

DOCUMENT NUMBER: 403

SUBJECT: Accident/Incident Investigation / Reporting Process & Forms

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PURPOSE: To determine the course and circumstances surrounding an accident or incident that has just occurred. To decide what action should be taken to avoid a similar accident in the future.

POLICY: All accidents, incidents and near misses that cause, or have potential to cause, injury or damage to property or the environment will be investigated. The accident investigation will be performed in a timely and efficient manner after receiving notification.

- OBJECTIVE:**
1. To ensure that all accident and incident investigations are accomplished to abate or preclude further occurrence.
 2. To ensure that the County of Riverside is in complete conformance with Title 8, California Code of Regulations, General Industry Safety Orders, Section 3203. This section requires an investigation and review of accidents and incidents resulting in occupational injury, occupational illness, or occupational exposure to hazardous substance or agents.

SCOPE: This document establishes the County of Riverside procedure for accident notification and accident, incident, near miss investigations. It provides information and guidance which is to be used by County Departments, Agencies & Districts in preparing individualized programs. This procedure sets forth minimum standards for all County organizations. Individual organizations may implement standards that are more stringent.

REFERENCES: Title 8, California Code of Regulations (CCR), Section 3203 of the General Industry Safety Orders.

ACCIDENT/INCIDENT INVESTIGATION AND REPORTING PROCESS & FORMS
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I. ACCIDENT NOTIFICATION

- A. All accidents involving or related to County of Riverside operations will be reported and investigated. That includes but is not limited to:
1. Bodily injury to persons, disabling and non-disabling injury accidents.
 2. Circumstances that have a potential to or have contributed to, acute or chronic occupational illness.
 3. Property loss or damage to County of Riverside property.
 4. Property loss to others (general public) caused by or involving County of Riverside operations.
 5. Vehicle accidents and incidents.
 6. Near-miss accidents and incidents with a potential for serious injury, property or environmental damage.
- B. Reporting requirements will depend on the nature of the accident and individuals involved. Please use the following guidelines when reporting an accident:
1. All accidents involving County vehicles, resulting in personal injury and/or property damage, regardless of the degree of severity, must be reported the same day, or if not possible, on the next business day. Accidents should be reported to:
 - a. Employee's immediate supervisor
 - b. Department/Agency/District Head (through the immediate supervisor or as specified by department policy).
 - c. County Safety Office
 - d. Risk Management
 - e. Workers' Compensation ((951) 955-3530, if employee injured)
 - f. Fleet Services ((951) 955-4650, if vehicle accident)
 2. Any potential dangerous situation must be reported immediately to:
 - a. Immediate supervisor
 - b. Fill out Hazard Reporting Form 401
 - c. County Safety Office, (Hot Line (951) 955-3520 – if reporting employee requests anonymity).
 - d. Department Safety Representative

ACCIDENT/INCIDENT INVESTIGATION AND REPORTING PROCESS & FORMS
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I. ACCIDENT NOTIFICATION - continued

3. Incidents involving property damage, non-County employee injuries (citizens, clients, etc.) at County facilities report to the following:
 - a. Facility Supervisor
 - b. County Safety Office
 - c. Risk Management
4. Any accident/incident resulting in death or injury requiring hospitalization for 24-hour or longer, other than for observation, will be reported to the County Safety Office immediately within 8-hours of knowledge. The individual on scene who observes the incident should limit their activities to the following:
 - a. Dial 911. If using an inter-County phone system, dial 9-911.
 - b. Render comfort and basic first aid to any injured victims, if trained to do so.
 - c. Immediately notify the following:
 - Immediate Supervisor
 - County Safety Office Manager – (951) 955-3520, if no answer, call the hotline.
 - County Safety Hotline – (951) 955-5868 (message phone)
 - Your Departmental Safety Representative

The first management personnel responding to the incident must immediately ensure that the above actions have been initiated.

- C. Accident notification, reporting, and investigation are essential to the effectiveness of the County of Riverside's Injury Illness Prevention Program (IIPP). Prompt and accurate notification and reporting of accidents, incidents and near misses, and thorough investigation is necessary to:
1. Initiate emergency response actions,
 2. Identify personal safety and health, property, and environmental risk hazards,
 3. Develop prevention and control measures,
 4. Prevent recurrence,
 5. Minimize legal liability,
 6. Mitigate adverse media publicity,
 7. And, to comply with insurance and regulatory requirements.

