

Chapter 2.7

Mishap and Incident Investigation

1. Applicability of this chapter

You are required to follow this chapter if you:

- a. Work at JSC or a JSC field site as a civil servant or contractor.
- b. Are a line manager, facility manager, contractor safety representative, director, or temporary official in charge of a mishap scene. Paragraph 20 of this chapter lists your responsibilities. Paragraph 20 of this chapter also lists the responsibilities of JSC's Center Director and the Director, Safety and Mission Assurance.
- c. Paragraph 21 of this chapter lists the responsibilities of the Safety and Test Operations Division, the Clinical Services Branch, the Security Branch, the Legal Office, the Public Affairs Office, the Information Systems Directorate, contracting officers, and technical representatives.

2. Description of Sub-element 2.7

JSC shall have a system to investigate mishaps and incidents that:

- a. Includes written procedures or guidance.
- b. Trains investigators.
- c. Produces written reports of findings.
- d. Tracks hazard elimination or controls to completion.
- e. Seeks the underlying causes of the mishap or event to prevent recurrence and avoids blaming the employee.
- f. Covers "close-call" incidents.
- g. Provides feedback and lessons learned to employees.

3. What this chapter excludes

This chapter covers how to report and investigate mishaps during JSC ground operations. It excludes the following:

- a. Emergency response to a mishap. You can find those requirements in Chapter 3.8.
- b. Liability, disciplinary action, or program direction.
- c. Response to spaceflight mission failures.

Reporting mishaps and close calls

4. Actions if a mishap or close call occurs

If a mishap occurs in your area, you shall follow these steps (see also Attachment 2.7A, Appendix 2B for more information):

- a. Call your emergency number if the mishap is an emergency. Emergencies include:
 1. Mishaps that cause major injuries to one or more persons or major property damage.
 2. Mishaps that result in a condition that is immediately dangerous to life or health.
 3. Any unplanned or uncontrolled hazardous material spills or releases.
 4. Any unplanned fire or explosion.
 5. Mishaps that require prompt emergency response.

Remember, your emergency numbers are: x33333 at JSC, Sonny Carter Training Facility, and Ellington Field, 9-1-1 at any off-site location, and x5911 at White Sands Test Facility.

- b. Prevent further injury, damage, or environmental spill or release.
- c. Secure the mishap scene.
- d. Safeguard mishap evidence.
- e. Report the mishap or close call as described in paragraph 5 or 6 of this chapter.
- f. If you think the mishap could involve death, permanent disability, hospitalization of three or more persons, or damage greater than or equal to \$500,000, contact the Safety and Test Operations Division, the Safety and Mission Assurance Directorate, or the Center Director's Office immediately. NASA Headquarters and OSHA require JSC to report these mishaps immediately.
- g. Refer news media inquiries to the JSC Public Affairs Office.

The Director of Public Affairs is the only person allowed to coordinate releases of information to the news media.

5. Reporting close calls

Report close-call events where no injury, property damage, or environmental spill, release, noncompliance, or nonconformance occurred on JSC Form 1257 or the electronic form in the IRIS (when available). See Chapter 2.6 for more information; the investigation will follow this chapter. At JSC, a *close call* is an event that could have caused injury, property damage, or environmental release, spill, noncompliance, or nonconformance, but didn't. For example, someone falls from a ladder and is not injured, someone almost gets cut because a machine guard is missing, or a spill almost occurs because a lid is missing from a waste containment drum. Close calls may result from hazards or unsafe acts. The Safety and Test Operations

Division will assign an RAC for close call-reports as described in Chapter 3.2, “Hazard Elimination And Control,” paragraphs 3–5 of this Handbook. Report actual damage and environmental remediation costs under \$1000 on NASA Form 1627, even though NASA Headquarters defines it as a “close call.”

