

Accident Investigation, Analysis, and Costs

Accident Investigation and Analysis

Successful accident prevention requires a minimum of four fundamental activities

- 1 A study of all working areas to detect and eliminate or control physical or environmental hazards which contribute to accidents
- 2 A study of all operating methods and practices
- 3 Education, instruction, training, and discipline to minimize human factors which contribute to accidents
- 4 For cause analyses, a thorough investigation of at least every accident which results in a disabling injury to determine contributing circumstances. Accidents that do not result in personal injury (so-called "near-accidents" or "near-misses") are warnings. They should not be ignored.

The fourth activity, cause analysis, is a secondary defense against hazards which may have been overlooked in the first three.

In connection with this activity, an investigation should be made of every accident which results in a disabling injury. Accidents resulting in nondisabling injuries, or no injuries, and also "near-accidents," should be investigated if time and facilities permit, especially if there is frequent recurrence of certain types of nondisabling injuries, or if the frequency of accidents is high in certain areas or operations.

Purpose of Investigation

Accident investigation is a device for preventing accidents. Investigation must be for *fact* finding, *not* *fault* finding. Otherwise, they may do more harm than good.

This is not to say that responsibility may not be fixed where personal failure has caused injury, or that such persons should be excused from the consequences. However, the investigation itself is concerned only with the facts, and the investigating individual, board, or committee is best kept free from involvement with the consequences.

The principal purposes of an accident investigation are

- 1 To learn accident causes so that similar

accidents may be prevented by mechanical improvement, better supervision, or employee training.

- 2 To determine the "change" or deviation that produced an "error," that, in turn, resulted in an accident (systems safety analysis).
- 3 To publicize the particular hazard among employees and their supervisors, and to direct attention to accident prevention in general.
- 4 To determine facts bearing on legal liability. An investigation undertaken solely for this purpose, though, will seldom give enough information for accident prevention purposes. On the other hand, an investigation for preventive purposes may disclose facts which are important in determining liability.

In the following discussion, the investigation is considered from the standpoint of accident prevention, not liability.

Persons making the investigation

Depending on the nature of the accident and other conditions, the investigation may be made by the supervisor or foreman, the safety engineer or inspector, the workmen's safety committee, the general safety committee, or an engineer from the insurance company. If the accident involves special features, consultation with an engineer from the state labor department or U S Bureau of Mines, or with a union representative, may be warranted.

The supervisor or foreman The supervisor or foreman should make an immediate report of every disabling injury and other accidents he may be directed to investigate. He is on the scene, he probably knows more about the accident than anyone else, and it is up to him, in most cases, to put into effect whatever measures may be adopted to prevent similar accidents. Fig 11-2 in the previous chapter illustrates one form that can be used to record the findings of an accident investigation.

This chapter was revised by the Statistical and Industrial Department staffs, based upon reviews by selected members of the National Safety Council.