legal services to organizational managers, New Technology Representatives and the Branch New Technology Office on matters relating to contract interpretations and the Patent Laws.

d. Send a copy of all reports to the appropriate New Technology Representatives.

IV. RESPONSIBILITIES - (Continued)

D. Huntsville Contracts and Administrative Services

1. Huntsville Contracts and Administrative Services Manager shall appoint an individual within that organization to serve as Huntsville Central Coordinator.

2. Huntsville Central Coordinator shall:

a. Make the necessary interim, annual and final New Technology summary reports to the Launch Systems Branch Central Coordinator on all Huntsville NASA contracts.

b. Notify the appropriate Program Manager and New Technology Representative at least twenty (20) working days prior to the submittal of reports in (a) above.

c. Send a copy of all reports to the appropriate New Technology Representative.

E. Michoud and Huntsville Operations - Materiel Managers shall:

Ensure that all subcontractors who may perform research, experimental, design, engineering or development work are contractually required to report New Technology in accordance with the requirements of the Launch Systems Branch prime contract.

November 1, 1967
(Supersedes issue dated January 19, 1967)

SUBJECT: MATERIALS REVIEW BOARD - S-IC PROGRAM

AFFECTED ORGANIZATIONS

S-1C Engineering
S-1C Operations
Manufacturing
Materiel
S-1C Quality and Reliability Assurance
S-1C Systems Test

FROM: H. D. Gunning
H. D. GUNNING
MICHOUD MANAGER

COMPLIANCE: This procedure complies with OP 812.14, "LSB Record System - Unplanned Event Processing System"

REFERENCE:
(1) Operating Procedure 527.3, "Nonconforming Government Furnished Property" Section II
(2) Operating Procedure 605.4, "Nonconforming Supplier Furnished Items - Control of"
(3) Operating Procedure 605.5, "Nonconforming Materials at Supplier Facility - Handling of"
(4) Operating Procedure 605.7, "Nonconforming Materials - Nondeliverable Tools"
(5) Operating Procedure 812.3, "Unplanned Event Record"

I. SUMMARY

Any Boeing and supplier furnished end item or end item component which does not conform to the requirements specified in the contract, engineering drawing, specification, or other applicable product description shall be properly identified and withheld from normal production channels. If the item cannot be restored to the applicable specification, or it is desirable to use the item or rework it to an out of tolerance condition, the nonconforming item shall then be referred to authorized Quality and Reliability Assurance personnel and the Materials Review Board to determine the disposition of the material. Routing instructions for supplier furnished items shall be provided by Materiel.

II. PURPOSE AND SCOPE

This procedure provides a system for repairing, scrapping, or special handling of nonconforming items as defined in III. This procedure encompasses all Boeing and supplier furnished items of contractually deliverable hardware, and nondeliverable operational manufacturing support equipment requiring configuration control prior to customer certification. Tool discrepancies will be processed per Reference (4). Government Furnished Property discrepancies will be processed per Reference (1).

III. DEFINITIONS

A. Nonconformance: As used in this procedure is any departure of an item from applicable engineering documentation.

B. Types of Nonconformances:

1. Major Nonconformance: Any departure from applicable engineering drawings which cannot be corrected by rework or its adverse effect on the Contract End Items (CEI) cannot be nullified by subsequent fabrication and assembly operations and which:

a. Will result in hazardous or unsafe conditions for individuals using or maintaining the contractual end item; or

b. Will adversely affect reliability, durability, or performance of the contractual end item; or

c. Will preclude interchangeability of those parts which are designated by engineering drawings as having interchangeable requirements; or

d. Will materially affect weight when the weight of the nonconforming article is a critical factor and repair significantly increases this article's weight.

2. Minor Nonconformance: Any departure of an item which does not constitute a major nonconformance.

IV. MATERIALS REVIEW BOARD (MRB)

A. The MRB is a formal Contractor-Customer Board established to determine the disposition of nonconforming items. One or more MRB's may be established as demanded by volume and diversity of work operations. Technical competence and thorough knowledge or product quality and functional requirements shall be prerequisite qualifications for all MRB members.

B. MRB consists of the following:

1. An authorized representative of the Boeing Quality and Reliability Assurance Organization.

2. An authorized representative of the Boeing Engineering Organization.

B. MRB consists of the following: (continued)

3. One or more representatives of the customer having acceptance authority from the cognizant NASA Contracting Officer.

NOTE: Lists of authorized personnel will be published as specified in VI. A. 5.

C. The customer member of the MRB shall be chairman of the Board. All members may have alternates. Members of the Board may call upon other customer or Boeing personnel to act in an advisory or consultant capacity. Such advisory or consultant personnel have no voice in decisions made by the Board, but may request a review of any MRB decision by the original or a higher ranking Board.

D. It is not necessary for the Board members to meet concurrently. However, any member of the Board may require all members to convene simultaneously in order to reach a decision.

E. Unanimous concurrence of all Board members is required before the acceptance of a nonconformance (V.A.2 "Use As Is" and V.A.3 "Rework"). However, any member of the Board may independently elect to apply the "unusable" disposition (See V.A.4). In cases where unanimous concurrence cannot be reached, the nonconformance may be referred to the members of management to whom the regular MRB report. These members of management will be designated as a "higher ranking board."

F. The higher-ranking board normally will consider only those nonconformancies that have been reviewed by a regular MRB. The higher-ranking board replaces the original board and assumes all the responsibilities of the original board with respect to the nonconformance which has been referred to it. All actions by the higher-ranking board must be in accordance with the provisions of this procedure. Individuals serving on a higher-ranking board must be authorized in the same manner as regular board members.

G. Board decisions may be changed by the original board or a higher-ranking board.

H. Whenever items of a recurring nature are referred to an MRB, the Board may elect to withhold disposition until effective nonrecurrence action has been initiated.

I. All failed items require processing in accordance with Reference (5).

V. MATERIALS REVIEW BOARD ACTION

A. The MRB will disposition nonconforming items referred to the board. The actions the Board may choose from are the following:

1. To request further investigation before deciding.

2. "Use As Is"

A nonconforming item is determined to be acceptable for use without repair or rework. This item shall be identified as nonconforming so that re-evaluation as to the effect on a higher level of assembly may be made at later assembly inspection and test points.

3. "Rework"

A nonconforming item is determined to be acceptable for use after appropriate corrective rework. The MRB authorizes correction and specifies the method of correction. Any applicable specifications requiring special methods of repair for the nonconformance shall be followed. Reworked items shall be resubmitted through normal inspection channels.

NOTE: Repair/rework of an item within drawing requirements does not require MRB action (See Reference 5).

4. "Unusable"

Nonconforming items which cannot be used as is or reworked shall be identified as unusable. Identification must be positive. Items receiving unusable disposition shall be routed to Reclaimation.

5. Refer to a higher-ranking MRB.

B. Each nonconformance referred to the MRB shall be classified as either "Major" or "Minor" as defined in III.B. Each major nonconformance shall be immediately referred to Engineering Contract Management. Nonconformancies are assumed to be minor unless positively identified as major.

NOTE: 1. Nonconformances shall be classified after MRB disposition.

2. A nonconformance which is predicted to be "Major" by an MRB, if the boards decision is complied with, shall not be processed. It shall be immediately referred to Engineering Contract Management.

VI. RESPONSIBILITIES

A. S-1C Quality and Reliability Assurance (Q&RA)

1. In cases where the authorized Quality and Reliability Assurance personnel cannot make one of the dispositions in Reference (5), he shall submit the nonconforming items to the MRB for disposition.

2. Inspection Supervisors will assure, in their respective areas, that all items requiring failure analysis are processed in accordance with Reference (5) and that all personnel participating in MRB decisions are properly authorized (See VI.A.5).

3. Source Control Representatives enter into Materials Review activities at Supplier facilities as required by Reference (3). Source Control reviews and approves all vendor requests for MRB authority in accordance with Reference (3).

4. The Manager of Quality and Reliability Assurance must approve all Boeing personnel authorized to serve on MRB's.

5. Quality Engineering prepares and publishes a listing of all Boeing personnel authorized to serve on S-1C MRB's and distributes copies to all Quality and Reliability Assurance Supervisors and other personnel as requested by Engineering.

6. Establish a system for providing UER's to Manufacturing or Systems Test immediately subsequent to MRB disposition. This system will be structured to allow Manufacturing and Systems Test to quickly evaluate the decision for cost or schedule impact and to request MRB reconsider their decision.

7. Hardware accepted by MRB action will be so identified by an appropriate MRB stamp.

B. S-1C Engineering:

1. Review and approve requests from subcontractors for authorization to act on material dispositions which involve engineering decisions. Such requests shall be relayed through Materiel after coordination with Quality and Relaibility Assurance Source Control.

VI. RESPONSIBILITIES (Continued)

2. Appoints qualified personnel to serve as engineering members of MRB's and provides a list of these qualified personnel to Quality and Reliability Assurance - Quality Engineering at monthly intervals.

3. Authorized MRB members:

a. Specify the disposition of all nonconformances submitted to them.

b. Provide all necessary engineering information required to accomplish rework. This information shall be in sufficient detail to enable the rework to be performed in accordance with engineering requirements.

c. Initiate any engineering changes to prevent recurrence of the nonconformance.

C. S-1C Operations - Manufacturing:

1. Initiate and perform rework and retest as required to comply with MRB dispositions.

2. Assist MRB's, as necessary, in determining the disposition of nonconforming items.

3. Review all MRB dispositions, utilizing the system established in VI.A.6.

D. S-1C Operations - Materiel:

1. Provide routing and costing information for parts changeable to a supplier and process them in accordance with Reference (2).

2. Route all requests from suppliers for authorization to participate on MRB's, in accordance with Reference (3).

3. Provide coordination within Discrepancy Control Areas for vendor items referred for MRB action.

4. Assist Manufacturing and Systems Test in accomplishment of VI.C.3 and VI.E.4.

E. S-1C Systems Test:

1. Comply with all provisions of this procedure through the applicable base organizations.

VI. RESPONSIBILITIES (Continued)

2. Initiate and perform rework and retest as required to comply with MRB disposition.

3. Assist the MRB in determining the disposition of nonconforming items, as required.

4. Review all MRB dispositions, utilizing the system of VI.A.6.

SUBJECT: NONCONFORMANCE CONTROL - SUPPLIER FURNISHED ITEMS

November 1, 1967

(Supersedes issue dated January 19, 1967)

AFFECTED ORGANIZATIONS

Michoud Finance
S-IC Operations
S-IC Systems Test
S-IC Engineering
S-IC Quality & Reliability Assurance

FROM: H. D. Gunning
H. D. GUNNING
MICHOUD MANAGER

COMPLIANCE: This procedure complies with Operating Procedure 812.14, "LSB Record System - Unplanned Event Processing System"

REFERENCE:
(a) Branch Operating Procedure 370.9, "Items Damaged or Lost in Shipment-Replacement and Accounting for"
(b) Branch Operating Procedure 605.1, "Materials Review Board-S-IC Program"
(c) Branch Operating Procedure 605.7, "Nonconforming Materials-Nondeliverable Tools"
(d) Branch Operating Procedure 812.3, "Unplanned Event Record"
(e) Document D5-11593, "LSB Record System"

I. PURPOSE

This procedure specifies the method for conveying timely information on supplier furnished items which are rejected, and outlines the additional responsibilities and requirements for processing Unplanned Event Records which require communication with suppliers.

II. DEFINITIONS

A. Nonconformance Disposition - The decision of the Material Review Board or an authorized Quality & Reliability Assurance member of the Material Review Board concerning the disposition of the nonconforming material. Refer to references (b) and (c) for the disposition process.

B. Materiel Disposition - The disposition made by the applicable buyer or by the Materiel Investigator, in accordance with the applicable buyer's direction and recorded on the UER specifying the agency and the routing necessary to complete the nonconformance disposition. Applicable accountability and rework charge numbers are also included as a part of the Materiel Disposition.

C. Supplier - The term "supplier" includes subcontractors and vendors. The term "supplier furnished" does not include that equipment supplied to Boeing by the government or customer.

D. Responsibility Codes - Responsibility codes indicated below shall be used on all UER's involving rejected supplier furnished items:

	Receiving Inspection Function	All Other Inspection Functions
1. Supplier responsibility	0811	0844
2. Boeing responsibility	(Use the Boeing applicable codes- refer to Document D2-4800-10 Section N2-SU 1001)	

E. Individual Non-Recurrence Action (INRA) - INRA is a type of action on individual nonconformances and consists of an investigation of all possible sources (i.e., Engineering, Manufacturing, Tooling, etc.) to determine the cause of the nonconformances and accomplishment of all action to prevent recurrence. INRA must include a complete statement of the cause of the nonconformance, the nonrecurrence action taken and the signature of the person responsible for the statement.

III. GENERAL

A. Unplanned Event Records will be prepared in accordance with reference (e), and will indicate the nonconformance or reason for rejection, the responsibility (supplier's, Boeing's, or commercial carrier's), and will contain a disposition from Quality & Reliability Assurance or the Material Review Board in accordance with either references (b) or (c). Failures will be processed in accordance with reference (d) and this procedure.

B. Individual Non-Recurrence Action (INRA) will be mandatory for all supplier responsibility rejections except for electrical/electronic or mechanical standards, raw materials, or MRO items. The validating Q&RA supervisor will determine if INRA is required on these items.

C. The Supplier Individual Non-Recurrence Action (SINRA) form LSB 1737 (Attachment I) will be used to document the request for non-recurrence action, action taken by the suppliers and results of follow-up by Boeing personnel. On receiving inspection failures, the SINRA form may be used to obtain supplier failure analysis. Q&RA will coordinate with the area Design representative as required for Engineering's input on the form. A copy of SINRA in these cases will be given to Engineering representative in addition to regular distribution.

D. When responsibility for a rejection is a commercial carrier's, costs will be recovered from the carrier in accordance with Operating Procedure 370.9, reference (a), above.

E. A finance cost estimate and supplier approval prior to rework will be required on supplier responsibility UER's if the effort falls within the following guidelines:

1. Fixed-price UER's requiring over four hours of rework.

2. Cost-plus UER's requiring over 200 hours of rework.

All other supplier responsibility UER's will be processed without supplier approval, but will be charged as outlined in IV. 12, below, even though the supplier will not be billed. A completed copy of the UER must be furnished to Finance-Accounts Payable as authorization to debit the supplier.

F. Rejected items will not be reworked by Boeing except when time does not permit their return to the supplier or in exceptional cases when weight, bulk, etc., make Boeing rework more economical than supplier rework from a cost standpoint. Items with a disposition of Unusable or Rework will not be altered or physically scrapped until the Materiel disposition is entered on the Unplanned Event Record.

IV. RESPONSIBILITIES

Quality & Reliability Assurance

1. Processes UER's in accordance with reference (e).

2. Routes all rejected supplier responsibility items, except those with a "use as is" disposition, to the Central Discrepancy Control Area (CDCA) for Materiel coordination and routing instruction.

If scheduling necessitates immediate rework, the Inspection Supervisor authorizing rework obtains Materiel disposition prior to accomplishment of rework (this will be accomplished by contacting the Materiel Representative in the Central DCA). The original of the UER will be routed to the Central DCA.

Note: All Logistics Spares hardware except Government Furnished Parts is processed through the Discrepant Spares Segregation Area (DSSA), which performs the functions as outlined above for the DCA.

IV. (Continued)

Quality and Reliability Assurance - Procurement Support	3. Holds rejected materials and supporting papers until: a. Nonconformance disposition is completed. b. Materiel disposition is completed.
	4. Codes all UER's using "0" for Receiving Inspection, "1" for Work-in-Progress UER's and "2" for Source Control UER's.
	5. Obtains nonconformance disposition.
	6. Routes to Materiel all supplier responsibility UER's receiving a nonconformance disposition of "rework" or "unusable."
	7. Initiate SINRA form LSB 1737 either before or after Materiel disposition is obtained on the UER.
	8. Distribute approved SINRA form as per D5-11593, Section 6, Reference (e).
Operations-Materiel	9. Investigator and buyer review all UER's with nonconformance disposition of rework or unusable (see II.B). If contract or warranty requirements indicate another nonconformance disposition to be more appropriate, an alternate disposition can be recommended to the Quality Assurance Representative. When mutual agreement has been reached, the Materiel disposition is recorded on the UER. If Materiel has information which indicates the responsibility code is incorrect, a request will be made for the DCA to investigate to determine the correct responsibility code.

IV. (Continued)	10. Prepares supporting papers required to effect the disposition ordered, such as shipping authorization and purchase order changes.
	11. Obtains the estimated costs for rework by Boeing on all supplier responsibility UER's from Finance-Estimating.
	12. Upon receipt of approved SINRA form from Q&RA formally transmit original to supplier with a requirement that a formal answer be returned to the buyer by the date specified on the form.
	13. Upon receipt of completed SINRA original from supplier, forward to Quality and Reliability Assurance Central Discrepancy Control Area and a copy to Design Engineering on failure analysis SINRA's.
Quality and Reliability Assurance - Procurement Support	14. Reviews the corrective action statement and, if adequate, forwards original to Q&RA Receiving Inspection, and one copy to Reliability Data Center.
	15. If the supplier's answer is unacceptable, return to Materiel, stating reason the answer is unacceptable.

16. Verifies implementation of corrective-action by monitoring hardware receivals and close out SINRA.
17. Transmit closed SINRA to Reliability Data Center.