6. Reporting a mishap

A mishap is an event that causes unplanned or unexpected injury, property damage, or impact to the environment; e.g., death or injury to a test subject and irreparable damage or impact to natural or cultural resources are mishaps. Failure of a test object isn’t a mishap if you expected the failure to occur as a result of the test. The supervisor of the injured employee or the manager in charge of the area where damage or a hazardous material release or spill occurred is responsible for making sure the mishap is reported. However, anyone who witnesses the mishap may report it. You shall report all mishaps except those excluded by paragraph 1.2.2 of NPR 8621.1, “NASA Procedural Requirements for Mishap and Close Call Reporting, Investigating, and Recordkeeping.” To report a mishap:

- a. You shall fill out an initial written report within one working day on NASA Form 1627 (Part A only) and send it to the Safety and Test Operations Division or use the electronic form in IRIS (when available). For injuries or illnesses, sending an injured or ill employee to the JSC Clinic will automatically initiate an injury report (JSC Form 340). There is no need to fill out an initial report if the injured employee goes to the JSC Clinic. Then, complete any additional information requested by the Safety and Test Operations Division within one working day. This includes a NASA Form 1627, which is based on the JSC Form 340, until the electronic entry form in IRIS is available.
- b. You shall follow up with your investigation results within 2 weeks.
- c. You shall also report the mishap to your facility manager as soon as possible.
- d. You may report the mishap immediately to the Safety and Test Operations Division by telephone.
- e. You shall report at least the following mishaps (civil service or contractor) to your higher management and, ultimately, to the Center Director who notifies NASA Headquarters:
 1. Any Type A or B mishap involving damage, injury, or death. Immediately call the Center Director, Deputy Director, or Director. Safety and Mission Assurance. JSC shall notify Headquarters within 1 hour.
 2. Any injury or illness involving lost work days. Notify the Center Director to allow Headquarters notification within 24 hours.
 3. Any non-occupational fatality on site, such as one due to a heart attack. These cases won’t be recorded, but the Center Director shall notify Headquarters within 24 hours.
 4. Any serious injury or illness off the job. Reporting is voluntary on the part of the employee or family. These cases won’t be recorded.

Part 2, Worksite analysis

- f. You shall report mishaps that occur in foreign locations as described in paragraphs 7, 8, and 9 of this chapter.

Close calls and mishaps at international locations

7. Close calls and mishaps at international locations

You shall report:

- a. Any injury or occupational illness to JSC civil service or contractor personnel.
- b. Any damage to JSC equipment.
- c. Close calls where JSC personnel could have been injured or JSC equipment could have been damaged.

8. How to report a close call or mishap at an international location

If a mishap occurs, follow the reporting process in this chapter as closely as your situation will allow. Call the JSC Safety and Test Operations Division at (281) 483-2084 during normal JSC duty hours (central time) or the JSC Emergency Operations Center at (281) 483-4658 outside of normal JSC duty hours to report the mishap. You shall:

- a. Report the mishap to JSC via telephone within 1 hour if it involves death, serious injury, or property damage exceeding \$500,000.
- b. Report the mishap via telephone within 24 hours if it involves other injuries or property damage less than \$500,000, or if it's a close call.
- c. Report the mishap or close call to your Directorate management as soon as possible.
- d. Fax a mishap report (NASA Form 1627) to the Safety and Test Operations Division or the electronic form in IRIS within 24 hours at (281) 244-0983 for mishaps that involve injury or property damage.
- e. Fax a close-call report (JSC Form 1257) to the Safety and Test Operations Division or the electronic form in IRIS within 24 hours at (281) 244-0983 for close calls.

9. What to do if you are injured at work while on foreign travel

You shall report to the JSC Clinic on your first business day after returning to work at JSC. This will allow the clinic personnel to make sure you have recovered or will recover, and to update your medical records.

10. Investigating mishaps in foreign countries

Your organization and the Safety and Test Operations Division will make sure the mishap is investigated under NASA requirements and international agreements.

Investigating mishaps

11. How to investigate a mishap as an individual or member of a small team

All mishaps require an investigation. The Environmental Office takes the lead for mishap investigations that are strictly environmental, and will help line management with other investigations that involve environmental issues. Line managers or facility managers may delegate an investigation to employees or employee teams. The investigation results, to include action plan or rationale why no action is necessary, are due within 2 weeks of the mishap unless you request an extension through the Safety and Test Operations Division. To investigate a mishap you shall:

- a. Start your investigation as soon as all emergencies are under control. You may ask the Safety and Test Operations Division for help. A Safety and Test Operations Division representative may already be on the way to the scene. Providing medical help to injured persons and preventing further injury or damage take priority over the steps listed below. After a mishap, you shall first:
 1. Identify potential witnesses and get statements from them.
 2. Secure the mishap scene and protect it from being disturbed.
 3. Safeguard evidence such as samples and photographs.
 4. Secure all records such as checklists, videos, and electronic data.