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I. ACCIDENT NOTIFICATION - continued

D. Title 8, California Code of Regulations (CCR), Section 3203 of the General Industry Safety Orders states that employers must implement a procedure to investigate occupational injury and occupational illnesses as a part of their overall Injury Illness Prevention Program. All accidents, regardless of how small or insignificant they appear, or whether an employee injury could have occurred, but did not, should be investigated. Accident Investigations should be documented in written format.

1. Accident: is an unplanned, undesired event that results in physical harm to a person or property damage. It is an unwanted interruption of a desired course of action.
2. Incident: is an unplanned, undesired event that adversely affects completion of a task.
3. Near-miss (near accident): is an occurrence or happening that had the potential to result in some degree of injury, property damage, or both, but did not. Also referred to as a near-accident.
4. Origins-Basic Cause(s): Basic causes are frequently classified into two major groups:

a. Personal Factors

Lack of knowledge or skill
Improper motivation
Physical or mental problems
Personal problems (marital, financial, etc.)

b. Job Factors

Inadequate work
Inadequate training
Inadequate design or maintenance
Inadequate purchasing standards
Normal wear and tear
Abnormal usage

These basic causes referred to as personal factors explain why some people engage in substandard practices which lead to a loss.

5. Immediate Cause(s) - Symptoms

Immediate causes are often referred to as unsafe acts and unsafe conditions.

- a. Unsafe Acts – incidents that result from unsafe behavior on the part of the employee, such as operating equipment at high speeds.
- b. Unsafe Conditions – mechanical or physical hazards that may lead to injury, such as defective equipment or improper lighting.

I. ACCIDENT NOTIFICATION - continued

Examples of common unsafe acts and conditions:

Unsafe Acts

- Failing to use protective equipment
- Using equipment improperly
- Performing unauthorized procedures

- Operating equipment at unsafe speeds
- Dressing improperly

Unsafe conditions

- Defective equipment or inadequate mechanical guards.
- Noise, heat, dust or vibration
- Dust, fumes, chemicals or toxic materials
- Poor or improper ventilation
- Improper lighting

6. Incident - Contact

When unsafe acts and conditions are allowed to continue uncorrected, the opportunity for the occurrence of an incident that may or may not result in a loss also exists. Incidents that result in physical harm or property damage are referred to as accidents and usually involve a contact with a source of energy. However, it is important to remember that each incident, whether or not it results in loss, provides an opportunity to obtain information which could prevent or at least control a similar incident in the future.

When information obtained from the investigation of previous accidents is not recorded, categorized or evaluated, the chance or likelihood of future losses cannot be prevented.

II. ACCIDENT INVESTIGATION

- A. An accident investigation is a methodical effort to collect and interpret facts. It is a systematic look at the nature and extent of the accident, the risks taken, and loss(es) involved. It is an inquiry as to how and why the accident even occurred. Since a major function of the investigation is to consider what actions can be taken to prevent similar events from occurring in the future, it is also a planning process to explore actions that should be taken to prevent or minimize recurrence of the accident.
- B. Serious workplace accidents can be avoided. That's why the extra effort and attention required to conduct a thorough investigation is so important. Knowing just what combination of factors caused a particular accident with its accompanying death, injury or damage, can prevent a similar incident from occurring in the future.
- C. All accidents have the potential to be serious. All are important, regardless of the degree of seriousness of any resulting injury, because the "injury-result" of any set of accident-producing circumstances is impossible to predict.

II. ACCIDENT INVESTIGATION - continued

- D. Therefore, every accident should be properly investigated. Keep in mind the following order of importance of resulting injuries:
1. Fatalities
 2. Lost time
 3. Restricted job
 4. Medical treatment
 5. First aid
 6. Near accident (near miss)
- E. The first and primary step after any accident, of course, is to see that any injured persons receive prompt and competent medical care.
- F. Promptness - Each investigation should be made as soon after the accident as possible. A delay of only a few hours may allow important evidence to be destroyed or removed, intentionally or unintentionally. Memories get fuzzy and people talk to each other. Also, the results of the inquiry should be made known quickly. Promptness greatly increases the publicity value in the safety education of employees and supervisors. One way to obtain an accurate view of the accident scene is with photographs or video tapes.
- G. "Securing" the Accident Scene
1. You see it on the evening television news and on real-life police documentaries: yellow tape secures a scene so that evidence is preserved for further investigation. These procedures have parallels in the industrial setting or at a construction site. Cordoning off or securing the work area immediately after a serious accident is a constructive step to preserve facts and information, before regular operations resume.
 2. Not every accident scene needs to be recorded or preserved, but such a step is an important consideration in a thorough accident investigation process. This is particularly the case when any of the following elements exist:
 - a. Serious injuries are involved.
 - b. There has been substantial property damage.
 - c. There is any suspicion of sabotage, arson or horseplay as a causing factor.
 3. Rope off the area, and advise supervisors and/or contractors that nothing is to be disturbed in that area.
 4. Utilize appropriate signage to communicate instructions to nearby patrons.