Q&RA Reliability Data Center

18. Monitors and follow-up timely completion of SINRA. Issue periodic status reports of open and completed SINRA's.

Finance

19. Provides Materiel with rework cost estimates on supplier responsibility UER's upon request.

Operations-Materiel

20. Enters the rework labor accounting charge number in the Work Order block of the UER for all supplier responsibility rework. The applicable charge numbers are contained in Document D5-10001-5, "LSB Accounting Technical Manual.

    Materials purchased specifically for repair of supplier responsibility items will be charged in the same manner as labor.

21. Advises the supplier of the estimated rework costs as obtained from Finance-Estimating and requests concurrence to rework at supplier's expense, for those UER's falling within the guidelines established in III.C. above.

22. Upon receipt of supplier concurrence for rework, indicates, "Rework at Supplier Expense" and enters the negotiated rework cost estimate on the UER in the Materiel Disposition Block.

23. Obtains supplier's concurrence for scrapping at his expense and negotiates the current scrap value to be credited. Enters the negotiated scrap value under Materiel Disposition on the UER. Buyer Supervisor signs UER original.

24. Issues purchase order changes to reduce the quantity ordered when rejected items are not to be replaced.

25. When rejected items are reworked or replaced by the supplier and re-submitted for acceptance, requires that packaging sheets contain a reference to previous rejection on Boeing UER Number _____.

26. Instructs suppliers not to resubmit for acceptance materials that have been declared unusable and returned to them.

27. Instructs Finance, in the Materiel Disposition Block, when to debit the supplier for supplier responsibility rejections.

Operations - Quality and Reliability Assurance - Discrepancy Control Area

28. If rework is not to be accomplished by The Boeing Company, routes UER in accordance with Materiel Disposition. If rework is to be performed inhouse, routes UER to Manufacturing Engineering for planning.

29. Ensures that the UER and shipping memoranda are cross-referenced.

30. Issues a UER Supplement to change the responsibility code when it is determined through failure analysis or other means that the responsibility for the rejection was not correctly indicated on the UER.

31. Forwards completed copy of all supplier responsibility UER's to Finance-Accounts Payable and three copies to Materiel-Procurement.

Operations-Manufacturing

32. Charges rework effort in accordance with either the planning paper or the Materiel Disposition on the UER.

Finance

33. Prepares debit memoranda to the supplier, only when instructed by the Materiel Disposition, with copies to Materiel, on the basis of completed UER's as follows:

33. a. Items returned for repair, credit, or replacement - debit purchase order price.

    b. Items reworked by Boeing at supplier's expense - debit the negotiated amount entered on the UER by Materiel for those UER's exceeding the guideline minimums established in III. C., above.

    c. Scrap at supplier's expense - debit purchase order price less current scrap value agreed upon between Materiel and supplier, but only if the net amount so derived is more than $5.00.

    Note: Upon receipt of UER Supplement which changes the responsibility code, make accounting adjustments so that the expenses accrued by the rejection are debited to the proper account.

THE BOEING COMPANY
LAUNCH SYSTEMS BRANCH

NO. _____

SUPPLIER INDIVIDUAL NON-RECURRENCE ACTION

SUPPLIER NO. _____

BOEING PART NO.	BOEING S/N	PART NAME			SUPPLIER NAME AND ADDRESS
SUPPLIER PART NO.	SUPPLIER S/N	QTY. REC.	QTY. INSP.	QTY. REJ.	
WHERE CONDITION FOUND	DATE	PURCHASE ORDER		P.O.C.	

DISPOSITION:
☐ UAI ☐ RTV ☐ MRB ☐ RWK ☐ UNUSABLE

BUYER | MAIL STOP

NON-CONFORMANCE OR CONDITION

☐ INFORMATION ONLY ☐ FORMAL REPLY REQUIRED BY _____ (DATE)

ORIGINATOR	DATE	MAIL STOP	SOURCE CONTROL (APPROVAL)	MAIL STOP

CORRECTIVE ACTION

CAUSE

ACTION TAKEN

EFFECTIVITY _____ DATE OR _____ UNIT SERIAL NO.

_____ SUPPLIER'S Q.C. MANAGER (SIGNATURE)

BOEING SOURCE CONTROL REPRESENTATIVE (SIGN) ☐

GOV'T. SOURCE INSPECTOR (SIGNATURE) ☐

CORRECTIVE ACTION FOLLOW-UP:
☐ C. A. ACCOMPLISHED
☐ C. A. NOT ACCOMPLISHED

_____ DATE OR _____ UNIT SERIAL NO

_____ BY (SIGNATURE)

November 1, 1967
(Supersedes issue dated April 17, 1964)

SUBJECT: NONCONFORMING MATERIALS AT SUPPLIER FACILITY - HANDLING OF

AFFECTED ORGANIZATIONS:

S-1C Engineering
S-1C Operations
Materiel
S-1C Quality & Reliability Assurance

FROM: H. D. GUNNING
MICHOUD MANAGER

COMPLIANCE: This procedure complies with O.P. 812.14 "LSB Record System - Unplanned Event Processing System"

REFERENCES:
(a) D1-8000, "Quality Control Requirements for Boeing Suppliers"
(b) O.P. 605.1, "Materials Review Board - S-1C Program"

I. PURPOSE

To establish a standard method of Materials Review which will ensure proper disposition of all minor nonconfirming materials at Suppliers' facilities not having Materials Review authority. Also, facilities having a Boeing approved Materials Review Board (MRB) but for which certain completed dispositions are unacceptable to The Boeing Company. All major nonconforming materials shall be dispositioned on the Boeing Unplanned Event Record (UER Form No. LSB 1016).

II. SUMMARY

Materials Review Board activity on Boeing contracts at Supplier facilities is considered an extension of Boeing Materials Review Board; therefore, Suppliers' Materials Review procedures and personnel must be approved by Boeing prior to the Supplier accomplishing Materials Review on Boeing contracts. Suppliers not authorized by Boeing to conduct formal Materials Review shall submit requests for Materials Review action to Boeing for disposition. When the Supplier is approved to hold Materials Review, Boeing reserves the right to reject the decisions of the Supplier's Materials Review Board. Suppliers of articles manufactured to proprietary design or to Boeing design procurement specifications or Source Control drawings may be authorized to perform Materials Review on minor nonconformances by purchase order note. Such authority is granted only when the Supplier has an existing Government approved Materials Review Board.

III. GENERAL

Suppliers having a Government approved Materials Review Board may request authorization to conduct Materials Review on minor nonconformances on Boeing contracts. To obtain authorization, the Supplier's request for Materials Review authority shall be transmitted through Materiel to the Source Control Office and must be accompanie

by a copy of the Supplier's Materials Review Board procedure and a resume of Supplier personnel to be authorized for Materials Review activity.

The Source Control Office will review the procedures and resumes and, if they are acceptable, will forward the Supplier's Engineering members' resumes to Boeing Engineering for review and approval. Upon receipt of approval of the Supplier's Engineering personnel resumes from Boeing Engineering, Source Control will prepare an approval letter for the signature of the Materiel Manager and concurrence by the Manager of Quality & Reliability Assurance and NASA Quality Assurance & Reliability. If the Supplier's procedures and/or resumes are unacceptable, a memorandum will be directed to Materiel from Source Control advising them of the unacceptable conditions.

The Source Control Office will maintain a list of all Suppliers authorized to perform Materials Review action and all approved Supplier Materials Review Board representatives, and will furnish copies to Materiel and Engineering as requested.

Suppliers not having a Government approved Materials Review Board shall obtain Boeing Materials Review Board disposition on nonconforming materials prior to the acceptance and shipment of the materials to the Boeing Company.

Boeing Materials Review Disposition may be obtained by one of the following methods:

A. When a resident Source Control representative is available, the representative shall be responsible for initiating a Boeing Unplanned Event Record (UER) and forwarding it to Boeing for Materials Review Board disposition.

B. When a Supplier does not have an approved Materials Review Board or the services of a Boeing Source Control representative, a letter or TWX may be directed to the responsible Buyer Supervisor describing the nonconforming condition in sufficient detail for a UER to be completed by Source Control.

When Government source inspection is a requirement of the purchase order covering the parts involved, the Supplier shall obtain the concurrence by signature on the letter or TWX of the Government representative who services his facility.

The Supplier shall identify the withheld item and hold it in a bonded area until Boeing Materials Review Board disposition has been obtained.

C. Under special circumstances, after concurrence by Engineering and the customer, Boeing may authorize the Supplier to send parts or assemblies to Boeing for Materials Review Board action. When this authority is granted, the UER will be prepared by the Boeing Source Control representative, the part will be identified

as a nonconforming item, and shall be forwarded to Boeing for Materials Review Board action.

Authority for shipment of parts or assemblies to Boeing for Materials Review Board action will only be authorized by concurrence of Materiel, Quality and Reliability Assurance, and the NASA Quality Division Representative. Authorizations of this nature will be confirmed by TWX and will require cosignature of Materiel, Quality and Reliability Assurance, and the NASA Quality Division Representative.

1. When parts or assemblies have been authorized to be shipped to Boeing for Materials Review Board action, the Supplier's packing sheet shall contain the following statement: "This part/assembly (as applicable) is being shipped as a rejected item subject to Materials Review action at Boeing. The part/assembly (as applicable) is complete and acceptable with the exception of items noted on UER No. XXXXXX . The Government Source Representative concurs with this shipment as acknowledged by his stamp affixed hereon."

Supplier nonconforming items requiring rework at Boeing shall be processed in accordance with Reference (b).

IV. RESPONSIBILITIES

A. Operations - Materiel

1. Advise the Supplier to take the action defined in III. B to obtain Materials Review Board disposition when they do not have an approved Materials Review Board or the services of a Boeing Source Control Representative.

2. Advise the Supplier that when rework of the withheld item covered by Boeing's UER is completed, the rework must be accepted on the vellum copy of the UER by the Boeing Source Control representative and the cognizant Government Source Representative. When the services of a Boeing Source Control representative are not available, Boeing Quality and Reliability Assurance acceptance of the rework will be accomplished by Receiving Inspection. The Supplier shall retain one copy of the UER for his records and attach the vellum and all remaining copies to the part or assembly to be shipped to Boeing.

3. Advise the Supplier that when rework of parts or materials involves more than one shipment, the Boeing UER must accompany the first shipment of reworked parts and must be referenced on the shipping documents of all subsequent shipments until the accounting of all parts covered by the UER is accomplished.

4. Receive the Boeing UER from Source Control after Materials Review Board action and forward the UER to the Supplier.

   a. Forward one copy of the transmittal letter to Source Control as notification that the UER has been returned to the Supplier.

5. Advise all affected Suppliers that each UER applicable to parts being shipped must be referenced on the Supplier's shipping paper.

B. S-IC Quality and Reliability Assurance

1. Source Control

   a. Review UER's for completeness and accuracy and forward to the Central Discrepancy Control Area for disposition.

   b. Complete the Boeing UER, including corrective action to be taken on future parts.

   c. Approve or disapprove the completed rework as conforming to the instructions noted on the Boeing UER. When the rework as been approved, the Source Control Representative shall stamp the UER in the applicable acceptance block.

   d. Ensure that reworked items have been referred to the Government Source Representative for approval or disapproval.

   e. Receive a copy of transmittal letter from Materiel confirming the UER has been returned to the Supplier.

   f. Assure the vellum copy of each applicable UER accompanies the first shipment of affected parts.

   g. Review and approve or disapprove Supplier's proposed Materials Review Board procedures and personnel resumes.

   h. Forward the Supplier's Engineering resumes to Engineering for review and approval or disapproval.

   i. Receive from Engineering the results of their review of Supplier Engineering personnel resumes.

   j. Write a letter of Materials Review authorization to Suppliers for signature of the Materiel Manager and concurrence by the Manager of Quality & Reliability Assurance and NASA Quality Assurance & Reliability.

   k. Maintain a listing of all subcontractors authorized to conduct Materials Review and all approved Supplier Materials Review Board representatives.

1. Materials dispositioned by Suppliers' Materials Review Board which are determined to be unacceptable to Boeing shall be discussed with the Supplier and cognizant Government Representative prior to referring the condition to the Boeing Materials Review Board for disposition.

2. Central Discrepancy Control Area

   a. Establish the disposition on all UER's in accordance with Reference (b).

   b. As soon as a disposition has been established, retain a copy of the UER and return the required copies of the UER to Source Control for return to the Supplier.

   c. Maintain a log on all UER's showing the UER number, part number, part names, disposition, and date.

   d. Maintain a permanent file of UER's reflecting Materials Review Board disposition.

C. Engineering

1. Receive and evaluate Supplier's proposed Materials Review Board Engineering personnel resumes from Source Control.

2. Advise Source Control by memorandum of approved or unapproved Supplier Engineering resumes.

3. Provide disposition for nonconformances submitted on UER's.

4. Provide technical support to Materiel in the interpretation of Engineering requirements and the disposition of nonconformance Supplier parts.

November 1, 1967
(Supersedes issue dated January 19, 1967)

SUBJECT: NONCONFORMING MATERIALS - NONDELIVERABLE TOOLS

AFFECTED ORGANIZATIONS

FROM: H. D. Gunning
H. D. GUNNING
MICHOUD MANAGER

S-1C Engineering
S-1C Operations
Manufacturing
Materiel
S-1C Quality and Reliability Assurance
S-1C Systems Test

COMPLIANCE: This procedure complies with O.P. 812.14, "LSB Record System - Unplanned Event Processing System"

REFERENCE:
(a) DS-12562, "Boeing Tooling Plan for the S-1C Stage"
(b) O.P. 527.3,"Nonconforming Government Furnished Property,"Sec. II
(c) O.P. 605.1, "Materials Review Board - S-1C Program"
(d) O.P. 605.4, "Nonconforming Supplier Furnished Items - Control of"
(e) O.P. 812.3, "Unplanned Event Record"

I. SUMMARY

Any Boeing or supplier furnished nondeliverable tool or tool component which does not conform to the requirements specified in the drawing, specification or other applicable tool description shall be properly identified and withheld from normal production channels. The tool shall then be referred to authorized Quality and Reliability Assurance personnel and Tool Representatives, as described in this procedure, to determine the disposition of the tool. Materiel shall provide routing instructions for supplier furnished tools.

II. PURPOSE AND SCOPE

This procedure describes the process by which a decision is obtained for the correction or disposition of tools or their components which depart from the applicable requirements. It affects all nondeliverable tools used in the manufacture, testing, and handling of produce hardware. It encompasses all those tools that, directly or indirectly, affect product quality and are designed by Boeing. Nonconforming government furnished tools will be processed as required by Reference (b). Deliverable tools and nondeliverable Manufacturing Support Equipment of a like nature to contractually deliverable Ground Support Equipment will be processed as required by Reference (c).

III. DEFINITIONS

A. Tools

Tools are devices used during fabrication, assembly, transportation or inspection operations for any of the following purposes:

1. To control dimensional relationships on or among product parts or other similar devices.

2. To supplement or increase the efficiency of other devices.

3. To facilitate the handling of product parts or other devices.

As used in this procedure, the term, "tools," shall mean: special contract tools that are identified in the Contract; and other standard tools which are designed to perform special multi-contract functions but are not identified in the Contract.

For the purpose of this procedure, tools are defined as those items that are identified as such and listed in Reference (a).

B. Nondeliverable Tools

Nondeliverable tools are those tools listed in Reference (a) that are designed by Boeing, fabricated by Boeing or Boeing suppliers, and used and retained by Boeing.

IV. GENERAL

A. Nonconformances discovered on nondeliverable tools shall be reported on the Unplanned Event Record (UER) by the inspector discovering the nonconformance. The UER will then be presented to the Inspection Supervisor responsible for the work area in which the nonconformance occurred.

B. The Inspection Supervisor shall review the UER to determine that the nonconformance is properly described and then shall make a choice from the following dispositions (supplier furnished tools may be scrapped or reworked only with the concurrence of Materiel when supplier charges are involved):

1. Complete: Tools which are found to be incomplete due to omissions and which can be corrected in accordance with drawings and specifications may be released for completion.

2. Unusable: Tools which are obviously unfit for use or uneconomical to repair may be scrapped.

3. Refer to the cognizant Tool Representative: In those cases where the Inspection Supervisor cannot make one of the above decisions, he shall submit the nonconformance tool to the Tool Representative for disposition.

C. The tool representative, who is an authorized representative from the organization having design responsibility for the affected tool, and the Inspection Supervisor responsible for the area in which the nonconformance was noted, shall act on tool nonconformances presented to them. The dispositions from which they must choose are:

B. Operations - Manufacturing

1. Provide authorized representatives to act on tools for which they have primary design responsibility.

2. Tool Representatives will:

   a. Specify the disposition of all nonconforming tools submitted to them for disposition.

   b. Provide all necessary engineering information required to accomplish rework. This information shall be in sufficient detail to enable the rework or repair to be performed in accordance with design requirements.

   c. Initiate any design changes required to prevent recurrence of the nonconformance.

3. Initiate rework orders as required.

4. Accomplish the rework required.

5. Provide a list of authorized Tool Representatives to Quality and Reliability Assurance.

C. Operations - Materiel

Recommend a final disposition of all nonconforming tools chargeable to suppliers and process in accordance with Reference (d).