JSC's Center Director may appoint a mishap investigation board to investigate your mishap. If he or she appoints a board, you shall stop your investigation, keep the mishap scene and evidence secure, and cooperate with the board.

If you think a mishap investigation board should investigate your mishap, contact the Safety and Test Operations Division.

- b. Refer any news media personnel that ask about the mishap to the Public Affairs Office.

The Director of Public Affairs is the only person who is allowed to coordinate releases of mishap information to the news media.

- c. Consult any experts you need to sample the mishap scene or analyze the data.
- d. Interview witnesses. You shall keep witness statements confidential. Guidelines for witness interviews are available at URL:
http://www6.jsc.nasa.gov/safety/mishaps/docs/MIB/MIB_Witness_Guidelines.pdf.
- e. Examine all evidence and analyze all mishap data to the appropriate investigation level described in paragraph 12 below. You may also use the current version of the checklists at
<http://www6.jsc.nasa.gov/safety/Mishaps/docs/general/MishapInvestigationChecklist.pdf>
and http://www6.jsc.nasa.gov/safety/Mishaps/docs/MIB/MIB_Checklist.pdf as guidelines.

Part 2, Worksite analysis

- f. Document the results of your investigation and action plan or actions taken. Submit the results to the Safety and Test Operations Division as follows:
 - 1. Provide the required products for the mishap type listed in figure 5 and paragraph 1.7 of NPR 8621.1 “NASA Procedural Requirements for Mishap and Close Call Reporting, Investigating, and Recordkeeping.”
 - 2. Document the results of mishap investigations, where there is an injury or any damage, on an electronic investigation form you receive via electronic mail, NASA Form 1627, or in IRIS. Include any additional documentation required in NPR 8621.1.
 - 3. Document the results of a close-call investigation (no injury or damage) on the close-call response form provided when the investigation is assigned or in IRIS.
- g. The investigator’s supervisor shall review and concur with the results of mishap investigations. The close-call reporter will have an opportunity to review and comment on the results of close-call investigations.
- h. Have your facility manager concur on the proposed action if the mishap involved the building or hazardous materials.
- i. Document lessons learned as described in paragraph 16 of this chapter.
- j. Work the action plan and track to closure as described in paragraph 13 of this chapter.

Don’t use your investigation to find fault, determine disciplinary action, or defend JSC from lawsuits. Your investigation is only to prevent the mishap from happening again.

12. Investigation levels for mishaps and close calls

When you investigate a mishap or close call, you shall find the cause(s) of the mishap or close call and decide what actions you will take to eliminate or control the hazard. The basic process for investigating Type C or D and “Close Call” mishaps is in Attachment 2.7B, Appendix 2B. See Attachment 2.7D of Appendix 2B for more details on OSHA and NASA mishap categories. Contact the Environmental Office for mishaps that are strictly environmental. Take the following steps to investigate a mishap or close call:

- a. For Type C mishaps – Lost time injuries (including restricted duty injuries), damage greater than or equal to \$50,000 and less than \$500,000:
 - 1. Do a full root cause analysis using an established root cause method. The cause may be simple, but try to look beyond the obvious. Perhaps the hazard was caused by some deficiency in the management system. Perhaps it was caused by human error, which resulted from deficiency in the management system. As a minimum, you shall use the Mishap Investigation Checklist in Attachment 2.7C, Appendix 2B. You may use other root cause methods and provide documentation in a standard Microsoft Office or PDF format.

