

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS UNITED STATES AIR FORCE
WASHINGTON, D.C.



10 MAR 1972

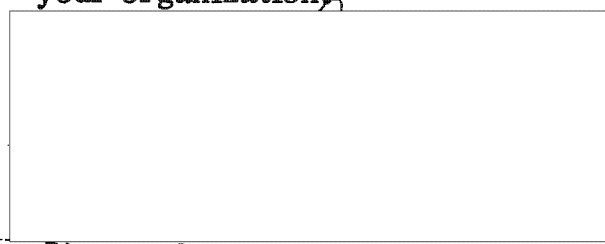
REPLY TO
ATTN OF: RDS

SUBJECT: Investigating and Reporting Satellite Failures

TO: AF/AC	AF/PRP	AF/RDPQ	AF/XOT
AF/ACM	AF/PRC	AF/RDQ	
AF/IGD	AF/RDG	AF/RDSC	
AF/IGI	AF/RDI	AF/RDSD	
AF/JAE	AF/RDM	AF/XOD	
AF/LG	AF/RDP	AF/XOO	

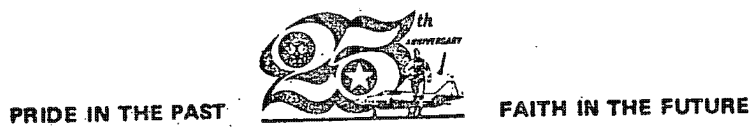
1. General Ryan has requested that procedures be established to inform HQ USAF of launch vehicle and satellite failures, require a formal investigation of the failure, determine the cause, identify corrective actions, and report the findings to HQ USAF. There are, at present, no regulations specifically requiring a commander to convene a board to investigate such failures unless safety is involved nor is there a requirement to keep higher levels within the Air Force informed on the findings of the board and on corrective actions being taken.

2. A draft regulation (Atch 1) has been prepared to correct these deficiencies. Please review and provide comments. Our plan is to consider the comments and suggestions in the preparation of a final draft and then recirculate the final draft for formal coordination. The Air Staff action officers are AF/RDSA, ext 71727, Pentagon. We request that your comments be submitted by 31 March 1972. Also, please identify a point of contact within your organization,



1-Atch
Draft Regulation

Director of Space
DCS/Research and Development



PROPOSED REGULATION

DEPARTMENT OF THE AIR FORCE
Headquarters US Air Force
Washington DC 20330

AF REGULATION II- _____

(Date)

Administrative Practices

INVESTIGATING AND REPORTING SATELLITE FAILURES

This regulation establishes the requirement to investigate space launch vehicle and satellite malfunctions or failures and report the results to HQ USAF.

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OPR: RDSA
DISTRIBUTION: F

1. PURPOSE:

An Operations Event/Incident Report (OPREP-3) is submitted in accordance with JCS Pub 6 to alert HQ USAF when the performance of a space system is degraded to the extent that it cannot achieve its planned mission objectives as specified in Program Management Directives (PMDs). Subsequent investigation of the failure of the space system to meet its mission objectives is required to identify the cause, determine necessary corrective actions, and reduce the probability of a recurrence. Each major commander will convene a Failure Review Board to investigate failures of space systems under his operational control and report the results to HQ USAF.

2. APPLICABILITY:

This regulation is applicable to:

a. All space systems for which the Air Force has development/procurement responsibility. This includes research and development satellites as well as satellites with designated operational missions, and their launch vehicles.

b. Space systems for which the USAF has a support responsibility, e.g., launch of a satellite for another agency/organization. The provisions of this regulation apply only to those mission areas which are the responsibility of USAF commands.