D. Engineering

1. Provide authorized representatives to act on tools for which they have primary design responsibility.

2. Tool Representatives will:

   a. Specify the disposition of all nonconforming tools submitted to them for disposition.

   b. Provide all necessary engineering information required to accomplish rework. This information shall be in sufficient detail to enable the rework or repair to be performed in accordance with design requirements.

   c. Initiate any design changes required to prevent recurrence of the nonconformance.

3. Provide a list of authorized Tool Representatives to Quality and Reliability Assurance.

E. Systems Test

1. Provide authorized representatives to act on tools for which they have primary design responsibility.

2. Tool Representatives will:

   a. Specify the disposition of all nonconforming tools submitted to them for disposition.

   b. Provide all necessary engineering information required to accomplish rework. This information shall be in sufficient detail to enable the rework or repair to be performed in accordance with design requirements.

   c. Initiate any design changes required to prevent recurrence of the nonconformance.

3. Initiate rework orders as required.

4. Accomplish the required rework when requested.

5. Provide a list of authorized Tool Representatives to Quality and Reliability Assurance.

NOTE: Remote test bases will comply as appropriate with all provisions of this procedure through the Quality Control, Design, Manufacturing, Materiel, and Administrative segments of the base organization.

November 1, 1967
(Supersedes issue dated January 19, 1967)

SUBJECT: PROCESSING OF CERTAIN NON-CONFORMING MATERIAL DISPOSED OF AS SCRAP

AFFECTED ORGANIZATIONS

All Organizations

H. D. Gunning

FROM: H. D. GUNNING
MICHOUD MANAGER

COMPLIANCE: This Procedure complies with OP 812.14, "LSB Record System - Unplanned Event Processing System"

I. PURPOSE

This procedure establishes the method for processing certain scrap material.

II. SCOPE

This procedure provides the necessary control to process certain nonconforming items which meet the requirements specified in III. A and B. Items such as miscellaneous bracketry, mixed standards, and nonidentifiable items dispositioned as scrap are covered. This procedure is not to be used to replace or to supplement procedures dealing with Unplanned Event Records (UERs).

III. GENERAL

A. The subject items must meet the following conditions before it can be processed per this procedure:

1. No traceability and/or serialization requirements exist as defined by Class I Engineering documentation.

2. Individual nonrecurrence action and/or failure analysis is not required.

3. Unit cost of item is $25 or less and is not Government property.

B. Examples of subject items:

1. Miscellaneous bracketry, parts or standards which become unusable as a result of Material Review Board (MRB) directed rework on a higher assembly.

2. Miscellaneous parts or items which cannot be identified.

3. Miscellaneous fasteners which have been used or cannot be identified.

4. Miscellaneous electrical or electronic components--such as bits and pieces of connectors and used wire clamps.

III. GENERAL - (Continued)

C. Parts or material may be processed as individual items or as a lot whichever is applicable but shall not remain or be collected in an area over ten working days.

IV. PROCEDURE

A. Affected Organizations:

1. Take subject item to the Quality & Reliability Assurance inspector for his disposition.

2. Present item, with a Validated Defective Part Tag and a Cost Collection Card, to Standards stores (MSA 30) for replacement parts.

B. Quality and Reliability Assurance (Q&RA):

1. Receives scrap item; initiates a Defective Part Tag (form-LSB 1005, 5/65) and attaches the tag to the item.

2. Audits to assure that only the subject item is processed per this procedure.

3. List all defective parts accumulated in MSA 30 on a bi-weekly basis. One UER Tag will be used to cover all parts.

4. Route parts with UER hard copy to Finance Reclamation area.

5. Route pink copy of UER Tag to stores supervisor.

C. Materiel:

1. Standards Store (MSA 30) will exchange new parts for damaged parts when they are accompanied with a properly validated defective Parts Tag and a Factory Cost Collection Card, form LSB 1013, from the using M or TP.

2. Materiel Procurement will reorder parts as necessary when they are in receipt of a validated UER Tag listing part number and quantity.

3. Provide suitable interim storage for this material.

D. Michoud Finance:

1. Receives item and establishes necessary accountability.

2. Estimates value of item. Notifies Q&RA when value of reject item is in excess of $25.

3. Obtains disposition instructions and disposes of the item.

November 1, 1967
(Supercedes issue dated January 19, 1967)

SUBJECT: FAILURE TRACKING, MONITORING, AND CLOSURE

FROM: H. D. Gunning
H. D. GUNNING
MICHOUD MANAGER

AFFECTED ORGANIZATIONS

S-1C Systems Test
S-1C Engineering
S-1C Operations
S-1C Quality & Reliability Assurance
S-1C Program Planning & Reporting
S-1C Program Executive Office

COMPLIANCE: This procedure complies with O.P. 812.14 "LSB Record System - Unplanned Event Processing System"

REFERENCE:
(a) O.P. 650.5, "Failure Flash Reports"
(b) O.P. 650.6, "Boeing Investigation & Corrective Action Request-Preparation, Routing, and Follow-Up"
(c) O.P. 812.3, "Unplanned Event Record (UER)"

I. PURPOSE

This procedure establishes the system and organizational responsibilities for the tracking, monitoring, and closure of failures to production S-1C stage and GSE hardware. This procedure and O.P. 812.3 provide the necessary assurance that production hardware failures have received failure analysis and adequate corrective action.

II. SCOPE

This procedure covers the time phase from start of post-manufacturing check-out throughout stage launch at KSC. For hardware defined as reliability critical, the time period for reporting shall begin at receiving-inspection for vendor supplied items, and at completion of assembly operations for Boeing fabricated items. It applies to all Schedule I responsibility hardware at Michoud, MTF, MSFC, and KSC.

III. GENERAL

The Launch Systems Branch Failure Analysis System is divided into four phases as follows: (1) Detection and Recording, (2) Investigation and Identification, (3) Analysis and Reporting, and (4) Follow-up. The "Follow-up" phase is the failure tracking, monitoring, and closure system which is the subject of this procedure. Phases 1, 2 and 3 are covered by O.P. 812.3.

Generally, the failure tracking, monitoring, and closure function is accomplished in two phases. The first phase is the routine processing of unresolved failures; the second phase is the flight impact assessment of unresolved failures prior to each stage launch.

IV. RESPONSIBILITIES

A. Phase I (routine processing of Unresolved Failures)

QUALITY & RELIABILITY ASSURANCE - RELIABILITY DATA CENTER	1.	Each UER and UCR classified as a failure, in accordance with O.P. 812.3, shall be tracked by the Q&RA Reliability Data Center (RDC) in the Failure Status Summary Report (a weekly report of unresolved stage and GSE failures). A Boeing Investigation and Corrective Action Request (BICAR) will be initiated for each UER/UCR and transmitted to the organization responsible for corrective action.
ENGINEERING	2.	Engineering will assess each UER/UCR that appears in the Failure Status Summary Report (FSSR) and classify for degree of criticality (i.e., 01 - loss of vehicle, life or hazardous to astronauts, 02 - launch scrub, 03 - launch delay, and 04 - loss of info; no significant effect on launch operation). The failures that could have an impact on the next scheduled launch will be designated "top priority" by Engineering. The criticality classification and "top priority" information will be transmitted weekly (daily, ninety days prior to each stage launch) by Engineering via coordination sheet to RDC for subsequent reporting.
QUALITY & RELIABILITY ASSURANCE - RELIABILITY DATA CENTER	3.	RDC will prepare management visibility charts on each "top priority" item and transmit the charts to the MAF Program Control Center. These charts will be updated weekly (daily, ninety days prior to each stage launch). In addition, RDC will maintain daily contact with the BATC Launch Site Reliability Investigation Group to expedite resolution of KSC failures.
S-1C PROGRAM, PLANNING & REPORTING - PROGRAM CONTROL CENTER	4.	The MAF Program Control Center (PCC), will be the central point for providing "top priority" charts to BATC program control centers and status rooms.
ALL ORGANIZATIONS	5.	Organizations assigned corrective action responsibility will evaluate each RDC initiated BICAR ("top priority" BICAR's will receive primary attention) and provide program corrective action and flight readiness action in accordance with the ground rules of Appendix A.

QUALITY & RELIABILITY ASSURANCE - RELIABILITY DATA CENTER	6.	RDC will monitor each BICAR and remove the associated UER/UCR from the FSSR when the "closure" action is in accordance with the ground rules of Appendix A. All "closure" information will be incorporated into the RDC computer system for future retrieval.
	7.	RDC will be the Launch Systems Branch central monitoring and processing point for such associated paperwork as follows:
		a. Failure Flash Report (FFR).
		b. Failure Analysis Report (FAR).

B. PHASE II (Flight impact assessment of Unresolved failures prior to each stage launch)

S-1C PROGRAM EXECUTIVE OFFICE - UER/UCR ASSESSMENT BOARD.	1.	Ninety days prior to each launch, a UER/UCR assessment board will be appointed by the S-1C Program Executive Office to assess unresolved "top priority" failures in relationship to launch impact. This assessment will determine whether an item should be classified as "assume risk" or "resolution mandatory prior to launch." An interim Boeing Investigation and Corrective Action Request (BICAR) will be initiated by the UER/UCR assessment board on "assume risk" items and transmitted to RDC for subsequent reporting. The BICAR will include the rationale for risk assumption.
QUALITY & RELIABILITY ASSURANCE - RELIABILITY DATA CENTER	2.	RDC will data-fax the interim BICAR to BATC Reliability and update the PCC "top priority" charts, daily.
S-1C PROGRAM, PLANNING & REPORTING - PROGRAM CONTROL CENTER	3.	PCC will transmit the updated "top priority" charts to BATC program control centers and status rooms, daily.

APPENDIX "A"

GROUND RULES FOR CLOSING UNRESOLVED UER/UCR's

The following information shall be included on the BICAR which closes the UER/UCR:

1. Failure Cause

   The failure cause as determined by failure analysis or when failure analysis cannot be performed, the most probable cause (based on historical data) must be established for each failure.

2. Program Corrective Action

   Statements of program corrective action should reflect the following intelligence:

   a. Does the failure indicate a design deficiency?

   b. Are upstream or associated component designs deficient?

   c. Do documents (dwg., test/calib. procedures, procurement documents, etc.) need to be revised or published?

   d. Have personnel been adequately trained or instructed? (human errors)

   e. If corrective action is not required, adequate reasons are necessary.

   The statement "failure not verified" is inadequate closure justification until answers are provided with the following intelligence:

   a. Was failure caused by another component, system or other equipment? If so, what? The answer to this all-important question often requires an employee going beyond his own area into that of another (e.g., Stage Design coordination with GSE Design and/or Systems Test, etc.).

   b. Are any design deficiencies indicated?

   c. Is test equipment adequate?

   d. Are there any documentation deficiencies?

The general philosophy is that: (1) the existence of a validated failure UER/UCR indicates a problem exists somewhere; and (2) the statement "failure not verified" means the problem was not researched far enough to establish what failed and why.

3. Flight Readiness Action

A statement of flight readiness action shall be made which is applicable to the next scheduled launch. The statement will include any remedial actions that are mandatory for launch. When the problem affects the next scheduled static firing, a statement of required remedial action will be made.

SUBJECT: UNPLANNED EVENT RECORD (UER) - GENERAL

November 1, 1967
(Supersedes issue dated January 19, 1967)

AFFECTED ORGANIZATIONS

S-IC Engineering

FROM: H. D. Gunning
H. D. GUNNING
MICHOUD MANAGER

S-IC Operations
Manufacturing
Materiel

S-IC Quality and Reliability Assurance
S-IC Systems Test

COMPLIANCE: This procedure complies with OP 812.14, "LSB Record System - Unplanned Event Processing System"

REFERENCE:
(a) D5-11593, "LSB Record System"
(b) OP 605.1, "Material Review Board"
(c) OP 527.3, "Nonconforming Government Furnished Property" (Sec. II)
(d) OP 650.1, "Failure Tracking, Monitoring & Closure"
(e) OP 650.6, "Boeing Investigation & Corrective Action Request (BICAR)"
(f) OP 605.11, "Processing of Certain Discrepant Material Disposed as Scrap"

I. PURPOSE

This procedure establishes the method for processing Unplanned Event Records (UER's) and the organizational responsibilities to assure accurate and complete recording of nonconforming conditions and the action taken to resolve them.

II. SCOPE

This procedure is applicable to all UER's initiated within Launch Systems Branch. OP 812.14 establishes when an UER is to be generated.

III. DEFINITIONS

See Reference (a) for definitions of terms used herein.

IV. GENERAL

A. This section is one of five sections that make up Operating Procedure 812.3. Section I is used each time a UER is initiated. Sections II through V are used as dictated by the nature of the part and nonconformance. A complete list of all sections of this procedure follows:

IV. GENERAL (Continued)

Section I - "Unplanned Event Record - General"
Section II - "Unplanned Event Record - Boeing Fabricated Items"
Section III - "Unplanned Event Record - Supplier Items"
Section IV - "Unplanned Event Record - Logistic Spares"
Section V - "Unplanned Event Record - Failure Analysis"

Correlation of these sections is shown in Exhibit "B" of O.P. 812.14.

B. When dispositioning hardware, Quality will choose one of the following:

1. UNUSABLE - used when an item is no longer usable for intended purpose and cannot be corrected by rework or uneconomical to do so.

2. REWORK/COMPLETE TO DRAWING CONFIGURATION - used to rework or complete an item provided item is to drawing configuration after work is complete.

3. REFER TO MRB - primarily used when rework causes an item to no longer be within drawing configuration requirements

C. It is the responsibility of each person initiating, validating or making entries on the UER to assure such entries are complete and contain all pertinent data. Likewise, it is the responsibility of the recipient to return any UER containing insufficient/incomplete data for completion prior to further processing. This is a mandatory requirement.

NOTE: Items which are covered by Operating Procedure 605.11, "Processing Certain Discrepant Material Disposed of as Scrap," shall not require individual UER's, and the material shall be processed by the same procedure.

V. RESPONSIBILITIES/PROCEDURE

Upon determination that the nonconforming condition warrants the initiation of an UER, the UER shall be processed in the following manner. Reference (a) contains a description of entries.

V. RESPONSIBILITIES/PROCEDURE (Continued)

Q&RA

A. Initiation of UER

1. Complete Entries 2 through 17 and 41. Entry 6 shall be completed only when the nonconformance is detected during Receiving Inspection or Receiving Inspection Functional Test. Entries 11 through 14 shall be completed only when nonconformance is detected during processing of a Manufacturing or Testing Process and Inspection Record.

2. Describe the nonconforming condition in Entry 36 and conditions under which it was detected. Include the geographic location (Michoud, MTF, KSC, etc.) and the specific shop or test area (Subsystems Test, Final Assembly, MSE-II, etc.) and whether the nonconformance occurred during Receiving Inspection, Receiving Inspection Test, Fabrication Assembly, PMC, Static Test, Refurbishment, PSC, etc.

3. Complete Entries 18, 19, and 20.

4. Validate the UER. This validation shall consist of the Q&RA supervisor's signature, budget number, and date, directly below the description of the nonconformance in Entry No. 36.

5. Record the UER serial number on the planned event packet or Receiving Inspection Record.

NOTE: UER's initiated on parts processed without MorTP & IR's or Receiving Inspection Records will have the UER affixed to the part.

B. GFP

Nonconforming Government Furnished Property/Equipment shall be processed in accordance with Reference (c).

C. INRA

1. Analyze the UER and determine if Individual Nonrecurrence Action is required. This determination may be made at any time during processing of an UER.

V. RESPONSIBILITIES/PROCEDURE (Continued)

2. Upon determining INRA is required, check the "INRA" block in Entry 40 and proceed per one of the following:

a. If INRA can be accomplished without adversely affecting hardware/work flow or schedules:

(1) Indicate appropriate reject charge number in Entry 39.

(2) Submit UER to organization indicated in Entry 39.

Reject Charge Number Orgn.

(3) Record INRA in Entry 40 followed by signature, budget number and date.

(4) Return UER to Quality.

Q&RA

b. If INRA cannot be accomplished without adversely affecting hardware/work flow or schedules:

(1) Indicate appropriate reject charge number in Entry 39 and initiate BICAR per Reference (e), or a Corrective Requirement Action Memo (CRAM) and indicate "See INRA on BICAR_____ or CRAM _____" in Entry 40.

D. Quality Instructions

1. If any of the following actions are required, the UER must be referred to Engineering and processed per Paragraph V.E. of this Section I.

a. Investigation to determine cause of nonconformance.
b. Engineering rework instructions.
c. MRB
d. If the nonconformance is a failure or possible failure.

NOTE: (1) In cases of doubt coordination with Engineering is required to make a preliminary determination.

(2) To assure prompt and accurate failure cause determination it is essential that complete troubleshooting data be recorded on the UER.

2. If the UER was written solely to obtain INRA process per Paragraph V. C. of this Section I and subsequently closeout the UER.

V. RESPONSIBILITIES/PROCEDURE (Continued)

3. If none of the above apply one of the following dispositions can be made.

a. Unusable.

b. Rework/complete to drawing configuration. Subsequently proceed per Sections II, III or IV (see Figure 1).

Design Engineering Representative (Supported by Q&RA, Manufacturing or Systems Test personnel as required)

E. Classification

Investigate as necessary to determine the cause of the nonconformance and determine if the nonconformance is a failure.