2. Evaluate the root causes and determine which ones you need to fix to prevent injuries or future hazards.
 3. Develop an action plan to change, control, or prevent those root causes from causing injuries or future hazards. The plan may involve one item or many. Remember to turn in work requests, if necessary. If your investigation shows that no action is necessary, you shall provide rationale.
 4. Provide the products required for Type C mishaps listed in figure 5 and paragraph 1.7 of NPR 8621.1 “NASA Procedural Requirements for Mishap and Close Call Reporting, Investigating, and Recordkeeping,” in a commonly available electronic format such as PDF or Microsoft Office software.
- b. For other injuries and damage cases, RAC 1 and 2 close calls, and RAC 3 and 4 close calls that involve an event (as opposed to merely reporting a hazard):
1. Determine the root cause(s). Avoid blaming the employee without looking into the cause. The obvious cause may be that the employee didn’t follow procedures. However, this may have happened because there were no procedures or because management didn’t train the employee in the procedures. As a minimum, you shall use the Mishap Investigation Checklist in Attachment 2.7C, Appendix 2B. You may use other root cause methods and provide documentation in a standard Microsoft Office or PDF format.
 2. Develop an action plan to address the causes. Your action plan may involve one item or many. Remember to turn in work requests, if necessary. If your investigation shows that no action is necessary, you shall provide rationale.
 3. Provide the products required for Type D mishaps and close calls listed in figure 5 and paragraph 1.7 of NPR 8621.1, “NASA Procedural Requirements for Mishap and Close Call Reporting, Investigating, and Recordkeeping,” in a commonly available electronic format such as PDF or Microsoft Office software.

13. Taking action after an investigation

The following rules apply to action plans developed during mishap and close-call investigation:

- a. If you assign actions to other organizations such as the Center Operations Directorate to modify the building or the Clinical Services Branch to sample the work area, contact those organizations ahead of time. If they don’t refuse the action within 5 working days, they have accepted the action. It is their responsibility to complete the actions.
- b. If you or another organization wants to change any estimated completion dates for any actions, you shall get approval from your director.
- c. The Safety and Test Operations Division will track actions in IRIS until they are completed and verified.
- d. Verification of completed action will be as follows:

Part 2, Worksite analysis

1. For lost time mishaps (including restricted duty cases) or mishaps involving damage greater than or equal to \$50,000 and less than \$500,000, the Facility Manager shall first verify completion and the Safety and Test Operations will follow up with an independent verification.
2. For less serious mishaps than those mentioned in subparagraph d.1 above and RAC 3 or 4 close calls, the Facility Manager verification will be sufficient to close the mishap or close call. The Safety and Test Operations Division may also follow up with an independent verification.

14. Mishap investigation boards

Mishap investigation boards are a formal method for investigating serious or potentially serious mishaps or close calls. Mishap investigation boards shall follow NPR 8621.1, which also specifies when an investigation board is required. Investigation board checklists are available at URL: http://www6.jsc.nasa.gov/safety/mishaps/docs/MIB/MIB_Checklist.pdf. Guidelines for interviewing witness are available at URL: http://www6.jsc.nasa.gov/safety/mishaps/docs/MIB/MIB_Witness_Guidelines.pdf.

15. Contractor mishaps and mishaps investigated by outside agencies

Contractors will investigate mishaps (including environmental mishaps) that involve only contractor personnel or equipment at an off-site location as described in their contracts and in paragraph 1.10.5 of NPR 8621.1. Contractor mishaps involving injury to NASA personnel or property shall be investigated as outlined in this chapter. JSC may accept investigations by outside agencies, such as OSHA or law enforcement agencies, as described in paragraph 1.10 of NPR 8621.1. JSC personnel shall support these investigations as needed.

Other requirements and responsibilities

16. Sharing lessons learned from mishaps or close calls

When you finish your investigation, decide whether you have any lessons learned to share with other organizations that would prevent them from having a similar safety, health, or environmental mishap.

- a. If you have any lessons learned, you shall attach them to your final mishap or close-call report when you send the report to the Safety and Test Operations Division. Enter the lessons learned into the NASA Lessons Learned system at <http://llis.gsfc.nasa.gov>. See paragraph 7.6 of NPR 8621.1.
- b. The Safety and Test Operations Division shares lessons learned with:
 1. JSC employees and organizations that would benefit through means such as alerts, announcements, or special reports.

2. Organizations outside JSC that would benefit through the Government Industry Data Exchange Program, product safety bulletins, or other means.

17. Notification of mishaps

If a mishap occurs:

- a. The Safety and Mission Assurance Directorate shall make notifications per NPR 8621.1.
- b. JSC shall follow JPD 1712.1 “Management Notification Policy for Use in the Event of Serious Illness, Injury, or Death,” current version.

18. Training for mishap investigators

Mishap investigators shall have the following training:

- a. “Introduction to Mishap Investigation” on SATERN (Site for On-Line Learning and Resources), course number SMA-00x-05.
- b. “Root Cause Analysis” through the JSC Safety Learning Center or the NASA Safety Training Center.

