



# NASA Procedural Requirements

**COMPLIANCE IS MANDATORY**

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Request Notification of Change (NASA Only)

## **Subject: NASA Procedural Requirements for Mishap and Close Call Reporting, Investigating, and Recordkeeping**

**Responsible Office: Office of Safety and Mission Assurance**

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## **Chapter 5. Mishap Investigation Report**

### **5.1 Mishap Investigation Report Development**

5.1.1 The IA shall:

a. Complete a mishap investigation report that contains the information as specified in Table D.

*Note: Witness statements, witness names, and names of those involved in the mishap or related activities are not to be included in the mishap investigation report.*

b. Include the mishap classification level (i.e., Type A and Type B mishaps and high-visibility mishaps and close calls) and NMIS event number, the incident date, and the report date on the mishap investigation report title page and in the report executive summary.

c. Describe in the mishap investigation report the type of property damage or mission failure and the severity of injuries or illnesses.

d. Describe in the mishap investigation report the actual direct cost of the mishap or an estimate if the actual direct cost is not available.

e. Sign the completed mishap investigation report.

f. Submit the completed and signed mishap investigation report to the AO within the specified time frame.

*Note: For Type A and Type B mishaps and high-visibility mishaps and close calls, the mishap investigation report is not considered available for response to a Freedom of Information Act (FOIA) request until signed and officially endorsed. Distribution of the report will be in accordance with Sensitive But Unclassified (SBU) requirements and with the AO's concurrence.*

g. Submit a request for additional time to complete the investigation or the mishap investigation report and include the rationale for the extension. The IA chairperson should make the request to the AO or designee.

5.1.2 Type A and Type B mishaps and high-visibility mishaps and close calls investigation reports shall include the products shown in Table D in the following order:

a. Section 1: Signature pages, list of consultants, executive summary, and OSHA form 301 questions 14 through 17 information (for reportable occupational injury or illness).

b. The executive summary should include a public-releasable description of the activity leading to the mishap and the findings and recommendations in the report.

c. Section 2: Narrative description and facts (what, when, where, how).

- d. Section 3: Type of data gathered and data analysis.
- e. Section 4: Findings.
- f. Section 5: Recommendations.
- g. Section 6: Minority Report, if applicable.

*Note: For Type C and Type D mishaps and close calls, Table D products are included according to Center or Program/Project policy.*

**Table D. Required Investigation Products**

<b>Investigation Products Required for Each Classification Level/Type of Investigation</b>	<b>High-Visibility Mishap or Close Call</b>	<b>Type A</b>	<b>Type B</b>	<b>Type C</b>	<b>Type D</b>	<b>Close Call</b>
a. Signatures of Investigating Authority	X	X	X	X	X	X
b. Signature of Ex Officio	X	X	X			
c. Signatures of all advisors	X	X	X	As applicable		
d. List of all consultants, if any	X	X	X	X		
e. Executive summary (no privileged, proprietary, Privacy Act, ITAR or EAR information)	X	X	X	X		
f. OSHA 301 or equivalent form for injuries only	X	X	X	X	X	
g. Narrative description of facts (who, what, when, where)	X	X	X	X	X	X
h. Description of type of data gathered during the investigation	X	X	X			
i. Timeline	X	X	X			
j. Description of all structured analysis techniques used and how they contributed to determine the findings	X	X	X			
k. Event and Causal Factor Tree or similar graphical representation of the mishap	X	X	X			

I. Description explaining why the mishap or close call occurred including all findings such as proximate causes, root causes, contributing factors, failed barriers, observations, and the evidence upon which the findings are based	X	X	X	X	X	X
m. Findings and recommendations	X	X	X	X	X	X
n. Minority report, if existing	X	X	X	X	X	X

5.1.3 The Ex Officio shall:

a. Serve as the authorized representative of the Chief/OSMA.

b. Sign the completed mishap investigation report for Type A and Type B mishaps and high-visibility mishaps and close calls attesting to the following:

*Note: Ex officio requirements for Type C and Type D mishaps and close calls will comply with Center or Program policy.*

- (1) The investigation was conducted in conformance with NASA policy and this NPR.
- (2) The investigation process was impartial, independent, and non-punitive.
- (3) The mishap investigation report contains all the required elements.
- (4) The mishap investigation report accurately identifies the proximate causes, root causes, and contributing factors. He or she should verify that the process was followed and the causes were identified and labeled correctly.
- (5) Adequate facts have been gathered and analyzed to substantiate the findings.
- (6) Recommendations reasonably address the causes and findings.
- (7) Each recommendation is associated with or traceable to at least one significant finding.

c. If the conditions in section 5.1.3 b. have not been met, describe the mishap investigation report's deficiencies in writing and sign and attach this description to the mishap investigation report in lieu of signing the report.