II. ACCIDENT INVESTIGATION - continued

Because other entities may need to investigate as well, there are reporting requirements to be met:

- a. The County Safety Division and the Workers' Compensation Division must be notified immediately so they can initiate required Federal, State and any other notification.
- b. Local police should also be advised in the case of a workplace fatality.
- c. Cal/OSHA must be advised within eight (8) hours of a job related fatality or an incident resulting in the hospitalization for longer than 24-hours other than for observation.
- d. All property or product damage, as well as injuries involving the public, should be reported promptly to Risk Management to initiate appropriate investigations for insurance liability requirements.

H. Collecting Accident Data

The basic steps of questioning is to ask who, what, when, where, how and to what extent. These seven questions can help in obtaining the desired information. If more than one individual is involved, make out reports for each individual.

1. Who – To learn about the individual(s) involved, ask these questions:
 - a. Name of person, age, sex
 - b. Address – both the individual(s) home and employment address should be given.
 - c. Department and section
 4. Occupational classification – use the classification that is in the current bargaining agreement for your union.
 5. Length of employment with the County.
 6. Length of service on present job.
 7. Immediate supervisor.
2. What – Next, ask about what occurred:
 - a. What happened? Take statements from witnesses to the accident.
 - b. What was the injured person doing just before the accident?
 - c. What were others around the accident location doing?
 - d. Could the supervisor see the worker at the time of the accident?
 - e. Was the injured person on his or her regular job?

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II. ACCIDENT INVESTIGATION - continued

- f. Did anyone observe the person's manner or attitude before the accident?
 - g. What machinery, materials or objects were involved?
 - h. Were any safety rules or practices violated? If so, what were they?
 - i. Were any local, state (provincial) or federal safety rules or standards violated?
 - j. If equipment was involved, what was its condition at the time of the accident? When was it last tested or inspected?
 - k. Was safety equipment needed for the job? If it was needed, was it available? Was this equipment being used and used properly?
 - l. If an object was involved, was the object unguarded, defective or otherwise unsafe?
 - m. Did the environmental condition, such as weather, poor ventilation, toxic substances, noise or odor contribute to the accident?
3. When – Ask questions that specify the time of day and time of year:
- a. Date: day, month and year.
 - b. Time: hour a.m. or p.m.
 - c. Environmental conditions: weather, ventilation, noise, odor, etc.
 - d. Shift: 8 a.m. to 4 p.m.; 4 p.m. to midnight or midnight to 8 a.m.
4. Where – Establish what the location was and what condition it was in:
- a. Physical location of the accident.
 - b. Environmental conditions that contributed to the accident.
 - c. Physical layout at the time of the accident.
 - d. Draw diagrams or supply photographs if possible. Remember not to overlook spills and small items such as loose parts.
5. How – Ask questions that pin down how the accident occurred:
- a. What was the cause of the accident?
 - b. If there is more than one cause, list the causes in order of importance.
 - c. Was each cause a direct cause or proximate cause?

II. ACCIDENT INVESTIGATION - continued

6. Why – To investigate why the accident occurred, ask questions such as these:
 - a. Were conditions safe?
 - b. How long did unsafe conditions exist?
 - c. Is there a similar condition in other departments or other job sites?
 - d. Was the cause an improper work procedure or practice?
 - e. How long has the procedure or practice been going on?
 - f. Was the procedure or practice due to lack of training or instructions?
 - g. Was the cause a misunderstanding due to improper planning or communication?
 - h. Was the accident caused by poor mental or physical health of the worker?
 - i. Have all details leading to the accident been carefully investigated and written down?