19. For more information on reporting and investigating close calls and mishaps

You can find more information on reporting and investigating close calls and mishaps in these documents:

- a. NPR 8715.1, “NASA Safety and Health Handbook, Occupational Safety and Health Programs.”
- b. Letter UO, dated August 6, 1993, “Federal Agency Recordkeeping” from the Director of Occupational Health and Aerospace Medicine Division, NASA Headquarters.
- c. JPR 1040.4, “JSC Emergency Preparedness Plan” including all annexes.
- d. JPD 1382.1, “Release of Information to News Media,” current version.

20. Individual responsibilities for reporting and investigating mishaps

- a. *Line managers* are responsible for:
 1. Making sure close calls and mishaps in your area are reported as described in paragraphs 5 and 6 of this chapter.
 2. Investigating all Type C mishaps, incidents, and first-aid injuries as described in paragraph 12 of this chapter.
 3. Taking necessary actions to correct hazards discovered during your investigation as described in paragraph 13 of this chapter. This includes temporary measures to

Part 2, Worksite analysis

protect your employees and the environment while you wait on building or equipment changes. Improve on your action periodically.

4. Supporting mishap investigation boards as necessary.
 5. Always reminding your employees that reporting close calls and mishaps is necessary. Reward those who promptly report close calls and mishaps, and reprimand those who don't.
 6. Monitoring the recovery of any employee with a lost time injury. Arrange for that employee to return to work on light or restricted duty as soon as possible.
 7. If the mishap results in a death or personal injury requiring immediate hospitalization or in damage estimated to exceed \$10,000 to Government or private property, refer to NPR 3792.1, "NASA Plan for a Drug-Free Workplace," to determine whether additional action outside the safety mishap reporting and investigating process should be taken.
- b. As a ***contractor safety representative***, you are responsible for helping contractor or NASA management with close-call and mishap reporting and investigation as necessary.
- c. As a ***facility manager***, your knowledge of your facility is important to a mishap investigation. You are responsible for:
1. Responding to close calls and mishaps that occur in your facility.
 2. Making sure close calls and mishaps that occur in your facility are reported and investigated.
 3. Investigating close calls. Support mishap investigations as necessary.
 4. Making sure that employees in your facility know about action plans and lessons learned.
- d. An ***Organizational Director*** at JSC is responsible for:
1. Developing processes for reporting and investigating close calls and mishaps that occur in your Directorate.
 2. Reviewing open close-call or mishap reports in your Directorate and making sure that they are closed in a timely manner.
 3. Providing services from your Directorate that other JSC organizations need to correct hazards found during investigations such as testing, evaluating data, modifying buildings or equipment, or sampling work areas.
 4. Being aware of mishaps in your Directorate and notifying the Deputy Center Director of lost time mishaps.
- e. If JSC's Center Director appoints you ***temporary official in charge of a mishap scene***, you are responsible for:
1. Overseeing the mishap scene until a mishap investigator or board takes over.

2. Keeping the Director, Safety and Mission Assurance, or Center Director informed of your status.
 3. Cooperating with the incident commander at the scene of a hazardous material spill. The incident commander is in charge of the scene.
- f. The **JSC Center Director** is responsible for:
1. Being the chief spokesperson for all JSC mishaps with local, state, and federal authorities and the news media through the Public Affairs Office.
 2. Supporting investigations of NASA mishaps by other federal agencies that have authority to investigate NASA mishaps (such as the National Transportation Safety Board) for aircraft mishaps and the U. S. Department of Labor for occupational mishaps). Support investigations of mishaps experienced by other federal agencies, foreign governments, and private industry per agreements.
 3. Appointing a temporary official in charge of a mishap scene for major mishaps if necessary. The temporary official in charge will usually be: for JSC mishaps, the Safety and Mission Assurance Director; for aircraft mishaps, the aviation safety officer of the Flight Crew Operations Directorate; or, for mishaps at JSC field sites, the chief of the local quality assurance, reliability, and safety office.
 4. Making sure the temporary official in charge of a mishap scene gets necessary support until the mishap investigator or board takes over.
- g. The **Director, Safety and Mission Assurance**, is responsible for:
1. Notifying JSC senior management and other organizations of all immediately reportable mishaps as described in paragraph 17 of this chapter.
 2. Recommending to JSC's Center Director how mishaps should be categorized (such as Type A or B) and investigated.
 3. Notifying the Office of the Inspector General (OIG) and the Office of the Chief Counsel immediately if it is reasonably suspected that a mishap resulted from criminal activity so that the OIG and chief counsel can appropriately coordinate their activities with the responsible workplace official.
 4. Review mishap investigation board reports from other centers to determine applicability to JSC. Recommend actions as appropriate.
- h. **Contracting Officers and their technical representatives** are responsible for:
1. Making sure that JSC contractors understand and follow NASA and JSC contract requirements for reporting and investigating close calls and mishaps.
 2. Including applicable mishap and close-call reporting and investigating procedures detailed in the NASA Federal Acquisitions Regulations Supplement into contracts covering NASA programs and operations.