1. If it is not a failure, record the word "defect" in Entry 36.

a. Record rework instructions and recommended hardware disposition in Entry 36.

b. Return UER to Quality.

Q&RA

c. Proceed per Section II, III or IV (see Figure 1).

Design Engineering Representative

2. Determination of Failure - if it is determined that the nonconformance is a failure, record the word "FAILURE" in Entry 36.

NOTE: Failures may be reclassified as defects during subsequent processing or investigation if appropriate. In such cases the reasons for reclassification must be clearly indicated in Entry 36.

a. Return UER to Quality

Q&RA

b. Proceed per Section V.

F. Remedial Action

1. Will assure that all UER's written against stage and GSE hardware subsequent to start of post-manufacturing checkout will include a positive statement (e. g., "Unit was reworked and reinstalled" or "removed Serial #____ and replace with Serial #___," etc.) of action taken to return the stage of GSE complex to the proper configuration.

SUBJECT: BOEING INVESTIGATION AND CORRECTIVE ACTION REQUEST (BICAR) - PREPARATION, ROUTING, AND FOLLOWUP

November 1, 1967
(Supersedes issue dated January 19, 1967)

AFFECTED ORGANIZATIONS:

S-IC Engineering
S-IC Operations
S-IC Systems Test
S-IC Quality & Reliability Assurance

FROM: H. D. Gunning
H. D. GUNNING
MICHOUD MANAGER

COMPLIANCE: This procedure complies with Operating Procedure 812.14, "LSB Record System - Unplanned Event Processing System"

REFERENCE:
(a) Michoud Directive 812.1, "The Launch Systems Branch Committee for the S-IC Record System"
(b) Document D5-11593, "Launch Systems Branch Record System"

I. PURPOSE

To establish functional responsibilities for the preparation, assignment, routine, follow-up and status reporting of Boeing Investigation and Corrective Action Request (BICAR) activity.

II. SCOPE

This procedure provides the necessary controls to obtain resolution of conditions warranting the use of the BICAR and to identify responsibilities of BICAR control groups.

III. GENERAL

A. A Boeing Investigation and Corrective Action Request is initiated when non-recurrence action cannot be obtained through the normal processing of the Rejection Tag (UER/UCR) e.g., failures requiring failure analysis and subsequent engineering evaluations, or when collective analysis of discrepancies indicate potential problems. The BICAR may be originated by any individual, subject to approval/disapproval of the originator's BICAR Control Group.

B. Investigation and Corrective Action Requests will reference related rejection tag numbers, indicate affected interfacing contractors or government agencies, assign responsibilities and schedules for feedback of information and completion of the action necessary to resolve the discrepancies. A copy of the originating rejection tag will be attached to the BICAR and transmitted. Boeing Investigation and Corrective Action Request flow is indicated in Figure 1.

C. Boeing Investigation and Corrective Action Request control groups will be established by affected organizations (Engineering, Systems Test, Q&RA, Operations-Sub Systems Test, Operations-Manufacturing and Operations-Materiel) in order to provide control, follow-up and status information concerning BICAR's and to ensure satisfactory interface with other BICAR control groups, when required. Appointments made within each BICAR control group shall include a primary and alternate responsible person. Quality & Reliability Assurance, Reliability Data Center shall maintain lists of the organizational BICAR Control Group representatives.

IV. PROCEDURES

A. Upon determination that further investigation and corrective action is required as per Section III. A. above, the BICAR will be originated and:

1. Processed by the initiator's BICAR control group to either an action individual internal to the originating BICAR control group or to the cognizant Control Group.

2. The originating BICAR control group will distribute a preliminary copy of the BICAR and the vellum of the completed BICAR upon answer to RDC.

3. The RDC will receive and process all BICAR's initiated by other Boeing locations.

V. STATUS REPORTING

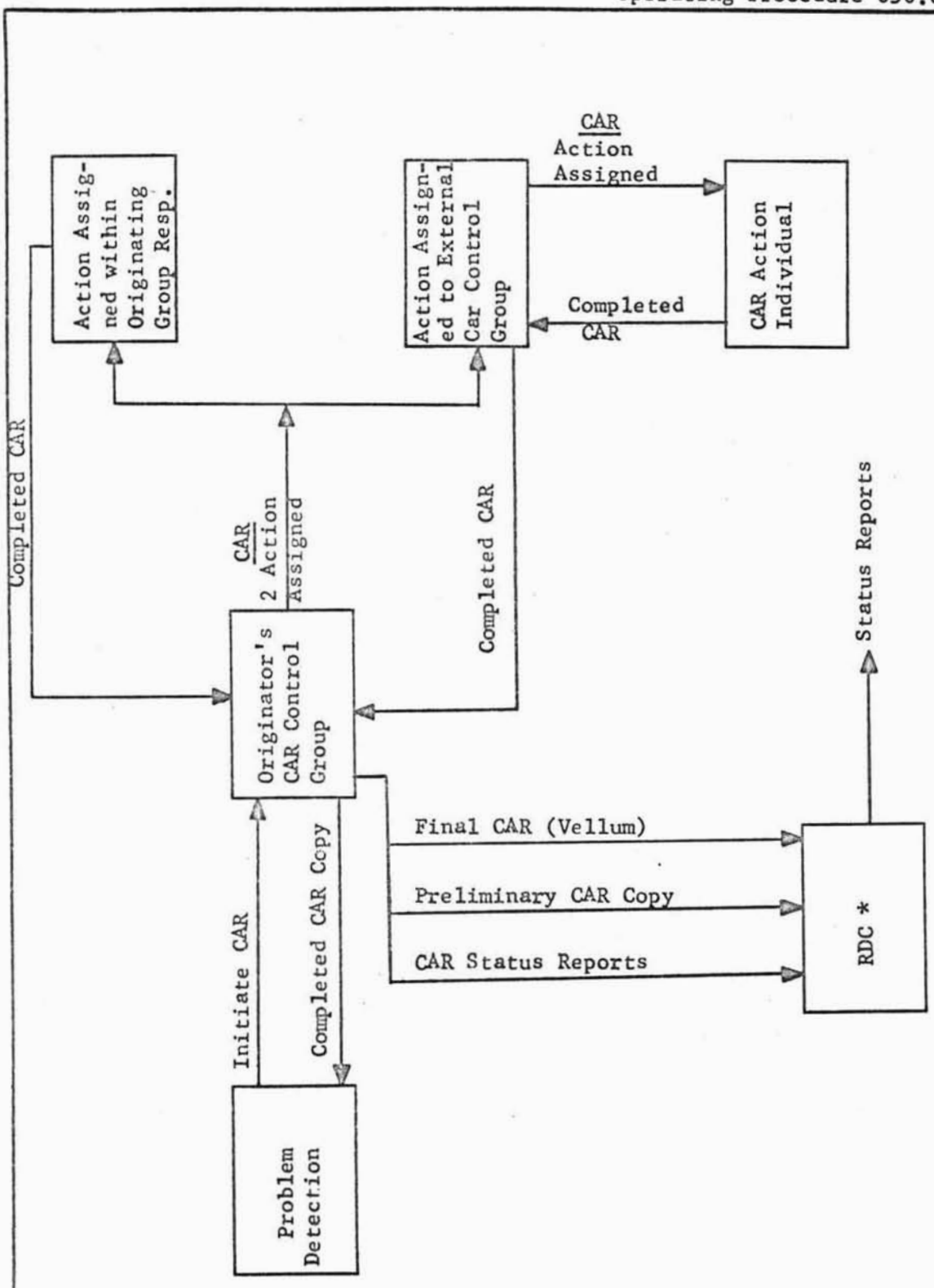
A status report will be distributed at regular intervals by RDC to the management of organizations which have been assigned action responsibilities. The report will be in part number sequence and will list all BICAR's pending completion, as well as those completed since publication of the previous report. BICAR's will be classified, in accordance with the following definitions:

A. Assigned - Boeing Investigation and Corrective Action Request has been assigned and delivered to the organization which has primary responsibility for correction of the reported unsatisfactory condition.

B. Closed Out - This status is assigned only when the originator has reviewed the results of the corrective action investigation and determined that action or additional action is not required.

C. Delinquent - The purpose of the delinquency list is to show lack of progress in obtaining timely corrective actions. Boeing Investigation and Corrective Action Requests will be listed as delinquent when the BICAR suspense data is not complied with, normally ten working days after BICAR receipt. Justifiable extension can be obtained from the originating BICAR control group on request.

EXHIBIT 1



*RDC acts as Central CAR Control and as Q&RA CAR Control Group.

SUBJECT: UNPLANNED EVENT RECORD (UER) - GENERAL

November 1, 1967
(Supersedes issue dated January 19, 1967)

AFFECTED ORGANIZATIONS

S-IC Engineering

FROM: H. D. Gunning
H. D. GUNNING
MICHOUD MANAGER

S-IC Operations
Manufacturing
Materiel

S-IC Quality and Reliability Assurance
S-IC Systems Test

COMPLIANCE: This procedure complies with OP 812.14, "LSB Record System - Unplanned Event Processing System"

REFERENCE:
(a) D5-11593, "LSB Record System"
(b) OP 605.1, "Material Review Board"
(c) OP 527.3, "Nonconforming Government Furnished Property" (Sec. II)
(d) OP 650.1, "Failure Tracking, Monitoring & Closure"
(e) OP 650.6, "Boeing Investigation & Corrective Action Request (BICAR)"
(f) OP 605.11, "Processing of Certain Discrepant Material Disposed as Scrap"

I. PURPOSE

This procedure establishes the method for processing Unplanned Event Records (UER's) and the organizational responsibilities to assure accurate and complete recording of nonconforming conditions and the action taken to resolve them.

II. SCOPE

This procedure is applicable to all UER's initiated within Launch Systems Branch. OP 812.14 establishes when an UER is to be generated.

III. DEFINITIONS

See Reference (a) for definitions of terms used herein.

IV. GENERAL

A. This section is one of five sections that make up Operating Procedure 812.3. Section I is used each time a UER is initiated. Sections II through V are used as dictated by the nature of the part and nonconformance. A complete list of all sections of this procedure follows:

IV. GENERAL (Continued)

Section I - "Unplanned Event Record - General"
Section II - "Unplanned Event Record - Boeing Fabricated Items"
Section III - "Unplanned Event Record - Supplier Items"
Section IV - "Unplanned Event Record - Logistic Spares"
Section V - "Unplanned Event Record - Failure Analysis"

Correlation of these sections is shown in Exhibit "B" of O.P. 812.14.

B. When dispositioning hardware, Quality will choose one of the following:

1. UNUSABLE - used when an item is no longer usable for intended purpose and cannot be corrected by rework or uneconomical to do so.

2. REWORK/COMPLETE TO DRAWING CONFIGURATION - used to rework or complete an item provided item is to drawing configuration after work is complete.

3. REFER TO MRB - primarily used when rework causes an item to no longer be within drawing configuration requirements

C. It is the responsibility of each person initiating, validating or making entries on the UER to assure such entries are complete and contain all pertinent data. Likewise, it is the responsibility of the recipient to return any UER containing insufficient/incomplete data for completion prior to further processing. This is a mandatory requirement.

NOTE: Items which are covered by Operating Procedure 605.11, "Processing Certain Discrepant Material Disposed of as Scrap," shall not require individual UER's, and the material shall be processed by the same procedure.

V. RESPONSIBILITIES/PROCEDURE

Upon determination that the nonconforming condition warrants the initiation of an UER, the UER shall be processed in the following manner. Reference (a) contains a description of entries.

V. RESPONSIBILITIES/PROCEDURE (Continued)

Q&RA

A. Initiation of UER

1. Complete Entries 2 through 17 and 41. Entry 6 shall be completed only when the nonconformance is detected during Receiving Inspection or Receiving Inspection Functional Test. Entries 11 through 14 shall be completed only when nonconformance is detected during processing of a Manufacturing or Testing Process and Inspection Record.

2. Describe the nonconforming condition in Entry 36 and conditions under which it was detected. Include the geographic location (Michoud, MTF, KSC, etc.) and the specific shop or test area (Subsystems Test, Final Assembly, MSE-II, etc.) and whether the nonconformance occurred during Receiving Inspection, Receiving Inspection Test, Fabrication Assembly, PMC, Static Test, Refurbishment, PSC, etc.

3. Complete Entries 18, 19, and 20.

4. Validate the UER. This validation shall consist of the Q&RA supervisor's signature, budget number, and date, directly below the description of the nonconformance in Entry No. 36.

5. Record the UER serial number on the planned event packet or Receiving Inspection Record.

NOTE: UER's initiated on parts processed without MorTP & IR's or Receiving Inspection Records will have the UER affixed to the part.

B. GFP

Nonconforming Government Furnished Property/Equipment shall be processed in accordance with Reference (c).

C. INRA

1. Analyze the UER and determine if Individual Nonrecurrence Action is required. This determination may be made at any time during processing of an UER.

V. RESPONSIBILITIES/PROCEDURE (Continued)

2. Upon determining INRA is required, check the "INRA" block in Entry 40 and proceed per one of the following:

a. If INRA can be accomplished without adversely affecting hardware/work flow or schedules:

(1) Indicate appropriate reject charge number in Entry 39.

(2) Submit UER to organization indicated in Entry 39.

Reject Charge Number Orgn.

(3) Record INRA in Entry 40 followed by signature, budget number and date.

(4) Return UER to Quality.

Q&RA

b. If INRA cannot be accomplished without adversely affecting hardware/work flow or schedules:

(1) Indicate appropriate reject charge number in Entry 39 and initiate BICAR per Reference (e), or a Corrective Requirement Action Memo (CRAM) and indicate "See INRA on BICAR_____ or CRAM _____" in Entry 40.

D. Quality Instructions

1. If any of the following actions are required, the UER must be referred to Engineering and processed per Paragraph V.E. of this Section I.

a. Investigation to determine cause of nonconformance.
b. Engineering rework instructions.
c. MRB
d. If the nonconformance is a failure or possible failure.

NOTE: (1) In cases of doubt coordination with Engineering is required to make a preliminary determination.

(2) To assure prompt and accurate failure cause determination it is essential that complete troubleshooting data be recorded on the UER.

2. If the UER was written solely to obtain INRA process per Paragraph V. C. of this Section I and subsequently closeout the UER.

V. RESPONSIBILITIES/PROCEDURE (Continued)

3. If none of the above apply one of the following dispositions can be made.

a. Unusable.

b. Rework/complete to drawing configuration. Subsequently proceed per Sections II, III or IV (see Figure 1).

Design Engineering Representative (Supported by Q&RA, Manufacturing or Systems Test personnel as required)

E. Classification

Investigate as necessary to determine the cause of the nonconformance and determine if the nonconformance is a failure.

1. If it is not a failure, record the word "defect" in Entry 36.

a. Record rework instructions and recommended hardware disposition in Entry 36.

b. Return UER to Quality.

Q&RA

c. Proceed per Section II, III or IV (see Figure 1).

Design Engineering Representative

2. Determination of Failure - if it is determined that the nonconformance is a failure, record the word "FAILURE" in Entry 36.

NOTE: Failures may be reclassified as defects during subsequent processing or investigation if appropriate. In such cases the reasons for reclassification must be clearly indicated in Entry 36.

a. Return UER to Quality

Q&RA

b. Proceed per Section V.

F. Remedial Action

1. Will assure that all UER's written against stage and GSE hardware subsequent to start of post-manufacturing checkout will include a positive statement (e. g., "Unit was reworked and reinstalled" or "removed Serial #____ and replace with Serial #___," etc.) of action taken to return the stage of GSE complex to the proper configuration.

November 1, 1967
(Supersedes issue dated January 19, 1967)

SUBJECT: UNPLANNED EVENT RECORDS - BOEING FABRICATED ITEMS

AFFECTED ORGANIZATIONS

S-IC Engineering

S-IC Operations
Manufacturing
Materiel

S-IC Quality and Reliability Assurance

S-IC Systems Test

FROM: H. D. GUNNING
MICHOUD MANAGER

COMPLIANCE: This procedure complies with OP 812.14, "LSB Record System - Unplanned Event Processing System"

REFERENCE: (a) D5-11593, "LSB Record System"
(b) OP 605.1, "Materials Review Board"
(c) OP 605.7, "Nonconforming Materials-Nondeliverable Tools"

I. PURPOSE

The purpose of this procedure is to define the method and responsibilities for processing Unplanned Event Records (UER's) on Boeing fabricated items.

II. SCOPE

This procedure is applicable to all UER's initiated within the Launch Systems Branch against Boeing fabricated items. Nondeliverable Boeing fabricated tooling will be processed in accordance with Reference (c).

III. GENERAL

A. The UER shall be initiated in accordance with Section I., O. P. 812.3.

B. Failure analysis entries shall be completed in accordance with Section V of O. P. 812.3.

C. Logistic Spare recommendations and Work Order Numbers shall be obtained in accordance with Section IV. of O. P. 812.3.

IV. RESPONSIBILITIES/PROCEDURE

A. If the item can be reworked/completed to drawing configuration:

Q&RA 1. Enter the appropriate

IV. RESPONSIBILITIES/PROCEDURE - (Continued)

instructions authorizing the work in Entry 36, and enter signature, budget number and date.

2. Route UER to Manufacturing Engineer or Test Planner.

Operations-Manufacturing Engineering or Systems Test

3. Initiate Manufacturing or Testing Process and Inspector Record (MorTP & IR) if required to execute UER instructions. Route UER, and MorTP & IR to appropriate shop for accomplishing UER instructions.