7. To What Extent – Finally, ask about the extent of injury resulting from the accident:
 - a. Did the accident involve injury to a person, group of persons or equipment?
 - b. If the accident involved a personal injury, did the victim receive first aid? From whom?
 - c. If the injured person required medical care, what is the name of the person who administered that treatment? Where was it administered? At what time?
 - d. How much time was lost on restricted activity (modified work)?
 - e. List the extent of impairments caused by the injury. Was each impairment total or partial?
 - f. If the accident was fatal, who signed the death certificate?
 - g. If a post mortem examination was performed, what person or group did the examination? Also, give the place, date and the results. Is there any reason for contesting the results?
 - h. Prompt considerations of each recommendation.
 - i. Compliance with recommendations that will eliminate the chance of this type of accident happening again.

II. ACCIDENT INVESTIGATION - continued

I. Objectives of Investigation

Several valid investigation objectives are listed below. The list could be greatly expanded. The rationale for each objective is usually self-evident.

1. Reduce danger to employees and susceptible public.
2. Prevent County resource losses.
3. Prevent further mishaps.
4. Respond to management needs.
5. Prevent loss of trained personnel.
6. Develop costing information.
7. Improve operating efficiency.
8. Provide answers to address anticipated public concern.
9. Define operating errors.
10. Define management errors.
11. Satisfy County Policies.
12. Reduce work process disruption.
13. Provide protection against litigation.
14. Satisfy insurance requirements.
15. Improve company product.
16. Educate supervisors.
17. Develop cost information.
18. Anticipate government interest.
19. Identify violations of County procedures.
20. Comply with Worker's Compensation rules.
21. Satisfy regulatory requirements.
22. Educate management and staff.
23. Research purposes.
24. Improve quality control and reliability.

II. ACCIDENT INVESTIGATION - continued

I. Objectives of Investigation

25. Isolate design deficiencies.
26. Satisfy news media.

J. Priorities

1. There is no question about the first priority at a mishap site: save lives and prevent more injury and property loss.
2. The California Highway Patrol has two recommendations that should always be kept in mind: First, arrive safely at the scene. Nothing can justify being in such a hurry that another mishap occurs. Second, observe the overall scene on arrival, and begin the planning process.
3. The first overall observation and analysis on arrival at the scene is critical. This starts as you approach the scene. Slow the approach and observe the overall picture. Begin to categorize your priorities. It may be quickly obvious at a distance that additional help is required, perhaps from the fire or police departments. Call for this assistance before getting tied up in actually managing the investigation. The entire evaluation time to this point may be a minute, if done properly.
4. Individuals at the scene may be pressed into service as volunteers to go for help, block off the area, or control onlookers. These helpers will need specific instructions on what to do.
5. If injured are still at the scene, volunteers might help. Often, a medically trained person may only be waiting to be asked to assist. Make certain that the person is capable of any basic medical task assigned. He/she may carry a card testifying to first aid or CPR training.
6. Here are the priorities for the investigator arriving at mishap scene:
 - a. Arrive safely.
 - b. Observe the overall scene on arrival and evaluate the situation.
 - c. Care for the injured.
 - d. Protect others from injury and protect property from further damage.
7. In no case should you jeopardize yourself or others when professional help is at hand, such as police, firefighters, medical personnel and rescue personnel. While the investigation is important, it should never hinder the four activities listed above. Do not approach the scene until others have finished their tasks and it is safe to approach. Only then should the investigation start.

II. ACCIDENT INVESTIGATION - continued

J. Priorities

8. Another set of priorities may now be established. Their order is not concrete and individual judgment is required. They may be carried out simultaneously.
 - a. Preserve evidence.
 - b. Protect the mishap site.
 - c. Secure the evidence.
 - d. Keep management informed.

ACCIDENT SCENE PRIORITIES

Priorities at the Mishap Scene	<ul style="list-style-type: none"> • Arrive safely and take charge. • Observe the overall scene for safety upon arrival and evaluate the situation. • Care for the injured. • Protect others from injury. • Remove onlookers from the immediate area.
Secondary Priorities at the Mishap Scene	<ul style="list-style-type: none"> • Protect the mishap site. • Keep management informed. • Contact appropriate state and federal officials.
Preserving Evidence	<ul style="list-style-type: none"> • Control crowds and traffic. • Take charge. • Take photos or make sketches. • Hold witnesses together. • Erect barriers (if necessary or appropriate).
Gathering Evidence	<ul style="list-style-type: none"> • Gather samples of evidence (oil, glass, metal, etc.). • Label samples. • Take measurements. • Identify photos and sketches. • Identify witnesses by name, address, etc.
Interviewing	<ul style="list-style-type: none"> • Interview in a quiet, neutral, non-threatening location. • Tell witnesses the purpose of the interview. • Take down essential information. • Let witnesses tell the story in their own terms; do not interrupt. • Take notes. • Avoid leading questions, be neutral, and use tact and diplomacy.