5.1.4 NASA advisors shall sign the mishap investigation report for Type A and Type B mishaps and high-visibility mishaps and close calls stating that each has reviewed the report, and it meets NASA policies and procedures in the advisor's functional area. The following also applies to advisor signatures:

- a. The export control advisor's signature indicates that any ITAR and EAR information has been identified and marked as non-releasable to the public.
- b. The legal and public affairs advisors' signatures indicate that any privileged or proprietary information, or material subject to the Privacy Act has been identified and marked as non-releasable to the public (e.g., NASA SBU); and releasable volumes and appendices are marked publically releasable. The public affairs advisor is not responsible for identifying such information because this knowledge is outside the scope of the public affairs advisor's functional area; however, the public affairs advisor shall be responsible for verifying the appropriate reviews have been conducted by the appropriate experts before signing the report.

*Note: Public release of reports for Type A, Type B, and high-visibility mishaps and close calls is accomplished through the FOIA process. For mishaps of certain public interest, reports may be released by the AO after review and concurrence from the supporting legal and public affairs organizations. For mishaps of certain public interest whose reports are not suitable for public release because the information they contain is proprietary or subject to ITAR or EAR, the IA public affairs advisor and the IA will produce a separate, publicly releasable summary of the findings and recommendations in the report. The AA/OCOM or designee may disseminate this summary. For Type C and Type D mishaps and close calls, the AO and public affairs advisor will determine the process for public release of the resulting mishap investigation report.*

*Note: Although the report may be marked as publically releasable, the public release of the information is still dependent on completion of endorsements, PAO authorizations, and NASA receipt of an FOIA request.*

5.1.5 The names of the consultants may be listed in the mishap investigation report; however, the consultants shall not sign the mishap investigation report.

*Note: The IA will determine if any consultant information should be withheld in the report and acknowledge consultant participation.*

5.1.6 Upon completion of the investigation, the cognizant Safety Office shall upload the report to NMIS (Appendix H).

## 5.2 Investigating Authority Release

Upon receiving the completed mishap investigation report for Type A and Type B mishaps and high-visibility mishaps and close calls, the AO shall first verify it fulfills the appointment letter and then inform the IA that its responsibilities have been fulfilled.

## 5.3 Mishap Investigation Report Review, Endorsement, and Approval

5.3.1 Upon receipt of the signed mishap investigation report for Type A and Type B mishaps and high-visibility mishaps and close calls, the AO shall:

a. Schedule an Endorsement Review with appropriate officials to review and endorse the mishap investigation report.

*Note: Refer to Table E for breakdown of Endorsing Officials by mishap classification.*

b. Deliver a copy of the mishap investigation report a minimum of five workdays prior to conducting the Endorsement Review.

*Note: During the five day period, the endorsing official's technical experts will review the report for compliance with requirements stated in sections 5.3.2 and 5.3.3. Lower level mishaps and close calls are reviewed and endorsed according to Center or Program policy.*

5.3.2 The Endorsement Review shall include (Appendix I):

*Note: The Endorsement Review, or Mishap Out Brief, is intended to be the culmination of the mishap investigation process, whereby the Appointing and Endorsing Officials have reviewed the mishap investigation report and are prepared to concur or not concur with the report content including findings and recommendations. The Endorsement Review may be waived at the AO's discretion and in coordination with the cognizant Safety Office and OSMA Mishap Investigation Program Executive. The IA is released from duty at the review's conclusion.*

a. IA's presentation of the mishap investigation report and its associated findings and recommendations.

b. Discussion and resolution of endorsing official comments and concerns.

c. Determination of report release option.

d. Identification of actions accepted by the AO.

5.3.3 On Endorsement Review, endorsing officials shall:

a. Verify the mishap investigation report content is technically correct and complete in addressing facts and circumstances associated with the mishap.

b. Concur the mishap investigation report describes causal and contributing factors.

c. Concur that the recommendations as practical, feasible, achievable, and will, in the opinion of the reviewer, prevent the occurrence of similar mishaps or close calls.

d. Concur that proprietary, ITAR, or EAR information; material subject to the Privacy Act; or privileged information has been properly identified and protected.

