

VERO ENERGY INC.

Section 9 – Accident Investigation



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9.0 ACCIDENT/INCIDENT/HAZARD INVESTIGATION REPORTING

9.1 PURPOSE

Why do we need to do this?

FACT: BASED ON INDUSTRY STATISTICS 20% OF ALL ACCIDENTS / INCIDENTS THAT OCCUR HAVE A HIGH POTENTIAL FOR LOSS, THUS 80% OF OUR INVESTIGATION TIME SHOULD BE SPENT ON THESE HIGH POTENTIAL LOSSES. 80% OF ALL ACCIDENTS / INCIDENTS REQUIRE LITTLE (20%) OF OUR INVESTIGATION TIME.

"Reporting all losses and near miss events serves as a process where Vero Energy can apply resources to do what is possible to prevent a reoccurrence of accident or incident."

Vero Energy Inc. is committed to identifying the causes of a loss and controlling or eliminating hazards to prevent a recurrence of the loss without fault finding, to utilize this system as a learning experience and to ultimately create a safe and healthy working environment for all its employees and contractors.

9.2 RESPONSIBILITIES

Who has to do this?

All employees and contractors are responsible for:

- ❖ Ensuring all accidents and applicable incidents are verbally reported immediately to management and to the applicable governing body (i.e. EUB, OH&S, RCMP, etc.).
- ❖ Based on instructions from the H&S Coordinator or Vero management, all employees will complete a preliminary accident or incident report, giving a detailed description of loss or near loss (see Incident/Accident Investigation Report in Appendices).
- ❖ Ensuring the applicable report is given to the VP, Engineering at Vero Energy Inc. before the end of the next working day. This information is the key to preventing further occurrences.
- ❖ Contractors are to work closely with the H&S Coordinator in completing an accident or incident report.

The VP, Engineering is responsible for:

- ❖ Based on the preliminary information provided, the VP of Engineering will determine the level of investigation activities Vero Engineering will implement per reported event.
- ❖ Ensuring who will conduct the investigation, and that investigators are trained for the multiple types of investigations.
- ❖ Coordinating and ensuring an investigation is completed in a timely manner, if an investigation is required;
- ❖ Ensuring remedial action has been completed by the specified date;
- ❖ Completion of the management control section, assigning responsibility for remedial action and follow-up;
- ❖ Distributing reports to applicable management and/or contractor personnel; and

- ❖ Preparing an accident/incident bulletin when such occurrences are considered high severity potential and ensuring such bulletins are distributed to applicable departments.

9.3 STANDARDS

Where does it say we have to do this?

Alberta OH&S Act – Section 18(3) Requires that: If an injury or accident referred to in subsection (2) occurs at a worksite or if any other serious injury or any other accident that has the potential of causing serious injury to a person occurs at a worksite, the prime contractor or, if there is no prime contractor, the contractor or employer responsible for that worksite shall:

- (a) carry out an investigation into the circumstances surrounding the serious injury or accident;
- (b) prepare a report outlining the circumstances of the serious injury or accident and the corrective action, if any, undertaken to prevent a recurrence of the serious injury or accident, and
- (c) ensure that a copy of the report is readily available for inspection by an officer.

9.4 IMPLEMENTATION

How will we make sure this is put into place?

9.4.1 APPLICATION

All accidental losses and near misses must be reported to a Vero Energy Inc area engineer on an Incident/Accident Report form on or before the next working day. Any employee or contractor involved in the accident may be required to complete a report form and assist in the investigation if one is deemed necessary.

"Accident" is defined as "an undesired event that results in harm to people, damage to property or loss to process." This definition concentrates on harm, damage and loss and may be further expanded to include:

- ❖ Personal injury requiring medical aid (where professional medical personnel or facilities are required);
- ❖ Damage to property such as vehicle, fire, explosion, environmental, security, etc. related accidents where such damage resulted; or
- ❖ Loss of process where product was lost through spills, releases, contamination, theft, process upset, etc.

"Incident" is defined as "a near-miss that, under different circumstances, could have resulted in personal injury, equipment damage, operational downtime, product loss, or a hazard to the public or environment.

All of the following types of loss or near loss must be reported:

Injuries

All injuries, excluding first aid (see First Aid Reporting, Section 9.9) sustained by any person while working on a Vero Energy Inc. property or when conducting business on Vero Energy Inc.'s behalf.

All exposures to a potentially harmful substance exceeding the occupational exposure limit where adverse affects are likely to be experienced by the individual involved.

Fires/Explosions

All unplanned fires or explosions, regardless of severity.

Vehicle

All vehicle related damage, regardless of severity occurring to Vero Energy Inc. property, or when operating a vehicle while conducting company business.

Property Damage

Physical damage to equipment or property, regardless of severity, such as buildings, tankage, boilers, pumps, compressors, pipes, lands, etc.