K. Witnesses

1. We usually think of a witness as one who has seen the mishap or was near enough to arrive soon afterwards and furnish helpful information. A witness can be anyone or anything that provides knowledge about the mishap.

II. ACCIDENT INVESTIGATION - continued

K. Witnesses

2. Witnesses should be interviewed as soon as practical to ensure the integrity of their information. Getting to the witness quickly helps get better information. The longer a witness sits on his/her statement, the more likely he/she is to modify it. Information given soon after a mishap will have more details. The best advice is to get a statement quickly and, if time is short, fill in details at a later interview. You can keep witnesses apart by giving them tasks at separate site locations. If you do nothing else, have them write up what they saw and/or draw a sketch of the scene.
3. Since a witness need not be human, consider one technique that classifies witnesses into four types. Known as the four P's, the types are people, parts, position and paper.
 - a. People – They need not be eye witnesses or participants. They can be maintenance persons, doctors, supervisors, engineers, designers, friends, relatives or anyone whose information can aid the investigation process.
 - b. Parts – This refers to failed machinery, communication, system failures, inadequate support equipment, improper fuels and lubricants, or debris at the mishap site.
 - c. Position – This concerns the mishap location and involves the weather, roadway, operating conditions, location, travel direction, wreckage resting position, etc.
 - d. Paper – Paper performs as a witness through records, publications, tapes, directives, drawings, reports and recordings. Nowadays, we might also include computer software.

L. Techniques of Interviewing

It would be impossible to discuss all the interviewing techniques that can be used in all possible situations. Listed below are some broad guidelines to be used with care.

1. Before starting an interview, have questions ready to ask after the witness tells his/her entire story. Interview in a quiet, neutral, non-threatening location.
2. Make certain the witness knows the purpose of the interview. For most of us, the purpose is to prevent more mishaps and keep others from being injured. He/she may react favorably if he/she is simply told you are trying to find out more about the mishap. These reasons should calm his/her fear about getting someone in trouble. Don't mislead the witness about the interview purpose. Inform him/her fully, and do not spring any surprises about the nature of the interview.
3. Get essential information on the record: name, address, where the witness can be reached, etc. Try to do this before you begin the interview.

II. ACCIDENT INVESTIGATION - continued

L. Techniques of Interviewing

4. Let the witness tell the story in his/her own terms. Have him/her tell of the event the way he/she saw it, in his/her own language and without interruption. You can start with: "Tell me what you saw or did, in the order it happened. Start with when you first knew about the mishap".
5. Talk to the witness in his/her terms, not yours. He/she may not know a lathe from a milking machine.
6. Use models or sketches to help the witness tell his story.
7. If the witness does not know where to start his/her account, a good lead is, "What first called your attention to the event?" This should start him/her talking.
8. Avoid leading questions. If you press the witness to answer in a certain direction, since he/she is often eager to please, he/she may respond in the way you indicate just to please you. If asked if the car is blue, the chances are excellent the witness will picture that and say yes, even if he/she does not recall the color. It is better to ask him to rephrase or repeat the statement so that you are not leading him/her.
9. Tact, courtesy and diplomacy are good interview rules. Be neutral but interested, friendly, courteous, and businesslike. Be informal and easy, but direct. Approach the witness as an equal. Avoid unpleasant subjects such as taxes, politics, and racial issues. Urge the subject onward, but do not appear to hurry him/her.
10. At the end of the interview, the witness can be asked about the fire and rescue response to help evaluate these services. Be certain to ask him/her if he/she knows anyone who saw the event.
11. Time is important. The longer the details of an event are held, the more likely they will be modified by:
 - a. Some details will be forgotten.
 - b. Details not remembered right after an event will be filled in by imagined information to make it seem right.
 - c. New information overheard or learned in discussion with others will change what was actually seen.

