

VERO ENERGY INC.

Section 10 – Environment



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10.0 ENVIRONMENT

10.1 PURPOSE

Why do we need to do this?

Vero Energy Inc. is committed to operating in an environmentally conscientious manner such that impacts on the environment will be minimized. Vero Energy Inc. will endeavor to ensure operations carried out on their behalf by other operations and contractors will do the same.

10.2 RESPONSIBILITIES

Who has to do this?

Management is responsible for the overall direction and application of environmental management principles and will ensure that these policies, directives and instructions are communicated effectively to all employees and contractors. Management will establish programs and systems to document environmental performance. Management will also ensure that training and support are provided to all staff so that they can maintain and upgrade their technical skills.

Senior management is responsible for coordinating and communicating management direction to all employees in order to support the company's environmental directives.

All employees are responsible for adhering to this policy and maintaining best efforts to implement the principles outlined above in their everyday operations. Employees are also responsible for reporting to management the possible areas of improvement in environmental performance.

10.3 STANDARDS

Where does it say we have to do this?

Environmental Legislation

- ❖ Environmental Protection and Enhancement Act
- ❖ Canadian Environmental Protection Act
- ❖ Potable Water Regulation
- ❖ Waste Control Regulations
- ❖ Forest and Prairie Protection Regulations

10.4 IMPLEMENTATION

How will we make sure this is put into place?

10.4.1 ENVIRONMENTAL GUIDING PRINCIPLES

- ❖ All services will conduct hazard identifications, waste management reporting and environmental site assessments in an environmentally responsible manner.

- ❖ All employees, management and contractors will acknowledge and follow VeroEnergy's Corporate Environmental Policy and practices.
- ❖ Personnel will ensure that sound environmental management procedures are employed in our operations to protect people, wildlife, air, water, plants and soil.
- ❖ Training and resources will be provided to ensure that company personnel can understand and meet their responsibilities in protecting the environment.
- ❖ Environmental procedures will be reviewed and updated on an annual basis or whenever otherwise required by changes in procedure, equipment, legislation, etc., to ensure that they are appropriate and effective.
- ❖ Will be prevented using a "cradle to grave" or "at the source" solution. Improvement in this area will be continual.
- ❖ Adverse environmental impacts caused by company operations will be addressed in an efficient and timely manner.
- ❖ Waste generation will be minimized by following the four R's of waste management: Reduce, Reuse, Recycle, and Recover.
- ❖ The best practical environmental option will be continually sought, generally using the best available techniques not entailing excessive costs.
- ❖ We will promote efficient use of resources in our operations, toward the goal of energy conservation.
- ❖ Vero Energy Inc. will recognize, support and encourage technological innovation, research and achievement for improvement of environmental performance.

10.4.2 ENVIRONMENTAL PRACTICES AND PROCEDURES

This section addresses environmental management strategies for operations within Vero Energy Inc.. Environmental concerns will be managed using the following:

- ❖ Workplace Hazardous Material Information System (WHMIS)
- ❖ Environmental Assessments
- ❖ Waste Management Program
- ❖ Spill Response Program

Workplace Hazardous Materials Information System (WHMIS)

WHMIS is a Canada-wide information system that reinforces a worker's right to know about the health hazards of controlled products used in the workplace. More information on WHMIS can be found in Section 5.7 of this Manual.

Environmental Assessments

Internal environmental assessments will support the goals of environmental protection and sustainable development. They are a means to determine the existing environmental concerns at a site or facility. They integrate environmental protection with economic decision-making at the earliest stages of planning an activity.

The purpose of these assessments is to predict the environmental, social, cultural and economic consequences of a proposed activity and to assess plans to mitigate any adverse impacts resulting from such activity.

The detail required for assessments will vary depending on a number of factors including magnitude, frequency, duration, ecological content, reversibility, public concern, etc. Management will specify the degree of environmental assessment required for any activities.

Waste Management Program

The purpose of this section is to describe waste minimization philosophies and to promote an active participation in waste minimization by all personnel involved with Vero Energy Inc..