4. Execute UER instructions and record accomplishment, results and all pertinent data in Entry 36 followed by signature, date, and budget number.

5. Present UER and item to Q&RA for inspection.

Q&RA

6. Inspect the item presented to determine if work was satisfactorily accomplished.

   a. If satisfactory, complete Entries 1, 43, and 44, and route to final destination. Closeout UER and distribute per Reference (a).

   b. If work is not satisfactory, record the nonconforming condition in Entry 36 of the same UER, followed by signature, date and budget number, and reprocess UER per this section.

B. If item is determined to be unusable, record the word "UNUSABLE" and instructions in Entry 36 followed by signature, budget number and date. Attach the hard copy of the UER to the item and route to reclamation. Distribute remaining copies of the UER per Reference (a).

C. If the item requires Engineering Instructions for:

Engineering-Design Representative

1. Reworking items to drawing configuration:

   a. Enter the appropriate instructions authorizing the work in Entry 36, and enter signature, budget number and date. Return UER to Q&RA.

IV. RESPONSIBILITIES/PROCEDURE - (Continued)

Q&RA

b. Forward a reproduced copy of the UER to RDC.

c. Route original UER for processing in accordance with IV. A. 2. through IV. A. 6. of this Section II.

2. Materials Review Board Action:

Engineering-Design Representative

a. Process per Reference (b).

b. Complete Entries 21 and 22.

c. Route UER to Q&RA.

Q&RA

d. Forward reproduced copy of UER to RDC.

e. Complete Entry 23 and present the UER to the customer for concurrence per Reference (b). (NOTE: Customer will complete Entry 24).

f. Route the UER per IV. A. 2 through IV. A. 6 of this Section II to accomplish rework instructions.

g. If item is dispositioned as unusable, route per IV. B. of this Section II.

h. If item is dispositioned "Use As is," complete Entries 1, 43, and 44, route UER to final destination, and distribute per Reference (a).

November 1, 1967
(Supersedes issue dated January 19, 1967)

SUBJECT: UNPLANNED EVENT RECORD - SUPPLIER ITEMS

AFFECTED ORGANIZATIONS

S-IC Engineering
S-IC Operations
Manufacturing
Materiel

S-IC Quality and Reliability Assurance
S-IC Systems Test

FROM: H. D. Gunning
H. D. GUNNING
MICHOUD MANAGER

COMPLIANCE: This procedure complies with O. P. 812.14, "LSB Record System - Unplanned Event Processing System"

REFERENCE:
(a) D5-11593, "LSB Record System"
(b) OP 605.4, "Nonconformance Control - Supplier Furnished Items"
(c) OP 605.7, "Nonconforming Materials - Nondeliverable Tools"

I. PURPOSE

This procedure defines the method and responsibilities for processing Unplanned Event Records (UER's) on supplier furnished items.

II. SCOPE

This procedure applies to all UER's written within the Launch Systems Branch against supplier furnished items. Supplier furnished nondeliverable tools will be processed in accordance with Reference (c).

III. GENERAL

A. The UER will be initiated in accordance with Section I. of OP 812.3.

B. Failure Analysis entries will be completed in accordance with Section V. of OP 812.3.

C. Logistic spares recommendations and work order numbers will be obtained in accordance with Section IV. of OP 812.3.

D. All supplier items except logistics spares will be routed to the Central Discrepancy Control Area (CDCA) for processing per Paragraph IV. of this Section III.

IV. RESPONSIBILITIES/PROCEDURE

Q&RA - CDCA Representative

A. If warranty considerations are involved, present the UER to Materiel Representative.

Materiel

1. Complete Entry 37 in accordance with Reference (b). Include debit and routing instructions on the UER.

2. Determine Work Order number and record in Entry 38. Return UER to Q&RA.

Q&RA

B. If disposition in Entry 36 is "Unusable" and instruction in Entry 37 is "Scrap," complete Entries 1, 43, and 44, attach the hard copy of the UER to the item and route to reclamation. Distribute remainder of UER per Reference (a).

C. If Materiel instruction is "Return to Vendor" (RTV), (this includes Boeing facilities remote to Michoud), complete Entries 43 and 44. Route the hard copy and a reproduced copy of the UER for shipment with the item to the vendor, and distribute the remainder of the UER per Reference (a).

D. If Materiel instruction is "Rework at Boeing" (in-house), route UER in accordance with Section II, Paragraphs IV. A. or IV. C. of OP 812.3.

November 1, 1967

SUBJECT: UNPLANNED EVENT RECORDS - LOGISTIC SPARES

(Supersedes issue dated January 19, 1967)

AFFECTED ORGANIZATIONS

S-IC Engineering

FROM: H. D. GUNNING
MICHOUD MANAGER

S-IC Operations
Manufacturing
Materiel

S-IC Quality and Reliability Assurance
S-IC Systems Test

COMPLIANCE: This procedure complies with O. P. 812.14, "LSB Record System - Unplanned Event Processing System"

REFERENCE: (a) D5-11593, "LSB Record System"
(b) OP 605.4, "Nonconformance Control - Supplier Furnished Items"

I. PURPOSE

This procedure defines the method and responsibilities for processing Unplanned Event Records (UER's) on logistics spares.

II. SCOPE

This procedure applies to all UER's written within the Launch Systems Branch against logistic spares.

III. GENERAL

A. The UER will be initiated in accordance with Section I. of O.P. 812.3.

B. Failure analysis entries will be completed in accordance with Section V. of O. P. 812.3.

C. All logistic spares will be routed to the Discrepant Spares Segregation Area (DSSA) for processing per IV. of this Section IV.

IV. RESPONSIBILITIES/PROCEDURE

Q&RA-DSSA Representative	A. Present the UER to the Spares Coordinator.
Logistics Engineering (Spares Coordinator)	B. Complete Entry 38: 1. If repairs are to be accomplished in-house record the Request for In-house Repair (RFIR) in Entry 36, block it in, and assign complete Work Order in Entry 38. 2. If repairs are to be accomplished by supplier, enter Work Order Number less Control Code Number in Entry 38. 3. Return the UER to Q&RA.
Q&RA-DSSA Representative	C. If the item is Boeing fabricated, process per Section II. of OP 812.3.
	D. If warranty considerations are involved, present the UER to Materiel Representative.
Materiel	1. Complete Entry 37 in accordance with Reference (b). Include debit and routing instructions on the UER. 2. Determine Work Order Number and record in Entry 38. Return UER to Q&RA.
Q&RA-DSSA Representative	E. If disposition in Entry 36 is "Unusable" and instruction in Entry 37 is "Scrap," complete Entries 1, 43, and 44, attach the hard copy of the UER to the item and route to reclamation. Distribute remainder of UER per Reference (a).
	F. If Materiel instruction is "RTV" (this includes Boeing Facilities remote from Michoud), complete Entries 43 and 44. Route the hard copy and a reproduced copy of the UER for shipment with the item to the vendor, and distribute the remainder of the UER per Reference (a).
	G. If Materiel instruction is "Rework at Boeing" (in-house), route UER in accordance with Section II, Paragraphs IV. A. or IV. C. of OP 812.3.

November 1, 1967
(Supersedes issue dated January 19, 1967)

SUBJECT: UNPLANNED EVENT RECORD - FAILURE ANALYSIS

AFFECTED ORGANIZATIONS

S-IC Engineering
S-IC Operations
Manufacturing
Materiel

S-IC Systems
S-IC Quality & Reliability Assurance

FROM: H. D. GUNNING
MICHOUD MANAGER

COMPLIANCE: This procedure complies with OP 812.14, "LSB Record System - Unplanned Event Processing System"

REFERENCE:
(a) D5-11910, "Reliability Status Report"
(b) D5-11593, "LSB Record System"
(c) OP 605.4, "Nonconformance Control-Supplier Furnished Items"
(d) OP 650.5, "Failure Flash Reports"

I. PURPOSE

This procedure defines the method and responsibilities for processing Unplanned Event Records (UER's) classified as "failures."

II. SCOPE

This procedure applies to all UER's written within the Launch Systems Branch classified as "failures."

III. GENERAL

The UER will be initiated in accordance with Section I. of O. P. 812.3.

IV. RESPONSIBILITIES/PROCEDURE

Q&RA

A. Classification

1. Classify UER as "Receiving Failure" or "Inservice Failure" and record in Entry 36.

2. Forward reproduced copy of UER to RDC.

3. Route UER to Design Engineering Representative.

Design Engr. Representative

4. Process Receiving Failures per IV. B. and Inservice Failures per IV. C. of this Section V.

IV. RESPONSIBILITIES/PROCEDURE (Continued)

B. Receiving Failures

1. Indicate in Entry 36 whether failure analysis will be conducted by the vendor or by Boeing. If Boeing is to conduct analysis, provide investigation instructions in Entry 36.

NOTE: Coordination with Materiel is required.

2. Return UER to Quality.

Q&RA

3. Process UER as follows:

a. If Boeing is to conduct analysis, proceed per Paragraph IV. C. of this Section V.

b. If vendor is to conduct analysis:

(1) Route UER and hardware to CDCA/DSSA.

(2) Initiate Supplier Individual Nonrecurrence Action (SINRA) per Reference (c).

(3) Coordinate with Design Engineering Representative for Engineering input.

(4) Distribute copies of SINRA to RDC and Design Engineering Representative.

(5) Proceed per IV. G. of this Section V.

C. Inservice Failures

Design Engr. Representative

1. Provide investigation instructions in Entry 36.

2. Return UER to Quality.

Q&RA

3. Acknowledge investigation instructions by entering signature, budget number, and date directly below instructions in Entry 36.

4. Route UER to Test organization/shop designated per IV. C. 1.

Operations-Manufacturing or Systems Test

5. Conduct on-site-investigation in accordance with UER instructions, record all pertinent data in Entry 36 and return UER to Design Engineering Representative.

IV. RESPONSIBILITIES/PROCEDURE (Continued)

Design Engineering Representative

6. Assure that a complete and thorough investigation has been conducted and trouble isolated to lowest remove and replace level.

7. Determine if failure is critical as defined in Reference (d). Complete Entry 30, and initiate failure flash report as required.

8. If the failure cause is known (has been determined) proceed per IV. D. of this Section V. If failure cause is not known proceed per IV. E. of this Section.

D. Failure Cause Known

1. Check the "No" block in Entry 31.

2. Enter "Failure Analysis Report" in Entry 36 and complete Entries 25 through 29.

3. Enter Engineering instructions for further processing in Entry 36 followed by signature, budget number, and date, and return UER to Q&RA.

Q&RA

4. Complete Entries 32 through 34, 39 and 40, if not previously completed.

5. For stage test operations, route UER to S-IC Systems Test Reliability Investigator (Test Conductor).

S-IC Systems Test Reliability Investigator (Test Conductor)

6. Complete Entry 35 with signature, budget number, and date, and return to Q&RA.

Q&RA

7. Obtain INRA per Section I, Paragraph V. C. of OP 812.3.

8. Proceed per Sections II, III, or IV of OP 812.3 as applicable.

IV. RESPONSIBILITIES/PROCEDURE (Continued)

E. Failure Cause not Known

Design Engr. Representative

1. Check the "YES" block in Entry 31.

2. Record "Route for Failure Analysis." AAR and laboratory designation shall be furnished by Design Project Engineering, 5-7XXXX," in Entry 36.

3. Forward reproduced copy of UER to the Design Engineer.

4. Complete Entries 25 thru 29 if known.

5. Route UER and hardware to Quality.

Q&RA

6. Complete Entries 32 thru 34. Also, entries 39 and 40 if information known.

7. Route UER's initiated during stage test operations to S-IC Systems Test Reliability Investigator (Test Conductor).

Systems Test - Reliability Investigator (Test Conductor)

8. Complete Entry 35 with signature, date, and budget number and return UER to Q&RA.

Q&RA

9. Route UER's with logistic spares to the Discrepant Spares Segregation Area (DSSA); route all other UER's and their parts to the Central Discrepancy Control Area (CDCA).

Q&RA CDCA/DSSA

10. Hold UER's until Additional Analysis Requirements (AAR) is received.

Engineering - Design

11. Review failure and investigation data and:

a. Establish additional analysis requirements.

b. Designate test lab.

c. Establish test schedule.

d. Initiate and distribute AAR.

IV. RESPONSIBILITIES/PROCEDURE (Continued)

Q&RA CDCA/DSSA

12. Enter "Routed to _____ for failure analysis per AAR_____" followed by signature, budget number, and date in Entry 36.

13. Route a reproduced copy of the UER to RDC.

14. Depending on test lab selected per AAR proceed as follows:

    a. If Boeing lab (Michoud Assy Facility-MAF) is designated process per IV. F. of this Section V.

    b. If vendor lab (other than Boeing-MAF) is designated process per IV. G. of this Section V.

F. Boeing Lab

1. Route UER, AAR and hardware to designated test lab.

Test Lab

2. Prepare test procedure.

3. Conduct test.

4. Prepare and forward lab report to the Design Engineer.

5. Route UER and hardware to area whence it came (e.i. CDCA/DSSA).

Design Engr. Representative

6. Complete Entries 25 thru 29 if not previously completed.

7. Enter Engineering instructions for further processing in Entry 36 followed by signature, budget number and date.

Q&RA

8. Obtain INRA per Section I, Paragraph V. C. of O.P. 812.3.

9. Proceed per Sections II, III, or IV as applicable of O. P. 812.3.

G. Vendor Lab

1. Enter in Block 36 "return to vendor for failure analysis per AAR _____ or SINRA _____"

2. Present UER with AAR or SINRA attached to Materiel.

Materiel

3. Complete Blocks 37 and 38.

IV. RESPONSIBILITIES/PROCEDURE (Continued)

	4. Initiate purchase order and shipping document
Q&RA	5. Close and distribute UER.
	6. Route hardware per Materiel's instruction.
Materiel	7. Make final disposition of hardware at vendor facility in coordination with Design Engineering, Logistics Engineering or Operations as required.
	8. Receive vendor lab report from AAR or SINRA and route to Design Engineering and notify RDC.
Design Engineering	9. Receives, reviews and evaluates lab report or SINRA to assure cause and mode of failure have been determined.
	10. Prepare and distribute Failure Analysis Report to Reliability Data Center.

SUBJECT: UNPLANNED EVENT - ENGINEERING ITEMS: IN-PROCESS SUPPORT OF MANUFACTURING OR TEST

November 1, 1967
(Supersedes issue dated March 7, 1966)

FROM: H. D. Gunning
H. D. GUNNING
MICHOUD MANAGER

AFFECTED ORGANIZATIONS

S-IC Engineering
S-IC Operations
S-IC Quality & Reliability Assurance
S-IC Program Executive
S-IC Systems Test

COMPLIANCE: This procedure complies with OP 812.14 "ISB Records System - Unplanned Events Processing System"

I. PURPOSE

This procedure establishes a method for reporting engineering design discrepancies separately from fabrication, assembly or test nonconformances. It establishes a method for providing an engineering fix prior to releasing formal engineering documentation to correct an inoperable, unsafe or unworkable condition when normal change processing would delay manufacturing or test schedules.

II. DEFINITIONS

A. Engineering Design Discrepancy - A design error or omission which must be corrected to make the system operable, safe or workable.

B. Engineering Fix - An engineering instruction, attached or written on the Unplanned Event - Engineering Item (UE-EI), describing the corrective action in required detail.

C. Advance Released Engineering Documentation - Documentation prepared by Engineering and released by the resident Engineering Group Supervisor.

III. SCOPE

This procedure is limited to Engineering Design discrepancies requiring immediate Engineering revisions to the engineering documentation in order to permit continuation of hardware fabrication or testing.

Excluded from this procedure are:

A. Nonconformances resultant from fabrication, assembly or test activity.

B. Nonconformances associated with "Pilot Model System for Deliverable Prototype Development."

C. Class I engineering changes except when appropriate engineering authority determines a Compatibility Engineering Change Proposal (CECP) is appropriate.

D. Nonconformances requiring failure analysis covered on an Unplanned Event Record.

IV. GENERAL

A. The UE-EI provides authorization and instructions to complete open design discrepant items, to proceed in the next step in the planned event packet, and to move the "fixed" item to the next manufacturing or test area.

B. An engineering design discrepancy will be noted on an Unplanned Event Pickup (UEP), form LSB 1034, modified for this usage. Modification to the UEP is accomplished by altering the title to read "Unplanned Event Engineering Item."

C. Each UE-EI is limited to one discrepant item or related items. Engineering will release formal Engineering documentation in accord with procedures defined in D5-12980-1.

NOTE: Related items are those covered by the same engineering revision and may be combined on the same UE-EI.

V. PROCEDURE

S-IC Operations S-IC Systems Test S-IC Quality & Reliability Assurance	1. Any person who observes or becomes aware of an engineering discrepancy in his area will immediately initiate a UE-EI. The initiator is responsible for justifying the UE-EI.
S-IC Quality & Reliability Assurance	2. Records the UE-EI number on applicable planned event packet data sheets. Notes effectivity on UE-EI for the hardware the UE-EI is written against.
	3. Secures UE-EI validation by the appropriate Quality & Reliability Assurance Supervisor and transfers the UE-EI to Engineering.
S-IC Engineering	4. Provides fix instructions to the appropriate shop within 48 hours after the UE-EI is received. The closing statement under the fix will be: "Engineering Order/Revision #XXX will be released to cover this change."
S-IC Quality & Reliability Assurance	5. Reviews the UE-EI fix for adequacy and completeness. Indicates Manufacturing or Systems Test may proceed by affixing the cognizant Q&RA supervisor's signature adjacent to the last pertinent entry.