II. ACCIDENT INVESTIGATION - continued

L. Techniques of Interviewing

12. A notation about weather conditions may be important, (i.e., rain, hail, sleet, snow) temperature (hot, cold), wind velocity and direction, etc.

These are only a few interviewing guidelines, but they should assure success. Remember, emotions and excitement produce distortion and exaggeration in verbal statements.

Witness statements may confirm, contradict, or interact with other evidence. They must be analyzed and evaluated for credibility.

M. Photography Hints for the Investigator

A camera can record an infinite amount of detail, often items an observer's eye will miss, and all in a few seconds. Proper planning of key shots early in the investigation will pay off.

Only those photos that will be referenced in the body of the report and promise to be pertinent should be printed, but do take all the pictures that might be needed. A guideline is to take all the photos that could possibly help with the investigation.

1. Photograph before touching anything. If waiting for a photographer, make walk-through and sketches.
2. A picture showing what a person saw should be taken from eye level at the observer's position. Obstructions to vision may show up.
3. Photograph any equipment that may have played a role, such as steps, scaffolding, rigs and support devices.
4. When bodies have been removed, outline the positioning with chalk or tape before taking picture.
5. If you have a choice, use a background that provides contrast.

II. ACCIDENT INVESTIGATION - continued

M. Photography Hints for the Investigator

6. Keep the camera level for easier orientation.
7. In close-up scenes, use a ruler or other familiar object to show size. Use objects of known size in all photos to allow comparison.

There are some general guidelines for the first pictures taken at a mishap site that apply to nearly all mishaps:

1. Take a few shots approaching the mishap scene (particularly a transport mishap) to catch the operator's point of view and transient evidence.
2. Photograph anything that is likely to be quickly displaced as soon as possible. This includes:
 - a. Medical evidence
 - b. Personal items and equipment
 - c. Instrument readings and control positions
 - d. Any evidence likely to be removed by weather, traffic or cleanup crews, such as ground scans, heat evidence and liquids.
3. At a fire in progress, take color pictures of flames and smoke. The investigator can analyze these for information on the type of burning material and temperatures. Pictures of onlookers may reveal arsonists.
4. An overhead view from a ladder, building, or (with widely dispersed debris) an aircraft will show the overall scene. Log the height of the shots. Try to get the shots as nearly vertical as possible and try to have something of known size in the scene. This will facilitate measurements.
5. General photos from all four sides are proper and are known as the "Standard Four". The distances from the subject should be the same and must be logged for the record.
6. Pictures made to orient the debris should be close enough to see the debris but far enough to show a relationship to other evidence. Consider this when showing ground scans and terrain features.
7. Show enough of all scenes to give a good orientation. In close-ups, include a familiar object such as a clipboard to show the scale involved. Including a ruler or tape measure is best for showing the scale. Take photos from the witness's viewpoint and, if possible, have the same lighting conditions.
8. Take close-up pictures of significant parts and/or fracture surfaces. Start with a wide-angle shot to show the part relationships, and progress to lab photos if needed.

II. ACCIDENT INVESTIGATION - continued

M. Photography Hints for the Investigator

The importance of videos, photos and tapes is that they immediately document many facts that could otherwise be lost in the confusion and concern for the injured that immediately follow an accident. Thus, information can be accurately recalled, in the event of a court case that could arise years later.

Both long-range and close-up pictures of the accident scene should be taken, and the sketching or drawing of an accident scene has not gone out of style, even with modern technology.

Modern technology has given investigators a helping hand by developing portable video cameras that show the date, year and time of day as the film is being recorded, as well as instant cameras that develop film on the spot. A portable tape recorder allows an investigator to dictate notes as conditions are observed, saving time in having to record details by hand.

N. Near-misses

The near accident or incident that just missed causing an injury is important from the standpoint of safety. Therefore, it should be investigated. For example, the breaking of a crane hook or a wire rope sling, or a small fire associated with the use of a flammable solvent has the potential for serious consequences.

Near misses are not always easy to detect. However, if they are monitored closely, they serve a two-fold purpose. First, they will warn of circumstances that might lead to serious injuries. Second, they can be effective as examples in safety meetings and other discussions to make people safety-conscious. By publicizing these near misses, the safety and health committee can spotlight situations where hazards or improper work practices could lead to severe injury or fatality.