Spills

All significant volumes of a designated substance, which may, or does, result in damage to the environment and any spills that exceed Vero Energy Inc. property boundaries.

Releases

All significant releases of a designated substance (excluding those occurring under normal operating conditions) or releases required to be reported by licensing agreements.

Loss/Theft

Any loss or removal of company property without authorization.

Bomb Threats

All bomb threats must be immediately reported verbally (see Section 10 – Office Safety) followed by an accident report.

Business Interruption

When emergency shutdown or process upset causes substantial loss of production or product, the contractor must report the incident to the VP, Engineering at Vero Energy Inc..

Near Miss

When a loss is narrowly avoided, but potential existed for severe injury or damage.

9.4.2 COMPLETING REPORTS

- ❖ When an accident has occurred, ensure that procedures contained in the accident/incident process are followed, that all required emergency response contacts have been made, and that all injuries have been attended to.
- ❖ It may be necessary to request a statement from all personnel involved when a serious accident has occurred (this may be accomplished by having people complete an accident report form).
- ❖ Rope off or barricade the site of a serious accident and proceed with taking photographs, measurements, drawings, etc. of the accident scene as required.
- ❖ At no time should an accident investigator endanger his/her own life/safety or that of any other persons.

Preliminary Report

When a loss has occurred, a preliminary assessment of loss potential must be completed. The questions should be asked:

- if the conditions had been slightly different; or
- if no corrective action is taken;...

... what is the potential for severe injury, liability or serious damage if a similar accident should recur?

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High potential losses cannot be thoroughly investigated by the following working day, therefore a preliminary report must be completed. This procedure **MUST** be completed before the end of the next working day. Do not hold this report back due to lack of detail or inability to determine direct or basic causes.

A preliminary report is usually nothing more than a detailed description of the occurrence and immediate action taken to prevent a recurrence. The knowledge of what happened and immediate corrective action taken may be enough information to prevent a similar loss in another location within the company. After this information has been shared with management and other pertinent areas, the required time can be taken to thoroughly investigate the loss.

Report Preparation

- ❖ Identify whether this is a preliminary report or the final report (if no investigation will follow) by checking the appropriate box.
- ❖ If the accident was caused by a contractor's actions, the contractor and company shall be named.
- ❖ Identify the exact location of the loss occurrence.
- ❖ Date and time of loss.
- ❖ The report should be completed by the affected person or his/her immediate contact person, however there are no limitations to who may report an accident;

- ❖ Persons involved, injured or witness to loss should be named, with company/position and their role in the accident;
- ❖ Ambient weather at the time of loss should be very specific as it helps to paint a picture for those investigating and reviewing the accident
 - Identify light conditions, visibility, ambient temperature, wind speed and direction and if it was raining, snowing, etc. at the time of the accident.
- ❖ Accident/Incident Type - more than one type may be identified.

When an injury has occurred, identify whether the casualty required:

- ❖ First aid - when casualty is treated outside of medical facility (i.e. hospital, clinic, doctors office).
- ❖ Medical aid - when casualty must be treated (not just diagnosed) at a medical facility.

Direct/Immediate Causes

Direct causes are the symptoms of the real problem or cause. They can be identified easily because they can be seen, felt or experienced. Some typical examples of immediate causes include:

Substandard Practices:

- ❖ operating equipment without authority
- ❖ failure to warn
- ❖ failure to secure
- ❖ operating at improper speed
 - horseplay
- ❖ making safeguards inoperable
- ❖ using defective equipment
- ❖ failing to use personal protective equipment
- ❖ improper loading
- ❖ improper lifting
- ❖ improper position for task
- ❖ servicing equipment in operation
- ❖ under influence of drugs

Substandard Conditions:

- ❖ inadequate guards or barricades
- ❖ inadequate or improper protective equipment
- ❖ defective tools, equipment, materials
- ❖ congested or restricted action
- ❖ inadequate warning system
- ❖ fire and/or explosion hazards
- ❖ poor housekeeping
- ❖ hazardous environment
- ❖ noise exposure
- ❖ extreme temperature
- ❖ inadequate or excessive illumination
- ❖ inadequate ventilation

These substandard conditions/practices identify what is wrong. Now we have to ask why this condition or practice exists.

Indirect/Basic Causes

Identify why an immediate cause exists by determining the personal and job factors that may have contributed to the loss. Some common basic causes include:

Personal Factors

- ❖ inadequate physical capability
- ❖ lack of knowledge
- ❖ lack of skill
- ❖ improper motivation

Job Factors

- ❖ inadequate leadership or supervision
- ❖ inadequate engineering/purchasing standards
- ❖ inadequate tools and equipment
- ❖ inadequate maintenance
- ❖ inadequate work standards/procedures
- ❖ wear and tear
- ❖ abuse or measure

Even after the basic causes have been identified, we need to ask why do these situations exist and what can be done to eliminate or control them in a practical manner?