5.3.4 Upon conclusion of the Endorsement Review, the endorsing officials shall sign the Endorsement Review Record, signifying mishap investigation report concurrence or nonconcurrence, and when applicable, provide comments related to concurrence or disagreement with elements of the report.

5.3.5 The Endorsement Review Record and comments shall be attached to the mishap investigation report and become part of the permanent record.

5.3.6 The AO, with assistance from the cognizant Safety Office, shall prepare for release of the Endorsement Review Record, which includes the following:

- a. List of Endorsement Review attendees.
- b. Appointing and endorsing officials' comments attached to the IA report.
- c. Document release authorization priority and any special distribution are according to Note 1, section 5.1.4.b.
- d. Actions accepted by the AO to be incorporated into the mishap Corrective Action Plan (CAP).
- e. Endorsing officials' signatures signifying mishap investigation report concurrence or nonconcurrence.

**Table E. Endorsing Officials by Mishap Classification**

<b>Endorsing Official by Mishap Classification</b>	<b>Type A</b>	<b>Type B</b>	<b>High-Visibility Mishap or Close Call</b>
AA	All mishaps for which he or she is the AO		
Chief/OSMA	X	X	X
OCHMO (when involving injury or fatality)	X	X	X
OSI/AMD* (when involving aircraft)	X	X	X
NASA Chief Engineer	X	X	X

\*Office of Strategic Infrastructure, Aircraft Management Division

5.3.7 The AO shall:

- a. Serve as final authority for acceptance or rejection of mishap and close call investigation reports in which he or she holds the AO's position.
- b. Ensure the mishap investigation process is complete.
- c. Verify the mishap investigation report is reviewed and endorsed.
- d. Assess the recommendations.

*Note: Recommendations should be assessed in relationship to their effectiveness at reducing the likelihood and consequence of reoccurrence. The AO determines the method most appropriate to perform this assessment. The highest rated recommendations should be considered for endorsement and corrective action, while those rated lower may be deferred or eliminated by the AO.*

*Note: The IA may recommend to the AO, at any time during the investigation, that immediate corrective action be taken to ensure the safety of personnel associated with ongoing operations, internal or external to NASA.*

- e. If the AO rejects the mishap investigation report, he or she shall provide a written description of the deficiencies warranting the rejection, and direction going forward. Options include assigning the same IA to redo part or all of the investigation; or dismissing the original IA and appointing a new IA with instructions in section 3.5; or releasing the IA in favor of a collateral investigation.

**5.4 Mishap Investigation Report Distribution**

5.4.1 Upon notification from the Center or Mission Directorate representatives that the mishap investigation report is authorized for public release, the designated FOIA officer shall send the approved mishap investigation report with authorization comments to the AO, OSMA, and the cognizant Safety Office (dependent on level of investigation).

5.4.2 OSMA will complete a Mishap Summary public release review and distribute the Mishap Summary as necessary for the purpose of mishap prevention awareness and other action deemed appropriate by NASA Centers and field installations.

5.4.3 Upon release of the Mishap Summary, the MDAA or the cognizant Safety Office shall distribute the Mishap Summary to the appropriate NASA programs and organizations including, but not limited to, the responsible organization or program, all cognizant Safety Offices, the OCHMO when injury or fatality is involved, and AMD when the mishap involves an aircraft.

*Note: At any time following initial mishap investigation report endorsement, the cognizant Safety Office may distribute actions and factual information associated with the mishap investigation, with the exception of that deemed subject to Privacy Act or the Health Insurance Portability and Accounting Act (HIPAA) or security related, for the purposes of corrective action planning or general workforce awareness of hazards with the*

*potential to cause similar mishap reoccurrence.*

5.4.4 The AA/OCOM shall determine whether a mishap investigation report, whatever its origin, will be issued from HQ or the Center.

5.4.5 If an FOIA request is made, and FOIA rules require mishap investigation report redaction, the redacted report shall not be distributed to the public except through the FOIA process.

5.4.6 For aircraft mishap investigations delegated to NASA by NTSB, OSI shall submit the approved NASA mishap investigation report to the NTSB, ensuring it meets the NTSB's required information. The NTSB may reformat and streamline the investigation report as necessary to meet its requirements without changing the report's causal and contributing factors, recommendations, and findings.

5.4.7 The Cognizant Safety Office shall ensure the information recorded in the NMIS is updated.

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