Investigation of "near misses" is very important as well, since there are instances in which serious injury or damage was averted by a matter of inches or minutes. These don't require quite the same intensive recording techniques, but witnesses need to be interviewed and machinery involved must be checked, and any hazardous substances identified.

Again, the point is to prevent what almost happened today, from actually happening tomorrow.

N. Cost of mishaps

We tend to look at the cost of a mishap in terms of ourselves, that is, its direct cost to the affected individual. Think of the cost as lost salary, inconvenience, delays, lost productivity, hospitalization, pain or any undesired consequence.

How much does an undesired event cost? Hospital costs and lost wages may both be paid through insurance. These are often called direct costs. But what about the indirect costs? A conservative estimate is that the indirect costs average three times the direct costs. If your accident victim had hospital costs and direct reimbursable equipment losses of \$3,000, then we should consider at least \$9,000 in indirect costs for a total of \$12,000. Indirect costs vary widely.

II. ACCIDENT INVESTIGATION - continued

O. Morale

Have you noticed what happens after an accident? At work, people stand around and talk, or go back to work subdued and sobered by the event. Their morale is shot; they don't feel like going ahead with their jobs. Productivity drops.

The effect is often a chain reaction, spreading to other departments or activities. While the lowered morale resulting from mishaps cannot be measured, its presence is seen and felt. Good mishap investigation can dispel rumors, set the record straight, ease concern over bad situations, and, most importantly, keep the mishap from occurring again. Properly carried out, the investigation displays good management intentions.

P. Corrective Action

Causal data collected during the investigation of an accident must be analyzed before it is possible to develop appropriate corrective action. Examine every aspect of the job, the worker, and supervisor to determine whether a change in conditions, procedures, equipment or training is necessary to prevent such accidents from recurring.

1. The real purpose of investigating any accident is to get at the cause and then correct it. This requires some form of action. This action should include several types of response:
 - a. Suggestions for how to avoid similar accidents in the future.
 - b. Prompt considerations of each recommendation.
 - c. Compliance with recommendations that will eliminate the chance of this type of accident happening again.

III. OVERVIEW

Title 8, California Code of Regulations (CCR), Section 3203 of the General Industry Safety Orders states that employers must implement a procedure to investigate occupational injury and occupational illnesses as a part of their overall Injury Illness Prevention Program. All accidents, regardless of how small or insignificant they appear, or whether an employee injury could have occurred, but didn't, should be investigated. Accident investigations should be documented in written format.

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A.	<u>ACCIDENT INVESTIGATION CHECKLIST – MANAGEMENT</u>	Yes	No	N/A	Other
1.	Did supervision fail to detect, anticipate, or report an unsafe or hazardous condition?	[]	[]	[]	[]
2.	Did supervision fail to recognize deviations from the normal job procedure?	[]	[]	[]	[]
3.	Did the supervisor and employees participate in job review sessions, especially for those jobs performed on an infrequent basis?	[]	[]	[]	[]
4.	Was supervision made aware of their responsibilities for the safety of their work areas and employees?	[]	[]	[]	[]
5.	Was supervision properly trained in the principles of accident prevention?	[]	[]	[]	[]
6.	Did supervision fail to initiate the corrective actions for a known hazardous condition which contributed to this accident event?	[]	[]	[]	[]
7.	Was there any history of personnel problems or any conflicts with or between supervisor and employees or between employees themselves?	[]	[]	[]	[]
8.	Did the supervisor conduct regular safety meetings with his or her employees with recorded minutes of the topics discussed and the actions taken?	[]	[]	[]	[]
9.	Were the proper resources (e.g., equipment, tools, materials, etc.), required to perform the job or task readily available and in proper condition?	[]	[]	[]	[]
10.	Did supervision ensure employees were trained and proficient before assigning them to their jobs?	[]	[]	[]	[]
11.	Did management properly research the background and experience level of employees before extending an offer of employment?	[]	[]	[]	[]