9.4.3 INVESTIGATION

As stated earlier, the potential for subsequent loss will determine the time and effort spent on the investigation. After most accidents have occurred, the direct and underlying causes and the preventive action are obvious, eliminating the need for an extensive investigation.

Prior to conducting an investigation some basic principles must be understood:

- ❖ Accidents and other problems are seldom, if ever, the result of a single cause. This must be remembered throughout the investigation as several causes should, and will, be identified.
- ❖ In any group of occurrences, a relatively small number of causes will tend to give rise to the largest proportion of results. Even though several causes may be identified in the investigation, usually only a few are critical and require the most attention.

Lessons Learned/Preventive Action

Identify practical solutions that will control or eliminate the critical immediate and basic causes.

Management Control

The Area Engineers shall ensure the report is complete, that all details are clear, that all questions are answered and that all causes and preventive actions have been identified. He/she must then determine what practical action can be taken to prevent or control the consequences of a similar accident (it is rarely determined that no action is required). The Area Engineers will inform the VP of any concerns that need his/her attention.

9.4.4 FOLLOW-UP

The VP, Engineering must assign responsibility for implementation of required preventive action and management controls. An expected completion date shall be assigned and the production superintendent is responsible for ensuring that actions are completed by the specified date.

9.4.5 DISTRIBUTION

Original copies of preliminary accident reports should be kept in an active file in the originating area/department until an investigation is complete. Copies of the preliminary and final reports should be forwarded to the VP, Engineering.
The reports shall be kept on file at Vero Energy Inc.

9.4.6 ACCIDENT/INCIDENT BULLETINS

When a serious or potentially serious accident or incident has occurred, all applicable areas should be informed. This information sharing allows all areas (and in some cases, other companies) to learn from mistakes made or hazards encountered. Steps taken to prevent a recurrence should also be shared through this process.

Bulletins are usually prepared after an investigation has been completed although, if a preliminary report indicates that the occurrence was critical or that the same situation exists in other areas and interim preventive measures are required immediately, a bulletin may be issued at this time.

Accident bulletin formats are nothing more than a brief description of the loss or near loss (WITHOUT NAMES), the critical immediate and basic causes, preventive action taken and lessons learned.

The VP, Engineering is responsible for completion of bulletins when necessary.

9.4.7 FIRST AID REPORTING

The provincially legislated, First Aid Regulations state that:

"Injuries sustained at work, no matter how minor they may seem, must be reported."

It is imperative that all injuries be reported, not just because of legislation. If an apparently minor injury develops into something major, a written report will ensure that Workers' Compensation will be paid to the injured worker. Reporting minor injuries will help management identify potential hazards and/or injury trends. This information may then be used to establish controls designed to reduce injuries.

The logbook inside each first aid kit is to be completed whenever an injury is sustained by a person conducting business on Vero Energy Inc.'s behalf, except when the injury is reported on an Accident Report form. Vero Energy Inc. must insure that accurate first aid reports are kept.

9.4.8 WCB REPORTING

Responsibility

The VP, Engineering is responsible for completing the required "Employer" reports for the applicable provincial Workers Compensation Board (WCB) as identified below. The production superintendent is also responsible to ensure employees and contractors complete the required "Worker" report form. All employees or contract employees must complete the required WCB report forms when an injury sustained requires medical aid (when a doctor is visited regarding an occupational injury or illness).

Application

When a worker sustains an injury while at a Vero Energy Inc. facility that requires medical attention, the required reports must be completed, even if no time is lost. Attending physicians are required to ask if an injury was sustained at work and will fill out the WCB forms. WCB will contact the employer if the doctor's form is completed and the Employer and Worker forms are not. An injury becomes recordable if one full, normally scheduled day shift is missed from work due to an injury or occupational illness. If the claim is valid, compensation may be paid to the injured worker for time and wages lost and any out of pocket expenses incurred due to the injury.

Process

Applicable WCB forms shall be completed by each party:

- ❖ The injured worker;
- ❖ The worker's employer; and
- ❖ The attending doctor.

The Employer and Worker forms shall be sent into the nearest WCB office as soon as possible after the injury is sustained.

9.5 MONITORING

How will we check to see that this is carried out?

All incident and investigation reports will be reviewed at monthly safety meetings and the findings discussed with employees. Site supervisors/management will ensure that all required inspections are carried out and that follow up is completed on action items identified.

9.6 REVIEW/FOLLOW-UP

When will we review this component for continuous improvement?

To determine the effectiveness of the Incident/Accident Reporting, Investigation and Analysis strategies described in this section, the company will conduct an annual review of the process.