S-IC Operations or S-IC Systems Test	6. Proceeds with the accomplishment of the fix. When completed per Engineering's instructions, stamps and dates the UE-EI under the column entitled "Attended to."
S-IC Quality & Reliability Assurance	7. Inspects the hardware for compliance with the UE-EI fix. Provides interim approval of the UE-EI pending release of Class I engineering.
S-IC Engineering	8. Initiates appropriate change action in accordance with "The Change Processing System Manual", D5-12980-1. Extends change coverage to full effectivity, as required.
	NOTE: Any design discrepancy covered by a UE-EI will result in a change to Engineering design documentation.
S-IC Change Processing System	9. Reviews and processes the change action.
	10. Provides advance or formal released documentation within 14 days of the fix date or 5 days prior to transfer between Michoud and any other location, or delivery of the contract end item, whichever comes first. Annotates the EO/Drawing Revision with the UE-EI number and effectivity which initiated the release.
S-IC Quality & Reliability Assurance	11. Compares the advanced or formal released engineering to the UE-EI fix and determines if the engineering is in accord with the fix. Ensures that EO/ Revision is entered on the planned event package and approves the UE-EI.
	NOTE: Whenever an item differs from released engineering documentation, even after the necessary EO's have been released, as in the case of UE-EI fixes, Q&RA will proceed per OP 812.3.
	12. Make distribution of UE-EI per document D5-11593.

SUBJECT: UNPLANNED EVENT PICKUP (UEP)

November 1, 1967
(Supersedes issue dated January 19, 1967)

AFFECTED ORGANIZATIONS

S-IC Engineering

FROM: H. D. Gunning
H. D. GUNNING
MICHOUD MANAGER

S-IC Operations
Manufacturing
Materiel

S-IC Quality and Reliability Assurance
S-IC Systems Test

COMPLIANCE: This procedure complies with O.P. 812.14 "LSB Record System - Unplanned Event Processing System"

REFERENCE:
(a) D5-11593, "LSB Record System"
(b) OP 812.3, "Unplanned Event Record"
(c) OP 812.6, Unplanned Event Engineering Items"

I. PURPOSE

This procedure establishes the method for processing Unplanned Event Pickups (UEP's).

II. SCOPE

This procedure applies to all UEP's initiated in the Launch Systems Branch.

III. GENERAL

The UEP shall be initiated by inspection or any person in an organization cognizant of the hardware who first observes or becomes aware of an unscheduled event in his work area. If an unscheduled event is observed by someone not assigned to the area in which it occurred, the person observing the event will notify an inspector assigned to that area.

The cognizant organization may use the UEP for troubleshooting and recording investigation results after Q&RA has validated the form. Prior to validation, the UEP is not in effect and no troubleshooting or corrective action may be taken.

The form will be used to record all unplanned events and to correct nonconformancies that can be returned to drawing configuration when the fix can be accomplished in the same shop where the nonconformance was discovered and when Individual Nonrecurrenct Action (INRA) is not required.

III. GENERAL (Continued)

EXCEPTION: UEP's need not be written against supplier items rejected during receiving inspection and controlled by a Receiving Inspection Record Form S-300-65-39.

This is a multiple item form, and several unplanned events may be entered on each form depending on space available. Each entry must have a statement of fix and must show acceptance of the statement by Quality and Reliability Assurance.

If one of the following conditions exist, an Unplanned Event Record will be initiated per Operating Procedure 812.3, "Unplanned Event Record (UER) - General":

A. Material Review Board disposition instructions are required.

B. Replacement of nonconforming component is required.

C. A record of nonrecurrence action is required by Quality and Reliability Assurance due to the nature of the nonconformance, its magnitude, or repetitiveness.

D. Rework must be accomplished by another shop.

Items covered by OP 605.11 (less than $25, no traceability requirements and are dispositioned "Unusable" - may be scrapped.)

The UER will be written in addition to the UEP and the UER serial number will be referenced in Block 11 of the UEP.

IV. DESCRIPTION OF ENTRIES, DISTRIBUTION, AND RETENTION

The UEP will be initiated, distributed and retained in accordance with D5-11593, Launch Systems Branch Record System.

V. RESPONSIBILITIES/PROCEDURES

Q&RA or Cognizant Orgn. & Engineering

1. Initiate the UEP, filling out Entries 1, 2, 3, and 7 through 11.

NOTE: (a) When the UEP has already been initiated and it is determined that a UER is required, enter under the description of the nonconformance, "This item transferred to UER XXXXXX."

(b) If the form is initiated by someone not in Q&RA, the initiator will sign under the description of nonconformance in Block 2 and present the form to Q&RA for validation. Q&RA will validate by stamping in Block 3.

V. RESPONSIBILITIES/PROCEDURES

(c) Initiator and/or Q&RA may request Engineering consultation as requirements dictate.

Engineering

(d) Where Engineering requests the nonconforming part be removed (see III. B.) and the replacement part is not available, this information is noted on the UER by the statement: "Replacement part not available. Replaced part number and serial number will be indicated on UEP No. _____."

(e) When replacement part is installed, the part number and serial number of the part is entered on the UEP.

Q&RA

2. Log the UEP serial number on the Event Index Log.

3. Enter the UEP serial number in the unplanned record column of the MorTP & IR when applicable.

Manufacturing or Systems Test

4. Directly below the description of the nonconformance in Block 2, enter troubleshooting results and the fix used to correct the problem. UEP stays open until problem is worked regardless of status of other documents.

5. The person who accomplished the rework will enter his stamp and date in Block 4.

Q&RA

6. The inspector who accepts the rework will enter his stamp and date in Block 5.

7. Distribute UEP in accordance with D5-11593.

SUBJECT: TRAVELING OF INCOMPLETE PLANNED AND UNPLANNED EVENTS

November 10, 1967

AFFECTED ORGANIZATIONS

FROM: H. D. GUNNING
MICHOUD MANAGER

S-IC Systems Test
Quality and Reliability Assurance
S-IC Operations
Manufacturing

REFERENCE: D5-11593, "Launch Systems Branch Record System"

I. PURPOSE

The purpose of this procedure is to provide accountability for traveling incomplete planned and unplanned events using a minimum of Launch Systems Branch Record System (LSBRS) records.

II. SCOPE

This procedure will be used for transferring S-IC Stages beginning with the transfer of a stage to Post-Manufacturing Checkout. It will be used to supplement the Configuration Exception/Traveler (CE/T).

III. GENERAL

A traveler M or TP & IR will be prepared by the organization transferring the S-IC Stage. This M or TP & IR will list all planned and unplanned event paperwork being traveled to the next organization. Each planned and unplanned record will be included with the traveler M or TP & IR.

When the major portion of planned event records is completed and accepted by Q&RA, the incomplete operations including customer inspection requirements will be transferred to the traveler M or TP & IR. When traveling an incomplete planned event record, all completed operations will be stamped by Q&RA. This will reduce the traveling of planned event records to a minimum and preclude traveling unnecessary records.

Transferred operations will be written in a manner to allow the receiving organization to perform the work without obtaining the original planned event record.

IV. RESPONSIBILITIES

TRANSFER TO PMC

S-IC Operations - Manufacturing:

1. Determine the requirements for and release a traveler M or TP & IR for transfer of the stage to PMC.
2. Log all planned events being traveled on the traveler M or TP & IR.
3. Develop the traveler with assistance from Q&RA.

IV. RESPONSIBILITIES - (Continued)

Quality & Reliability Assurance:

1. Retain the Manufacturing M or TP & IR's when operations have been transferred to the traveler M or TP & IR.

2. Log all unplanned events being traveled on the traveler M or TP & IR.

3. Audit the traveler M or TP & IR.

4. Provide the traveler M or TP & IR to Systems Test on the day the stage is transferred to PMC.

TRANSFER TO MTF & BACK TO MICHOUD

S-IC Systems Test:

1. Provide a traveler M or TP & IR when the stage is transferred to MTF and back to Michoud.

2. Log all planned events being traveled on the traveler M or TP & IR.

Quality & Reliability Assurance:

1. Log all unplanned events being traveled on the traveler M or TP & IR.

2. Audit the traveler M or TP & IR.

3. Provide the traveler M or TP & IR to Systems Test on the day the stage is transferred to MTF or Michoud.

SUBJECT: PLANNED EVENT PROCESSING SYSTEM November 1, 1967

ORGANIZATIONS AFFECTED

S-IC Engineering
S-IC Operations
Materiel
Manufacturing
Quality & Reliability Assurance
S-IC Systems Test

FROM: H. D. Gunning
H. D. GUNNING
MICHOUD MANAGER

REFERENCE: Branch Directive 812.1, "Launch Systems Branch Record System Committee"

I. INTRODUCTION

The Launch Systems Branch Record System provides for the planning, authorization, control, description, records of fabrication, assembly, installation, testing, inspection and collection of pertinent data, during inplant and outplant operations performed under Boeing Control.

The Record System involves two main categories of activities:

A. Planned Events
B. Unplanned Events

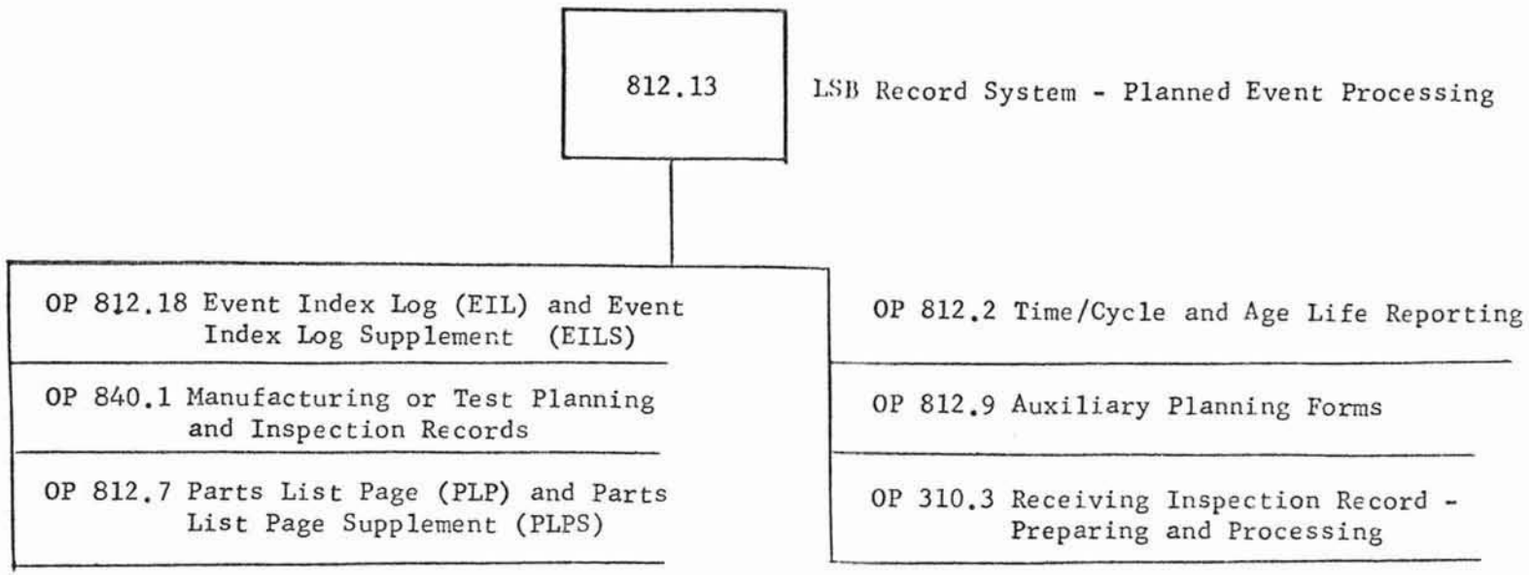
II. PURPOSE

This procedure gives the broad responsibilities associated with planned events and accordingly controls the family of procedures depicted on Exhibit "A".

III. RESPONSIBILITIES

Affected organizations will prepare and process planned events in accordance with procedures depicted on Exhibit "A".

EXHIBIT "A"


812.13
LSB Record System - Planned Event Processing
OP 812.18 Event Index Log (EIL) and Event Index Log Supplement (EILS)
OP 840.1 Manufacturing or Test Planning and Inspection Records
OP 812.7 Parts List Page (PLP) and Parts List Page Supplement (PLPS)
OP 812.2 Time/Cycle and Age Life Reporting
OP 812.9 Auxiliary Planning Forms
OP 310.3 Receiving Inspection Record - Preparing and Processing

SUBJECT: UNPLANNED EVENT PROCESSING SYSTEM

NOVEMBER 1967

AFFECTED ORGANIZATIONS

S-IC Engineering
S-IC Operations
Materiel
Manufacturing
S-IC Quality & Reliability Assurance
S-IC Systems Test

FROM: H. D. Gunning
H. D. GUNNING
MICHOUD MANAGER

REFERENCE: Branch Directive 812.1, "Launch Systems Branch Record System Committee"

I. INTRODUCTION

The Launch Systems Branch Record System provides for the authorization, control, description, and records of fabrication, assembly, installation, testing and inspection of items during inplant and outplant operations performed under Boeing control.

The Record System involves two main categories of activities:

A. Planned Events
B. Unplanned Events

This procedure gives the broad responsibilities associated with unplanned events and accordingly controls the family of procedures depicted on Exhibit "A".

II. DEFINITION

Nonconformance - Any departure of an item from the applicable Engineering documentation.

III. RESPONSIBILITIES

A. General

The unplanned event sequence begins when a nonconformance occurs or is discovered. If NASA personnel discover the nonconformance, they prepare a rejection tag and Boeing Q&RA will respond in accordance with Operating Procedure 812.15, "Unplanned Event-NASA".

If the nonconformance is discovered by Boeing personnel, it is processed in accordance with Exhibit "B" which is a broad descriptive display of the unplanned event system and provides a detailed flow chart of the system.

EXHIBIT "A"

812.14 "Unplanned Event Processing System"

OP 812.3	"Unplanned Event Record"(UER)
OP 8.2.10	"Unplanned Event Pickup"(UEP)
OP 812.6	"Unplanned Event Engineering Items" (UEEI)
OP 812.16	"Unplanned Event Engineering Test" (UEET)
OP 812.15	"Unplanned Event - NASA" (UEN)
OP 812.17	"Removal & Reinstallation Record (RRR)
OP 650.6	"Boeing Investigation & Corrective Action Request" (BICAR)
OP 650.1	"Failure Tracking, Monitor & Followup"
OP 527.3	"Nonconforming Government Furnished Property" (Section II)
OP 605.4	"Nonconformance Control - Supplier Furnished Items"
OP 605.5	"Nonconforming Materials at Supplier Facility - Handling of"
OP 605.7	"Nonconforming Materials - Non-Deliverable Tools"
OP 605.11	"Processing of Certain Nonconforming Material Disposed of as Scrap"
OP 650.5	"Failure Flash Reports"