3. THE INVESTIGATING COMMANDER:

a. The Commander, AFSC will designate the investigating commander for space systems under the operational control of AFSC. Normally, these will include launch vehicles, research and development, and operational space systems from launch until operational control is assumed by another command.

b. When another USAF command assumes operational control of a space system the commander of that Major Air Command will designate the investigating commander. Normally, this responsibility begins after the space system has been deployed, checked out, and declared operationally ready by AFSC.

c. When operational control of a space system is assumed from AFSC by another service or agency (e.g., US Navy, Defense Communications Agency), the Commander, AFSC, will coordinate the appropriate investigative action with his counterpart in the other organization involved. If the operating agency chooses to conduct a formal investigation of a satellite failure with AFSC represented on the investigative board and if the Commander, AFSC, determines that the intent of this directive can be met through this action, then there is no requirement for a separate USAF Board to be convened. The Commander, AFSC, will designate an AFSC representative to keep HQ USAF informed in accordance with paragraph 6

and 7 of this regulation. If, however, the operating agency either chooses not to convene an investigative board or does not select appropriate USAF representation for the board, or if the Commander, AFSC, determines that the intent of this directive will not be met through an investigative board convened by the operating agency, then he shall appoint an investigating commander and convene an USAF investigating board.

4. RESPONSIBILITIES OF THE INVESTIGATING COMMANDER:

- a. Insure that OPREP-3 reports, progress reports and formal reports are submitted (See Attachment).
- b. Convene a Failure Review Board.
- c. Insure that all factors related to the failure of the space system to achieve its mission objectives are investigated thoroughly.
- d. Obtain technical assistance when required.
- e. Review the investigation proceedings, findings, recommendations and actions. Evaluate the formal Failure Review Board report to insure that it fulfills the purpose, intent, and requirements of this regulation.
- f. Forward the formal report as required by this regulation (See Attachment).
- g. When within his authority, take corrective action to prevent recurrence of the satellite failure. Describe actions taken in the correspondence forwarding the report.

5. INVESTIGATING BOARDS:

a. Space System Failure Review Boards will not be established below wing or comparable level.

b. Command responsibility for selection of the Failure Review Board president will not be delegated by the major commander to a level lower than the numbered Air Force or the equivalent. For commands whose first echelon below major command level is a wing or equivalent organization, the board president will be appointed by the major command. The board president will be selected from officer resources other than those of the wing or equivalent organization responsible for the development, procurement, or operation of the space system. The board president will be equal to or senior in rank to the program/project director for boards convened by AFSC or to the commander of the operating organization for boards convened by other USAF commands.

c. The investigating commander will insure that no board member has a personal interest in the investigation, and that each one is able to act impartially.

d. For space systems with a designated operational mission, boards convened by AFSC will include one or more members from the operating command.

e. Boards convened by major USAF commands other than AFSC will include one or more members from AFSC.

f. The number of board members and their technical qualifications will be determined by the investigating commander.

6. REPORT CONTENT:

a. Progress reports will summarize the proceedings of the Failure Review Board. As a minimum, each progress report will provide:

(1) A narrative description of all available facts and circumstances pertaining to the failure of the space system to achieve its planned mission objectives.

(2) Probable cause of the failure. When appropriate, identify the type of item that malfunctioned or the error that caused the failure.

(3) Impact of the failure or malfunction on successful mission accomplishment.

(4) Planned corrective actions to minimize impact of the failure or malfunction on successful mission accomplishment.

(5) Results of corrective actions taken to date.

b. The final Failure Review Board Report will include the same type of information required for the progress reports and:

(1) Impact of the failure or malfunction on the specific space program.

(2) Recommended corrective actions to minimize the likelihood of a recurrence.

(3) Supporting documentation.

7. WHEN REPORTS WILL BE SUBMITTED:

a. The first progress report will be submitted by teletype within 72 hours after submission of the OPREP-3. Subsequent progress reports will be submitted as often as required to inform HQ USAF of significant events, but at least every 14 days.

b. The formal report and supporting documentation will be submitted by mail at the conclusion of the Failure Review Board activities. This report will normally be submitted within 60 days after the date of the OPREP-3. This report is sent to the appropriate addressees (listed in Attachment) who review the report for command and corrective actions.

c. Control of teletype reports during minimize. During emergency conditions (minimize) when it is imperative that communications circuits be kept as free as possible from non-urgent transmission, only the initial and first supplemental report on a launch vehicle or space system failure will be sent by electrical transmissions. All other reports will be prepared in letter form and forwarded by regular mail, or airmail as appropriate, until minimize is canceled.

8. WHO WILL REVIEW THE FORMAL REPORT:

The following will review the report:

- a. Each organization with command responsibility.
- b. Each command with technical responsibility.