Waste minimization is a continuous improvement practice. It is an ongoing process involving the 4 R's, and includes the full-cycle assessment of environmental effects and the associated economic and technical feasibility of the various management options.

Vero Energy Inc. will promote waste minimization within their operations and will ensure effective management strategies are employed to minimize and effectively handle waste in a diligent manner.

The 4 R's represent the minimization strategies that may be employed to reduce wastes requiring disposal. Reduction offers Vero Energy Inc. the greatest options for waste minimization and can usually be applied at the source. The ultimate way to manage waste is not to produce it in the first place. Reuse can also be applied on-site. Recycling and/or recovery programs will be implemented to reduce the amount of paper and aluminum product waste that is produced by Vero Energy Inc..

Reduction

Waste reduction involves reducing the amount of waste at its source by modifying operating practices and policies, or changing processes that contribute to waste production. It is usually associated with low capital cost. Reduction also includes altering input material or end products. Other waste reduction options include:

- ❖ Design considerations
- ❖ Inventory management
- ❖ Improved operations
- ❖ Equipment modifications
- ❖ Process changes
- ❖ Spill and leak elimination
- ❖ Optimal raw material use.

Reuse

Reuse is the second Waste Management technique that can be explored. **Reuse means reusing a product for its original or a new purpose rather than throwing it away.** The longer you reuse a product the longer it is kept out of a landfill.

Significant cost savings can be obtained by installing closed loop systems so that solvents and other materials can be reused in plant processes. The most important thing to remember about reuse is to separate the waste materials to keep them clean. This greatly enhances their ability to be reused or their acceptability as a raw material.

Recycle

Recycling is the third alternative. **This involves the reclaiming of a specific product from the waste stream and processing it into new materials and products.** Recycling is different than reuse in that it is not the product itself being reused, but the raw materials within a product.

Recycling can be carried out on site or off site. Vero Energy Inc. or others can use the waste materials. Just as in reuse, it is important to keep the recyclable material uncontaminated, which minimizes processing requirements.

Recover

The final “R” is recover. **Wastes generated by Vero Energy Inc. may contain “recoverable substances” that could be recovered and then recycled or reused on site or by others.**

Recover also means gaining the useful materials or energy from a product by chemical or thermal means. This is also called “resource recovery”. It includes using a waste material as a fuel, commonly called “refuse derived fuel”. Composting is also a form of resource recovery.

Spill Prevention and Management

An environmental incident (i.e. spill) is a situation where material is released into the environment (air, soil, water), sanitary sewers or storm water in a manner that is not approved by government authorities or, if unregulated, has the potential to cause an adverse effect on human health or the environment.

Good design and production practices will be followed to ensure that corrosion control and leakage prevention are implemented. Processed chemicals will be stored in secure containers. All spills will be contained, cleaned up and the area will be rehabilitated as soon as possible. Contaminated soils and ground water will be rectified as soon as possible.

All environmental incidents are internally reportable. However, not all spills are reported externally. This will vary by substance, the amount released and jurisdiction. This issue will be reviewed in this section.

Alberta has adopted new environmental legislation, the *Alberta Environmental Protection and Enhancement Act*. The *Waste Control Regulation* addresses the identification, storage, handling and disposal of hazardous waste, minimization and the recycling of hazardous recyclables, and waste control. All wastes generated by the upstream oil and gas industry are regulated by the EUB in Alberta, except integrated facilities and facilities treating both oilfield and non-oilfield wastes. Alberta has a number of defined “waste types” not defined in the federal TDGR.

Spill Procedures

Be prepared to control small spills. SAFETY COMES FIRST. Do not attempt to control a spill unless you are sure it can be done without endangering yourself or others. Call Emergency Services and evacuate the area if there is potential for fire, explosion or other hazard, or if the spill appears likely to migrate offsite. However, if stopping the source of the release can safely contain the spill, do so as quickly as possible. Control of the spill may require:

- ❖ Pick up the spilled container and place it in a safe location while cleaning up the spill.
- ❖ If the spill occurs from a drum or tank, attempt to control the source by closing the valve, setting the drum upright or plugging the hole if applicable.
- ❖ If the spill occurs from tipped equipment, attempt to right the equipment as quickly as possible.
- ❖ Use protective gloves (nitrile) and a face shield, if applicable, while attempting to control a spill.