21. Organizational responsibilities for reporting and investigating mishaps

- a. The *Safety and Test Operations Division* is responsible for:
 1. Providing JSC with a list of personnel trained in mishap investigations.
 2. Keeping records of close-call and mishap reports and investigations and tracking all items to completion.
 3. Coordinating with the Environmental Office on environmental mishap and close-call investigations.
 4. Helping with close-call and mishap investigations and actions as necessary.
 5. Reviewing and approving close-call and mishap reports and action plans. Evaluate reports for possible lessons learned.
 6. Verifying that actions are completed.
- b. The *Environmental Office* is responsible for:
 1. Helping the Safety and Test Operations Division with environmental mishap and close-call investigations.
 2. Helping the Safety and Test Operations Division to review and approve environmental mishap and close-call reports and action plans
 3. Evaluating close-call and mishap reports for possible environmental lessons learned.
- c. The *JSC Medical Clinic* (Clinical Services Branch) is responsible for:
 1. Filling out JSC Form 340 when an employee has an injury or illness on the job. Send copies to the Safety and Test Operations Division and the injured employee's supervisor or company.
 2. Informing the employee's supervisor and the Safety and Test Operations Division immediately of a fatality or a suspected disabling injury or illness
 3. Providing any necessary occupational health and industrial hygiene support required by other JSC organizations to fulfill any of the responsibilities of this chapter.
 4. Providing medical or pathological information required to fulfill the requirements of this chapter under the Privacy Act of 1974.
- d. The *Security Branch* is responsible for:
 1. Making sure that mishap scenes are secured.
 2. Making sure that evidence and important information are preserved for the investigation.
 3. Investigating motor vehicle accidents.
- e. The *Legal Office* is responsible for:
 1. Having ground rules to protect the privileged status of witness statements, witness testimony, or other matters related to a mishap.

2. Reviewing mishap information or reports before they are released from JSC control to make sure the facts are correct and can be released.
- f. The **Public Affairs Office** is responsible for:
1. Preparing releases of any mishap information to the news media or other organizations outside JSC under JPD 1382.1, “Release of Information to News Media,” current version.
 2. Having the JSC Legal Office and anyone else connected with the mishap, such as the mishap investigator or board chairperson, review information to make sure the facts are correct and can be released.
 3. Protecting the privileged status of witness statements, witness testimony, and other matters related to a mishap under Legal Office ground rules.
 4. Following procedures for public announcements by NASA found in agreements with other agencies or contractors when releasing mishap information.
 5. Coordinating information releases as described in paragraph 3.9 of NPR 8621.1.
- g. The **Information Resources Directorate** is responsible for providing photographic and other information services on a priority basis when needed by mishap investigations.

22. Safety and health records

The following records document mishap and incident investigation:

- a. Center-level – The Safety and Test Operations Division shall maintain:
1. Copies of NASA Form 1627.
 2. A tracking database to track mishap data, investigation, and closeout.
 3. Mishap information and submit to IRIS.
 4. Copies of JSC mishap investigation board reports and supporting material such as procedures, minutes, tape recordings, etc.
 5. A log of occupational injuries and illnesses, OSHA Form 300 as described in Appendix 1.
 6. The Annual Summary of Federal Occupational Injuries and Illnesses on OSHA Form 300 as described in Appendix 1.
- b. Organizational-level – As a line manager, you are encouraged to keep records on mishaps in your work areas to include copies of completed NASA Form 1627 and any supporting documentation.

23. Measurement

The following factors measure mishap and incident investigation:

Part 2, Worksite analysis

- a. Timeliness of mishap reporting.
- b. Timeliness of investigation and follow up.