Unplanned Event Processing System

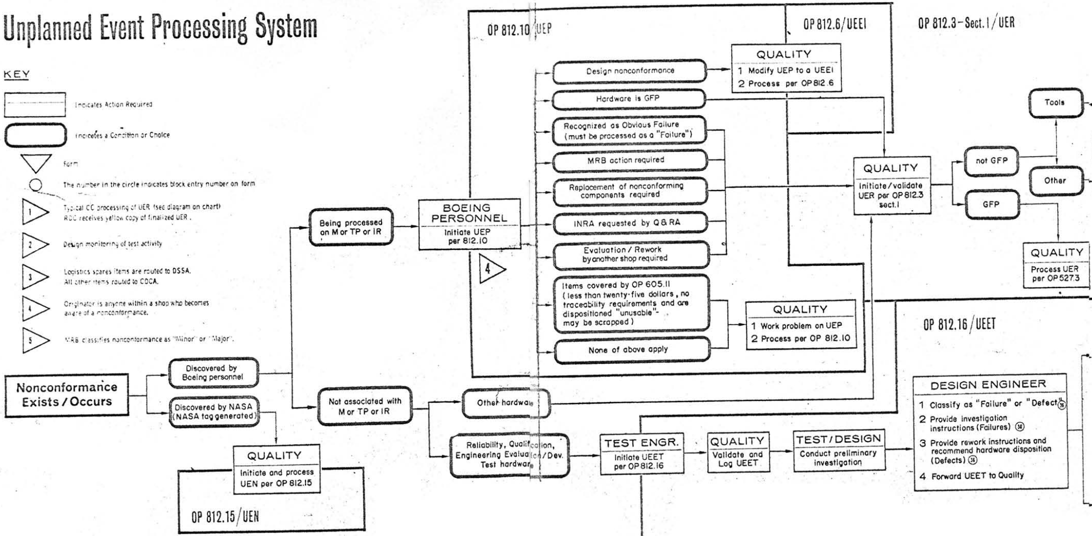
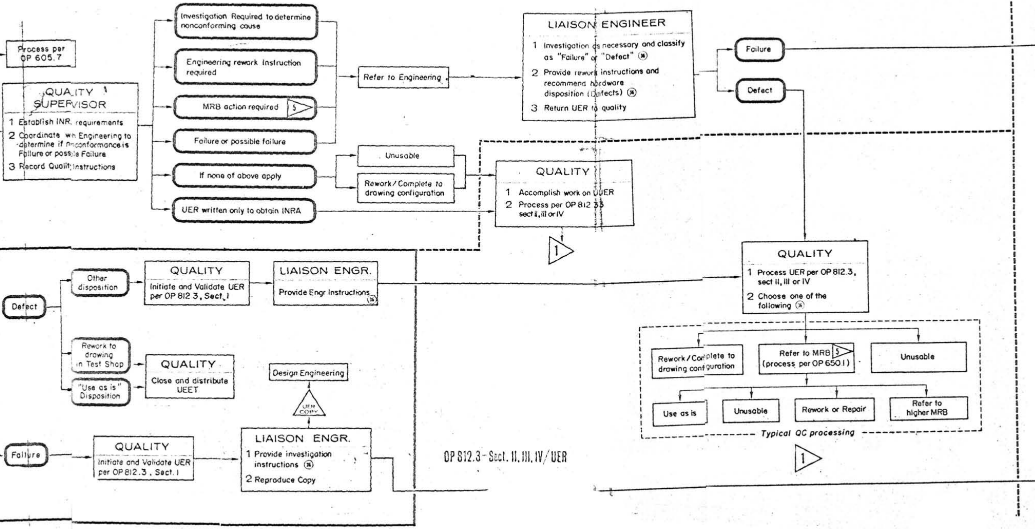
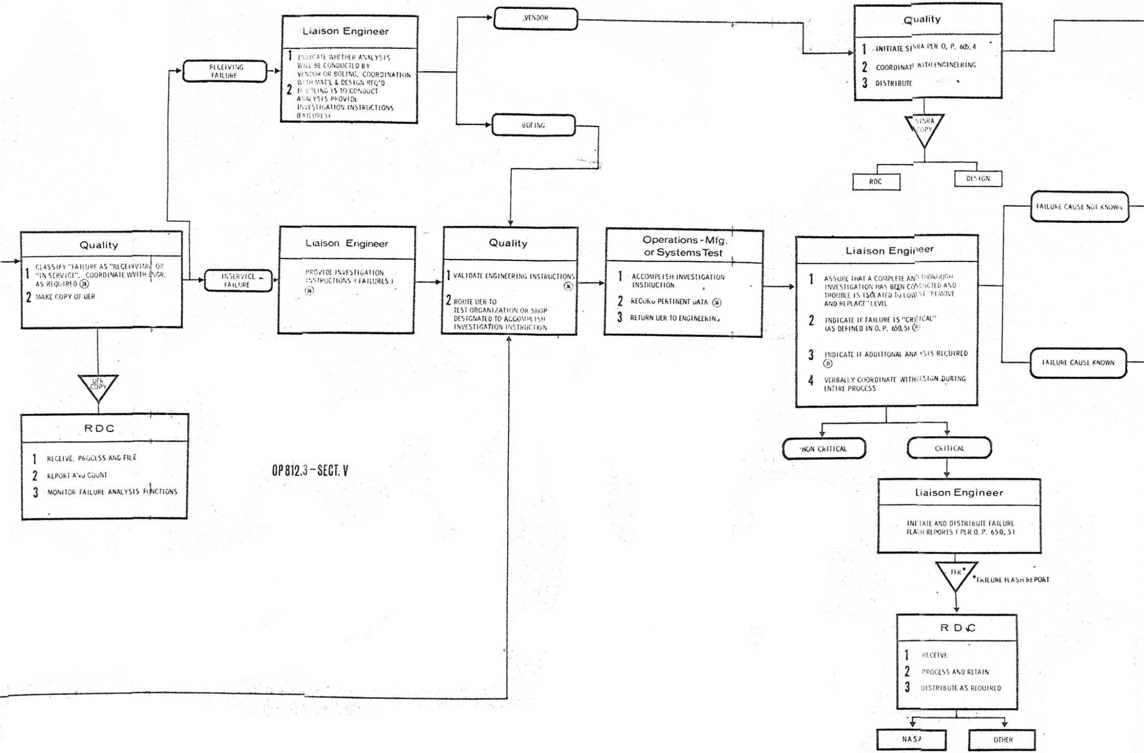

KEY
Indicates Action Required
Indicates a Condition or Choice
Form
The number in the circle indicates block entry number on form
1 Typical CC processing of UER (see diagram on chart) RDC receives yellow copy of finalized UER.
2 Design monitoring of test activity
3 Logistics spares items are routed to DSSA. All other items routed to CDCA.
4 Originator is anyone within a shop who becomes aware of a nonconformance.
5 MRB classifies nonconformance as "Minor" or "Major".
Nonconformance Exists / Occurs
Discovered by Boeing personnel
Discovered by NASA (NASA tag generated)
QUALITY
Initiate and process UEN per OP 812.15
OP 812.15/UEN
Being processed on M or TP or IR
Not associated with M or TP or IR
BOEING PERSONNEL
Initiate UEP per 812.10
4
OP 812.10/UEP
Design nonconformance
Hardware is GFP
Recognized as Obvious Failure (must be processed as a "Failure")
MRB action required
Replacement of nonconforming components required
INRA requested by Q&RA
Evaluation / Rework by another shop required
Items covered by OP 605.11 (less than twenty-five dollars, no traceability requirements and are dispositioned "unusable"- may be scrapped)
None of above apply
OP 812.6/UEEI
QUALITY
1 Modify UEP to a UEEI
2 Process per OP 812.6
QUALITY
1 Work problem on UEP
2 Process per OP 812.10
OP 812.3-Sect. I/UER
QUALITY
Initiate/validate UER per OP 812.3 sect. I
not GFP
GFP
Tools
Other
QUALITY
Process UER per OP 527.3
Other hardware
Reliability, Qualification, Engineering Evaluation/Dev. Test hardware
OP 812.16/UEET
TEST ENGR.
Initiate UEET per OP 812.16
QUALITY
Validate and Log UEET
TEST/DESIGN
Conduct preliminary investigation
DESIGN ENGINEER
1 Classify as "Failure" or "Defect" ㊱
2 Provide investigation instructions (Failures) ㊳
3 Provide rework instructions and recommend hardware disposition (Defects) ㊱
4 Forward UEET to Quality

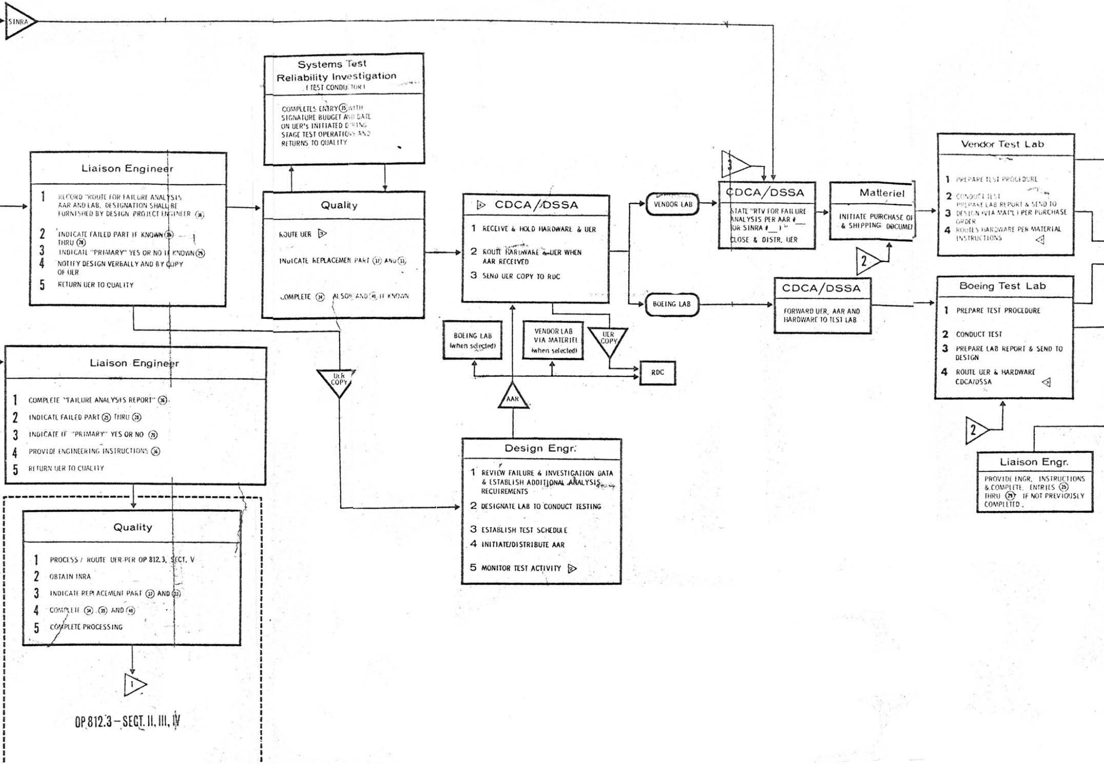
EXHIBIT B

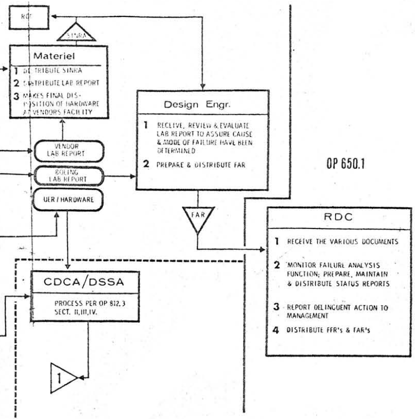
OP 812.14


Process per OP 605.7
QUALITY SUPERVISOR
1 Establish INR requirements
2 Coordinate with Engineering to determine if nonconformance is Failure or possible Failure
3 Record Quality Instructions
Investigation Required to determine nonconforming cause
Engineering rework instruction required
MRB action required
5
Failure or possible failure
If none of above apply
UER written only to obtain INRA
Refer to Engineering
Unusable
Rework/Complete to drawing configuration
LIAISON ENGINEER
1 Investigation as necessary and classify as "Failure" or "Defect" ㊟
2 Provide rework instructions and recommend hardware disposition (Defects) ㊟
3 Return UER to quality
Failure
Defect
QUALITY
1 Accomplish work on UER
2 Process per OP 812.3 sect II, III or IV
1
Defect
Other disposition
QUALITY
Initiate and Validate UER per OP 812.3, Sect. I
LIAISON ENGR.
Provide Engr Instructions ㊟
Rework to drawing in Test Shop
"Use as is" Disposition
QUALITY
Close and distribute UEET
Design Engineering
UER COPY
Failure
QUALITY
Initiate and Validate UER per OP 812.3, Sect. I
LIAISON ENGR.
1 Provide investigation instructions ㊟
2 Reproduce Copy
OP 812.3 - Sect. II, III, IV/UER
QUALITY
1 Process UER per OP 812.3, sect II, III or IV
2 Choose one of the following ㊟
Rework/Complete to drawing configuration
Refer to MRB (process per OP 650.1)
5
Unusable
Use as is
Unusable
Rework or Repair
Refer to higher MRB
Typical QC processing
1


Quality
1 CLASSIFY "FAILURE AS "RECEIVING" OR "IN SERVICE". COORDINATE WITH ENGR. AS REQUIRED ㊱
2 MAKE COPY OF UER
UER COPY
RDC
1 RECEIVE, PROCESS AND FILE
2 REPORT AND COUNT
3 MONITOR FAILURE ANALYSIS FUNCTIONS
RECEIVING FAILURE
INSERVICE FAILURE
Liaison Engineer
1 INDICATE WHETHER ANALYSIS WILL BE CONDUCTED BY VENDOR OR BOEING. COORDINATION WITH MAT'L & DESIGN REQ'D
2 IF BOEING IS TO CONDUCT ANALYSIS PROVIDE INVESTIGATION INSTRUCTIONS (FAILURES)
Liaison Engineer
PROVIDE INVESTIGATION INSTRUCTIONS (FAILURES) ㊱
VENDOR
BOEING
Quality
1 VALIDATE ENGINEERING INSTRUCTIONS ㊱
2 ROUTE UER TO TEST ORGANIZATION OR SHOP DESIGNATED TO ACCOMPLISH INVESTIGATION INSTRUCTION
Operations - Mfg. or Systems Test
1 ACCOMPLISH INVESTIGATION INSTRUCTION
2 RECORD PERTINENT DATA ㊱
3 RETURN UER TO ENGINEERING
Quality
1 INITIATE SINRA PER O. P. 605.4
2 COORDINATE WITH ENGINEERING
3 DISTRIBUTE
SINRA COPY
RDC
DESIGN
Liaison Engineer
1 ASSURE THAT A COMPLETE AND THOROUGH INVESTIGATION HAS BEEN CONDUCTED AND TROUBLE IS ISOLATED TO LOWEST "REMOVE AND REPLACE" LEVEL
2 INDICATE IF FAILURE IS "CRITICAL" (AS DEFINED IN O. P. 650.5) ⑱
3 INDICATE IF ADDITIONAL ANALYSIS REQUIRED ㉛
4 VERBALLY COORDINATE WITH DESIGN DURING ENTIRE PROCESS
FAILURE CAUSE NOT KNOWN
FAILURE CAUSE KNOWN
NON CRITICAL
CRITICAL
Liaison Engineer
INITIATE AND DISTRIBUTE FAILURE FLASH REPORTS (PER O. P. 650.5)
FFR*
*FAILURE FLASH REPORT
RDC
1 RECEIVE
2 PROCESS AND RETAIN
3 DISTRIBUTE AS REQUIRED
NASA
OTHER

OP 812.3 – SECT. V


SINRA
Systems Test
Reliability Investigation
(TEST CONDUCTOR)
COMPLETES ENTRY ㉟ WITH SIGNATURE BUDGET AND DATE ON UER's INITIATED DURING STAGE TEST OPERATIONS AND RETURNS TO QUALITY
Liaison Engineer
1 RECORD "ROUTE FOR FAILURE ANALYSIS AAR AND LAB. DESIGNATION SHALL BE FURNISHED BY DESIGN PROJECT ENGINEER ㊱
2 INDICATE FAILED PART IF KNOWN ㉕ THRU ㉘
3 INDICATE "PRIMARY" YES OR NO IF KNOWN ㉙
4 NOTIFY DESIGN VERBALLY AND BY COPY OF UER
5 RETURN UER TO QUALITY
Quality
ROUTE UER 3
INDICATE REPLACEMENT PART ㉜ AND ㉝
COMPLETE ㉞ ALSO ㊴ AND ㊵ IF KNOWN
CDCA/DSSA
1 RECEIVE & HOLD HARDWARE & UER
2 ROUTE HARDWARE & UER WHEN AAR RECEIVED
3 SEND UER COPY TO RDC
VENDOR LAB
BOEING LAB
3
CDCA/DSSA
STATE "RTV FOR FAILURE ANALYSIS PER AAR #___ (OR SINRA #___)"
CLOSE & DISTR. UER
Matteriel
INITIATE PURCHASE OF & SHIPPING DOCUME
2
CDCA/DSSA
FORWARD UER, AAR AND HARDWARE TO TEST LAB
Vendor Test Lab
1 PREPARE TEST PROCEDURE
2 CONDUCT TEST
3 PREPARE LAB REPORT & SEND TO DESIGN (VIA MAT'L) PER PURCHASE ORDER
4 ROUTES HARDWARE PER MATERIAL INSTRUCTIONS
Boeing Test Lab
1 PREPARE TEST PROCEDURE
2 CONDUCT TEST
3 PREPARE LAB REPORT & SEND TO DESIGN
4 ROUTE UER & HARDWARE CDCA/DSSA
2
Liaison Engr.
PROVIDE ENGR. INSTRUCTIONS & COMPLETE ENTRIES ㉕ THRU ㉙ IF NOT PREVIOUSLY COMPLETED.
BOEING LAB (when selected)
VENDOR LAB VIA MATERIEL (when selected)
UER COPY
RDC
AAR
UER COPY
Liaison Engineer
1 COMPLETE "FAILURE ANALYSIS REPORT" ㊱
2 INDICATE FAILED PART ㉕ THRU ㉘
3 INDICATE IF "PRIMARY" YES OR NO ㉙
4 PROVIDE ENGINEERING INSTRUCTIONS ㊱
5 RETURN UER TO QUALITY
Design Engr.
1 REVIEW FAILURE & INVESTIGATION DATA & ESTABLISH ADDITIONAL ANALYSIS REQUIREMENTS
2 DESIGNATE LAB TO CONDUCT TESTING
3 ESTABLISH TEST SCHEDULE
4 INITIATE/DISTRIBUTE AAR
5 MONITOR TEST ACTIVITY 2
Quality
1 PROCESS / ROUTE UER PER OP 812.3, SECT. V
2 OBTAIN INRA
3 INDICATE REPLACEMENT PART ㉜ AND ㉝
4 COMPLETE ㉞, ㉟ AND ㊵
5 COMPLETE PROCESSING
1
OP 812.3 – SECT. II, III, IV


RDC
SINRA
Materiel
1 DISTRIBUTE SINRA
2 DISTRIBUTE LAB REPORT
3 MAKES FINAL DISPOSITION OF HARDWARE AT VENDORS FACILITY
VENDOR LAB REPORT
BOEING LAB REPORT
UER / HARDWARE
Design Engr.
1 RECEIVE, REVIEW & EVALUATE LAB REPORT TO ASSURE CAUSE & MODE OF FAILURE HAVE BEEN DETERMINED
2 PREPARE & DISTRIBUTE FAR
OP 650.1
FAR
RDC
1 RECEIVE THE VARIOUS DOCUMENTS
2 MONITOR FAILURE ANALYSIS FUNCTION; PREPARE, MAINTAIN & DISTRIBUTE STATUS REPORTS
3 REPORT DELINQUENT ACTION TO MANAGEMENT
4 DISTRIBUTE FFR's & FAR's
CDCA/DSSA
PROCESS PER OP 812.3 SECT. II,III,IV.
1

OP 812.3—SECT. II, III, IV

Flow Diagram of UEP, UEEI & UER

PROCESSING PER OP 812.3, 812.10 & 650.1

PREPARED:
R L Markey 10/16/67
R.L. MARKEY, Reliability Assurance DATE

APPROVED:
H. Frost 10/16/67
H. R. FROST, DATE
Chairman, S-IC SATURN RECORDS SYSTEM

SUBJECT: UNPLANNED EVENT-NASA

November 1, 1967

(Supersedes O.P. 605.6 dated April 10, 1967)

AFFECTED ORGANIZATIONS

Michoud Operations
S-IC Operations
Industrial Engineering
Manufacturing
Material
S-IC Quality and Reliability Assurance
S-IC Systems Test

FROM: H. D. Gunning
H. D. GUNNING
MICHOUD MANAGER

REFERENCE:
(a) O.P. 812.14 LSB Record System - Unplanned Event Processing System
(b) O.P. 812.3 Unplanned Event Record
(c) O. P. 812.6 Unplanned Event Engineering Item
(d) O. P. 812.10 Unplanned Event Pickup
(d) O. P. 812.16 Unplanned Event Engineering Test
(f) O. P. 400.3 Saturn Engineering Liaison Request (SELR)

COMPLIANCE: This procedure complies with Operating Procedure 812.14, "LSB Record System - Unplanned Event Processing System."