Once the spill is controlled, contain it, if it is safe to do so, so that the smallest possible area is impacted. It is most important that a spill be contained so that it does not exit Vero Energy Inc. property. This can be done through absorbent booms and/or granulated absorbent (cellulose).

Vero Energy Inc. will place spill response kits near areas where potential spills are likely, but outside the area likely to be impacted by a spill. The basic kit may consist of two 350 litre, open-top, over pack drums on mobile bases.

After eliminating any ignition sources, a spill may be contained by absorbing it or by placing a physical barrier in its path. Usually it is not necessary to physically contact a spilled material or waste product to prevent it from spreading. If the spill is small (less than 20 litres), use granulated absorbent to soak it up and then properly dispose of the absorbent. If the spill is larger, use a combination of granulated absorbent and containment booms, as applicable, to prevent it from spreading.

Spill Response Kit Contents

- ❖ One drum filled approximately 2/3 full of granular absorbent, two short square-end spark-resistant shovels and two dustpans.
- ❖ The second drum will contain approximately 12m of absorbent socks, two pairs of rubber boots, nitrile gloves and two face shields, as well a copy of the inventory.
- ❖ Both drums must be labelled "Spill Containment Kit".
- ❖ Remove and store separately the metal tops of the drums. Commercially available plastic tops will be placed on the drums for quick removal while providing protection from the elements.

Mini-Spill Response Kit Contents

- ❖ One 20 litre metal bucket filled approximately 2/3 full of granular absorbent.
- ❖ One short square-end spark-resistant shovel and a dustpan.
- ❖ A second 20 litre metal bucket containing two pairs of rubber boots and nitrile gloves, and two face shields, as well as a copy of contents.
- ❖ Both cans must be labelled "Mini-Spill Response Kit".

For any service site spill, contact the client site representative and the project manager as soon as possible. If the spill is on a public right-of-way and local authorities respond, follow their directions and provide any assistance they request. If the spill is on third-party private property and the property owner wants to direct a cleanup of their site, let them do so and offer any assistance you can.

Reporting Requirements

Vero Energy Inc. employees and contractors will report all spills to management who, in turn, will report spills to the VP, Engineering:

- ❖ Transportation spills classified under Federal and Provincial TDG Act(s) are reportable to the local, provincial and federal authorities. (Reportable amounts vary by jurisdiction and should be confirmed with local regulatory agencies).

Any amount of a toxic material spilled in a river, lake, waterway, storm sewer or sanitary sewer, or any amount that has the possibility to cause an adverse effect on the environment must be reported in all provinces. **If any doubt exists – report it!** Alberta requires a verbal report of any uncontrolled release of contaminants within 24 hours.

Spills that threaten the environment may require the use of:

- ❖ Vero Energy Inc.'s Emergency Response Plan.
- ❖ Utilization of Oil Spill Clean Up and Recovery (OSCAR) Units.
- ❖ Utilization of Oil Spill Co-Operatives equipment units, as required.

Emergency Spill Response:

- ❖ Protect human life
- ❖ spill
- ❖ Contact VP, Engineering
- ❖ Establish further clean-up procedures.

10.5 MONITORING

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

Vero Energy Inc.'s management will review the environmental policy and procedures annually to ensure its continuing suitability, adequacy and effectiveness. The management review process will ensure that the necessary information is collected to allow management to carry out this evaluation.

The management review will address the possible need for changes to policy, objectives and other elements of the environmental aspects, changing circumstances and the commitment to continual improvement.

10.6 REVIEW/FOLLOW-UP

When will we review this component for continuous improvement?

To determine the effectiveness of the Environmental Management strategies described in this section, the company will conduct an annual review of the process.