9. REVIEW OF FORMAL REPORTS BY COMMANDS AND APPROPRIATE ACTION:

- a. Each headquarters (Attachment) to which space system Failure Review Board reports are forwarded, will review and indorse them to the next higher headquarters within 10 working days of their receipt.
- b. A commander who cannot meet the 10 day deadline will notify the appropriate intermediate and major commands and the HQ USAF OPR for the subject space system of the delay. He will explain the reason for the delay and state when he expects to forward his indorsement.
- c. Each indorsing commander will state his concurrence or nonconcurrence with the report findings and with the corrective action taken or recommended by each subordinate indorsing commander.
- d. The major commander will, within the 10 day deadline, indorse the transmittal letter with one copy of the report to the Chief of Staff, USAF, stating:
 - (1) His concurrence or nonconcurrence with all recommendations resulting from the investigation, including those of

each subordinate indorsing commander; and

(2) The corrective action taken within the major command, including action to forward the report to the appropriate agency for corrective action.

10. ACCESS TO SPACE SYSTEM FAILURE REVIEW BOARD REPORTS:

a. Restrictions on Release. Unless authorized by the Chief of Staff, USAF, the distribution of reports and their attachments/extracts will be limited to commanders and authorities as specified in this regulation. Reports, and their attachments, prepared under the authority of this regulation, or extracts from them, will not be furnished or made available to persons outside the USAF without the approval of the Secretary of the Air Force or his designated representative. Commanders and other authorities preparing and receiving such reports or extracts will be responsible for their proper use as prescribed in this regulation, pursuant to AFR 205-1, concerning the use of classified matter.

b. Requests Submitted by Congress. Refer all requests submitted by the Congress, its committees, or members to the Secretary of the Air Force (SAF-LL), Washington, DC 20330, per AFRs 11-7 and 205-1.

c. Requests from Contractor Representatives. Contractor representatives may not be granted access to the board reports but the

investigating commander may authorize accredited contractor's technical representatives be furnished summaries or extracts of factual technical material which relate to the design, performance, or manufacture of the material involved.

d. Requests from Foreign Nationals. The investigating commander will send each request from a foreign national (as explained in AFR 205-1) for information about satellite failures to HQ USAF (AFCVFB), Washington, DC 20330. He will include sufficient information upon which that office may base a reply.

e. Other Requests. Forward all requests for the release of information or documents not discussed here to the HQ USAF OPR for the subject space system, as applicable.

11. SECURITY CLASSIFICATION OF REPORTS:

Reports will be classified in accordance with AFR 205-1.

12. GENERAL:

The provisions of AFR 11-1, Boards of Officers for Conducting Investigations, apply except where they conflict with this regulation.

Attachment
Routing Formal Reports
and Progress Reports

ROUTING FORMAL REPORTS

FORWARDTOFOR

- | | | |
|---|--|---|
| 1. Original copy by airmail | HQ USAF OPR | Review, appropriate corrective action, and file. |
| 2. Three copies | Investigating Commander | Review within 10 working days, corrective action, and file one copy. Indorse second and third copies through command channels to MAJCOM. The MAJCOM file second copy and forward third copy with indorsed transmittal correspondence to CSAF. |
| 3. One copy direct (in addition to copies forwarded through channels) | MAJCOM | Review, appropriate corrective action, and file. |
| 4. Three copies | SAMSO, LAAFS, Calif 90045 (when the major commander is other than Commander, AFSC) | (Same as 2 above) |
| 5. One copy (for investigations conducted by AFSC of operational space system failures) | MAJCOM concerned (MAJCOM having operational responsibility) | Review, appropriate action, file. |
| 6. One copy | AFLC, Wright-Patterson AFB, Ohio 45433 | Review, corrective action, and file. |

Attachment

ROUTING PROGRESS REPORTS

Progress Reports will be transmitted to:

- a. Chief of Staff, USAF
- b. HQ USAF OPR for the space system
- c. Commander, AFSC
- d. Commander, SAMSO
- e. Commander, MAJCOM having operational responsibility

(for investigations of operational space system failures).