I. PURPOSE AND SCOPE

The Unplanned Event-NASA form is a modified Unplanned Event Record (Form No. LSB 1016) which is initiated in response to either a NASA-Michoud Discrepancy Report or NASA-Michoud Rejection Tag in order to resolve or correlate the reported nonconformances within the LSBRS Record System.

This procedure defines the responsibilities in processing and reporting items having either of these NASA forms attached to them by the Customer.

II. AREAS AFFECTED

Michoud Assembly Facility only.

III. GENERAL

A. The following forms are used by NASA to report NASA found non-conformances. Upon receipt of either form, Boeing Q&RA will immediately initiate an Unplanned Event-NASA form (figure 1).

XII. GENERAL (Continued)

1. The NASA-Michoud Discrepancy Report (Figure 2) is used to report NASA found nonconformances and will be initiated by NASA when the nonconformance is of a nature that continued processing will not cause the nonconformance to be inaccessible for inspection or corrective action at a subsequent operation.

2. The NASA-Michoud Rejection Tag (Figure 3) is used by NASA to identify those articles that are not acceptable to NASA in their present condition. The initiation of this tag will suspend continued processing of the item unless, in the opinion of the Boeing Quality Assurance supervisor, further processing of the item will not deteriorate the quality of the product, or render the nonconforming area inaccessible for inspection or corrective action. However, an item may not be received into a stores area or be released for delivery until appropriate corrective measures have been taken on the Unplanned Event-NASA form.

B. Due to the possibility of a "stop work" impact imposed by a NASA-Michoud Rejection Tag, it is necessary that such action be under the prior cognizance of appropriate levels of NASA and Boeing management. Further, all possible remedial measures must be pursued to circumvent the necessity for affixing a NASA-Michoud Rejection Tag. Accordingly, the following communication lines have been established:

1. When a NASA inspector feels compelled to use a NASA-Michoud Rejection Tag, he notifies his supervisor to obtain a specific concurrence for such action from the responsible Branch Chief of NASA Quality Assurance.

2. The approving NASA Quality Assurance Section Chief immediately notifies the cognizant Boeing Quality Assurance Superintendent when a "rejection" is authorized. He also notifies the offices of the NASA Product Control Engineering Office Chief and the NASA-Marshall-Michoud Assistant to the Manager for Quality Assurance and Reliability of the rejection within the first hour of the first normal work day following the rejection action.

C. It is expected that as much advance notice as possible of an impending Rejection Tag will be provided to Boeing.

IV. RESPONSIBILITIES

A. All affected organizations will:

1. When notified of an impending NASA-Michoud Rejection Tag, take the appropriate action to reconcile the problem to avoid the issuance of the tag.

2. When a NASA-Michoud Rejection Tag or Discrepancy Report is initiated, notify the area immediately.

B. Quality and Reliability Assurance will:

1. When notified of an impending NASA-Michoud Rejection Tag, the cognizant Quality Assurance Superintendent will immediately notify his immediate supervisor and the affected manager of manufacturing or test (Containers, Structures, Final Assembly, GSE and Electrical Systems, Systems Test).

2. Upon issuance of a NASA-Michoud Rejection Tag, the Quality Assurance Superintendent will provide notification to the offices of the affected product Organization Manager, the Quality and Reliability Assurance Manager, and the Operations Manager of the existence of such a Rejection Tag within the first hour following its issuance.

3. An Unplanned Event-NASA form shall be generated immediatel All information on the NASA-Michoud Discrepancy Report or Rejection Tag shall be faithfully transferred onto this form . If the nonconformance is against documentation, the notation "DOCUMENTATION NONCONFORMANCE", in capital letters, is to be entered across the top of Block 36; If the nonconformance is against hardware, the notation, "HARDWARE NONCONFORMANCE", in capital letters, is to be entered across the top of Block 36. The NASA tag type and serial number are to be entered in Block 42 of the UEN (e.g. NASA Discrepancy Report No. xxxx or NASA Rejection Tag No. xxxx). The serial number of the paralleling UEN will be entered in the "Final Corrective Action" block of the NASA-Michoud Discrepancy Report and the "Disposition" block of the NASA-Michoud Rejection Tag and shall serve as notification to the Customer that appropriate corrective measures are being taken. The nonconformance shall then be processed in accordance with existing procedures as applicable to its type.

4. Process "HARDWARE NONCONFORMANCES" as follows:

IV. RESPONSIBILITIES (Continued)

a. If the nonconformance is associated with the processing of a Manufacturing or Testing Process and Inspection Record (MorTP & IR) an Unplanned Event Pickup shall be initiated to reflect the complete nonconformance and shall be processed in accordance with Reference (d).

b. If the nonconformance is associated with Qualification, Reliability, Engineering Development, or Engineering Evaluation testing, an Unplanned Event Engineering Test form shall be initiated to reflect the complete nonconformance and shall be processed in accordance with Reference (e).

c. If the nonconformance is not associated with a MorTP & IR or the testing specified in Paragraph IV. B 4 c, above, an Unplanned Event Record form shall be initiated to reflect the complete nonconformance and shall be processed in accordance with Reference (d).

5. Process "DOCUMENTATION NONCONFORMANCES" as follows:

a. If the affected documentation does not have a direct interface with an item of hardware, the nonconformance may be resolved by generating the appropriate "ChangeRequest" forms if required. If a change is not required, an explanation of why the documentation is satisfactory is in order and shall be reflected on the Unplanned Event-NASA form (Block 36).

b. If the affected documentation does have a direct interface with an item of hardware, the following steps shall be taken:

(1) An Unplanned Event Pickup shall be initiated to reflect the complete nonconformance and shall be processed in accordance with Reference (d).

(2) The proper change request form (UEEI, SELR, DCR) shall be initiated and processed in accordance with the applicable Reference.

(3) If it is determined that a change to existing documentation is not required it shall be so noted on the Unplanned Event Pickup or UER and on the Unplanned Event-NASA form.

IV. RESPONSIBILITIES (Continued)

6. The Unplanned Event - NASA form shall not be logged against Manufacturing or Testing Process Records and shall in no way directly affect operations contained therein.

7. The distribution of the completed Unplanned Event - NASA form shall be as follows:

   a. Original to I-MICH-QP
   b. Yellow copy to Boeing RDC
   c. White copy to I-MICH-QE
   d. Pink copy to originating organization
   e. Remaining copy not required.

8. In cases where corrective actions have been completed and agreement cannot be reached with the customer representative, the problem shall be immediately referred to the next higher level of Management.

FIGURE 1

UNPLANNED EVENT RECORD — NASA

U XXXXX (PAGE) OF

2 PART NUMBER	11 E I L PART NO	25 FAILED P/N	16 REPORTED BY	17 DATE	21 MRB DISPOSITION: USE AS IS / REWORK / UNUSABLE
3 SERIAL NUMBER	12 E I L SERIAL NO	26 FAILED S/N	18 QTY REC / 19 QTY ACC / 20 QTY REJ		
4 EFF / 5 MANUFACTURER	13 ORDER NO / 14 OPER SEQN	27 NOMENCLATURE	32 REPLACEMENT P/N		22 ENGINEER
6 PURCHASE ORDER	15 NEXT HIGHER ASSY PART NO	28 MANUFACTURER	33 REPLACEMENT S/N		23 Q.R.A.
CON / 8 WORK ORDER / 9 SUB / 10 ACC SERIAL		29 PRIMARY ☐YES ☐NO / 30 CRITICAL ☐YES ☐NO / 31 ANAL REQD ☐YES ☐NO	34 TIME CYCLE	35 H.E.L. INV	24 CUSTOMER

36 NONCONFORMANCE CONDITIONS, INSTRUCTIONS FOR RESULTS DISPOSITION; MAKE ALL ENTRIES CLEAR, CONCISE AND COMPREHENSIVE

ROUTING: Original - I-MICH-QP
Yellow - Boeing, RDC
White - - I-MICH-QE
White - Not required
Pink - Originator
Hard - Not required

NOTE: 1. Description of entries is the same as a UER except as shown in figure.
2. In the event the nonconformance is transferred to another form, the form name and serial number shall be referenced in Block 36 (i.e., "TRANSFERRED TO UER XXXXX", TRANSFERRED TO UEP XXXXX", etc.)

Serial number of NASA-Michoud Discrepancy Report or Rejection Tag.

37 MATERIEL DISPOSITION	38 WORK ORDER: CON / WORK ORDER / SUB / SERIAL	39. REJECT CHARGE NO	40. NON-RECURRENCE ACTION
☐1 R T V ☐2 RAK AT BOEING			☐ INRA ☐ CAO
☐1 SUPPLIER EXPENSE ☐2 CONTRACT EXPENSE	☐1 REPLACE ☐2 REPAIR ☐3 SCRAP		

REMARKS

U XX	12. PART NUMBER	41. NOMENCLATURE	42. UER REFERENCE S/N	43 DATE	44 INSP	45 CUST

SUBJECT: UNPLANNED EVENT - ENGINEERING TEST (UEET)

November 1, 1967

AFFECTED ORGANIZATIONS

S-IC Engineering
S-IC Operations
S-IC Quality & Reliability Assurance

FROM: H. D. Gunning
H. D. GUNNING
MICHOUD MANAGER

COMPLIANCE: This procedure complies with OP 812.14, "LSB Record System - Unplanned Event Processing System"

I. PURPOSE

This procedure establishes the system and organizational responsibilities for the detection, recording, investigation, analysis reporting and follow-up of nonconformances which occur during testing conducted in the Engineering test labs. Tests conducted in Engineering test labs include, but are not limited to, Qualification, Reliability, and Engineering Development Testing.

II. SCOPE

This procedure applies to all areas under Boeing control at M choud and all Boeing outplant locations involved in Qualification, Reliability or Engineering Development Testing on S-IC Stage or GSE hardware.

III. RESPONSIBILITIES

The organizations listed in the following sub-paragraphs have the primary responsibility for the listed functions. Normally, the decisions made will be arrived at in conjunction with other organizations involved and will reflect a mutual agreement.

A. Initiate UEET

Test Engineering

1. Upon the detection of a nonconformance during the course of a test; initiate a UEET using a UEP Form (LSB 1034). Modify form by striking out the word "pick-up" and writing in "Engineering Test" at the top of the form.

2. Write a description of the nonconformance noted, fully describing all conditions existing at the time the nonconformance was noted. Affix signature, organization number and date.

3. Present the UEET to the Quality and Reliability Assurance representative for validation.

B. Validation and Recording

Q&RA

1. Will validate the UE-ET.

2. Log the UE-ET in and record it against the appropriate test identification paper.

3. Return the UE-ET to the Test Engineer.

C. Investigation

Test, Design & Reliability Engineering

1. Conduct preliminary investigation as necessary to determine if the nonconformance is a result of the test set-up or test procedure.

2. Classify the nonconformance as a "Defect" or "Failure".

Design Engineering

3. If a "Defect", write Engineering recommendations to fix hardware, test set-up and/or test procedure.

Test Lab

4. Provide to have work performed per Engineering recommendations.

Q&RA

5. Validate fix that has been complied with and close UE-ET.

NOTE: If Engineering fix cannot be performed by test lab, Q&RA will initiate a UER and present to Liaison Engineering for processing per OP 812.3, Section II, III or IV.

Design Engineering

6. If a "Failure", write Engineering instructions on the UE-ET and present to Q&RA.

Q&RA

7. Initiate UER and present to Liaison Engineering.

Liaison Engineering

8. Disposition UER per Design Engineering instructions on UE-ET, route copy of dispositioned UER to responsible Design Engineering organization and return UER to Q&RA.

Q&RA

9. Process UER per OP 812.3, Section V.

D. Distribute UE-ET per document D5-11593.

SUBJECT: REMOVAL AND REINSTALLATION RECORD

November 1, 1967

AFFECTED ORGANIZATIONS

FROM: H. D. Gunning
Michoud Manager

Michoud Facilities
S-IC Operations
Manufacturing
Material
S-IC Quality and Reliability Assurance
S-IC Systems Test

REFERENCE: O.P. 812.14, "LSB Record System-Unplanned Event Processing System"

COMPLIANCE: This procedure complies with Operating Procedure 812.14, "LSB Record System - Unplanned Event Processing System."

I. PURPOSE AND SCOPE

This procedure defines the responsibilities in processing removals and reinstallations utilizing the Removal and Reinstallation Record (RRR) form.

II. GENERAL

The Removal and Reinstallation Record (RRR) is used to record the removal, reinstallation and retest of items as authorized by the planned or unplanned event forms. Removal is defined to include wire bundle disconnects, the opening of inspection sealed doors, or any breaks of inspection seals as well as the physical removal of an item.

III. RESPONSIBILITIES

A. All affected organizations will:

1. Assure correct entry of part number and serial number as required.

2. Signify required approval by a stamp entry in the appropriate block.

B. S-IC Quality and Reliability Assurance will:

1. Obtain required customer approvals.

2. Route completed RRR form with its associated planned or unplanned event form as required.

SEP 5 1967
(Supersedes issue dated July 16, 1965)

SUBJECT: COMPLETED M OR TP RECORD

AFFECTED ORGANIZATIONS

S-IC Operations
Manufacturing
S-IC Systems Test
S-IC Quality & Reliability Assurance

FROM: H. D. Gunning
H. D. GUNNING
MICHOUD MANAGER

I. PURPOSE

R This procedure describes the use of the completed manufacturing or testing process form (Completed M or TP Record), and establishes a method for transmitting necessary information to Production Control Areas (PCA's) and Planning groups.

II. SCOPE

This procedure shall only apply to Michoud areas, excluding Mississippi Test Facility, during fabrication, assembly and test.

III. GENERAL

A The "Completed M or TP Record", Form LSB-1019 (Exhibit A) ensures a timely flow of fabricated, assembled, and/or tested parts to their assigned PCA, and provides required information for accountability and storage of the item until such time as issue from that area is required. The "Completed M or TP Record" is also used during stage test operations at Michoud to provide accountability for completion of M or TP packets.

IV. PROCEDURE

S-IC Quality & Reliability Assurance

A. Initiate a "Completed M or TP Record" when all operations of the Manufacturing or Testing Process and Inspection Record (M or TP & IR) packet have been completed.

B. Fill out the "Completed M or TP Record."

C. Attach the "Completed M or TP Record" to the part and/or parts and route to their assigned PCA.

D. Route the completed M or TP Record to Product Delivery Records.

A E. During stage test operations route the "Completed M or TP Record" to Systems Test.

IV. PROCEDURE - (Continued)

PCA's	F.	Remove the "Completed M or TP Record" from the part and/or parts when received.
	G.	Utilize the information entered on the "Completed M or TP Record" for internal accountability.
A S-IC Operations & Systems Test	H.	Utilize the information entered on the "Completed M or TP Record" for internal accountability.

COMPLETED MorTP RECORD

MorTP Completed This Date _____ in _____ Area & Routed to Records Retention

(Information for PCA _____ ledgers & records)

Part Number	Nomenclature	Serial No.	Order No.
Contract W/O	Sub No.	Eff.	E.O. No.	Used On
Qty. Ordered	Qty. Accepted	Inspection	Stamp	Date
Remarks:				

LSB 1019 (5-65)