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B.	<u>ACCIDENT INVESTIGATION CHECKLIST – EMPLOYEES</u>	Yes	No	N/A	Other
1.	Did a written or well-established procedure exist for employees to follow?	[]	[]	[]	[]
2.	Did job procedures or standards properly identify the potential hazards of job performance?	[]	[]	[]	[]
3.	Were employees familiar with job procedures?	[]	[]	[]	[]
4.	Was there any deviation from the established job procedures?	[]	[]	[]	[]
5.	Did any mental or physical conditions prevent the employee(s) from properly performing their jobs?	[]	[]	[]	[]
6.	Were there any tasks in the job considered more demanding or difficult than usual (e.g., strenuous activities, excessive concentration required, etc.)?	[]	[]	[]	[]
7.	Was the proper personal protective equipment specified for the job or task?	[]	[]	[]	[]
8.	Were employees trained in the proper use of any personal protective equipment?	[]	[]	[]	[]
9.	Did the employees use the prescribed personal protective equipment?	[]	[]	[]	[]
10.	Were employees trained and familiar with the proper emergency procedures, including the use of any special emergency equipment?	[]	[]	[]	[]
11.	Was there any indication of misuse or abuse of equipment and/or materials at the accident site?	[]	[]	[]	[]
12.	Is there any history or record of misconduct or poor performance for any employee involved in this accident?	[]	[]	[]	[]
13.	If applicable, are all employee certifications and training records current and up-to-date?	[]	[]	[]	[]
14.	Was there any shortage of personnel the day of the accident?	[]	[]	[]	[]

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C.	<u>ACCIDENT INVESTIGATION CHECKLIST – EQUIPMENT</u>	Yes	No	N/A	Other
1.	Were there any defects in equipment (including materials and tools) that contributed to a hazard or created an unsafe condition?	[]	[]	[]	[]
2.	Were the hazardous or unsafe conditions recognized by management, employees or both?	[]	[]	[]	[]
3.	Were the recognized hazardous conditions properly reported?	[]	[]	[]	[]
4.	Are existing equipment inspection procedures adequately detecting hazardous or unsafe conditions?	[]	[]	[]	[]
5.	Were the proper equipment and tools being used for the job?	[]	[]	[]	[]
6.	Were the correct/prescribed tools and equipment readily available at the job site?	[]	[]	[]	[]
7.	Did employees know how to obtain the proper equipment and tools?	[]	[]	[]	[]
8.	Did equipment design contribute to operator error?	[]	[]	[]	[]
9.	Was knowledge of the location/use of emergency equipment required for this job?	[]	[]	[]	[]
10.	Was all necessary emergency equipment readily available?	[]	[]	[]	[]
11.	Did emergency equipment function properly?	[]	[]	[]	[]
12.	Are there any records of system safety analyses for the equipment involved in the accident?	[]	[]	[]	[]
13.	Is there any history of equipment failure for the same or similar reasons?	[]	[]	[]	[]
14.	Has the manufacturer issued warnings, safe-alerts, or other such information pertaining to this equipment?	[]	[]	[]	[]
15.	Were all equipment guards and warnings functioning properly at the time of the accident?	[]	[]	[]	[]

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D.	<u>ACCIDENT INVESTIGATION CHECKLIST</u> <u>WORK ENVIRONMENT</u>	Yes	No	N/A	Other
1.	Did the location of the employees, equipment, and/or materials contribute to the accident?	[]	[]	[]	[]
2.	Were there any hazardous environmental conditions that may have contributed to the accident?	[]	[]	[]	[]
3.	Were the hazardous environmental conditions in the work area recognized by employees or supervision?	[]	[]	[]	[]
4.	Were any actions taken by employees, supervision, or both to eliminate or control environmental hazards?	[]	[]	[]	[]
5.	Were employees trained to deal with any hazardous environmental conditions that could arise?	[]	[]	[]	[]
6.	Were employees not assigned to a work area present at the time of the accident event?	[]	[]	[]	[]
7.	Was sufficient space provided to accomplish the job?	[]	[]	[]	[]
8.	Was there adequate lighting to properly perform all the assigned tasks associated with the job?	[]	[]	[]	[]
9.	Did unacceptable noise levels exist at the time of the accident event?	[]	[]	[]	[]
10.	Was there any known leak of hazardous materials such as radiation, chemicals or air contaminants?	[]	[]	[]	[]
11.	Were there any physical environmental hazards, such as excessive vibration, temperature extremes, inadequate air circulation, or ventilation problems?	[]	[]	[]	[]
12.	If applicable, were there any hazardous environmental conditions, such as inclement weather, that may have contributed to the accident?	[]	[]	[]	[]
13.	Is the layout of the work area sufficient to preclude or minimize the possibility of distractions from passerby or from other workers in the area?	[]	[]	[]	[]
14.	Is there a history of environmental problems in this area?	[]	[]	[]	[]