

Manual Materials Handling Guideline

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1.0 Purpose

Cenovus recognizes that manual materials handling exposes workers to physical conditions that can lead to occupational fatigue, and increased risk of injury.

The purpose of this guideline is to provide a method for identifying and controlling the ergonomic hazards associated with manual materials handling (MMH).

2.0 Scope

The Cenovus Manual Material Handling guideline applies to all Cenovus worksites, and work activities.

3.0 Process Requirements

The Cenovus MMH Guideline consists of the following elements:

- Hazard identification
- Ergonomic hazard assessment
- Recommended control measures

3.1 Task Hazard Identification

The main risk factors associated with the development of injuries in manual material handling tasks are:

- Awkward postures (e.g. bending, twisting)
- Repetitive motions (e.g. frequent reaching, lifting, carrying)
- Forceful exertions (e.g. carrying or lifting heavy loads)
- Static postures (e.g. maintaining fixed positions for a long time)

A review of the job description and/or field level hazard assessment should be conducted in conjunction with behavioural observations to identify suspected activities and tasks that expose workers to potential musculoskeletal injuries.

Table 1 refers to a list of common questions to assist in identifying hazardous manual tasks.

Table 1: Task Hazard Identification Checklist

Are any of these factors present in the task?	Yes	No
Twisted, stooped, awkward asymmetrical postures		
Fixed, sustained, rigid, prolonged postures		
Unvaried, repetitive movements		
Sudden, uncontrolled or jerky movements		
Handling or reaching away from the body		
Using high or sustained force		

Are any of these factors present in the task?	Yes	No
Handling heavy or awkward loads		
Whole body vibration or upper limb vibration		
Handling that goes on for too long without a break		

If MMH concerns are suspected as indicated by answering yes to one or more questions above, an in-depth Ergonomic Hazard Assessment is recommended to identify and prioritize the ergonomic hazards.

3.2 Ergonomic Hazard Assessment

In-depth ergonomic hazard characterization and assessment will assist in prioritizing tasks that have a greater risk of musculoskeletal injury. Manual handling tasks will be evaluated through the Cenovus Ergonomic Hazard Identification and Assessment Tool to determine the potential risk of injury.

The risk of musculoskeletal injury is determined according to the number of ergonomic factors present in the areas of manual materials handling, organizational factors, and workplace design. Tasks that have a greater risk of musculoskeletal injury should have priority and be further evaluated by the Cenovus Occupational Health Group.

3.3 Control Measures

Control measures are ergonomic improvements that aim to improve the fit between the demands of work tasks and the capabilities of the workers. If a task has a high risk of injury and cannot be eliminated, the aim from an ergonomic improvement perspective will be to:

- Make the task as easy as possible for the worker
- Reduce the time a worker is required to do it

Ergonomic control measures typically consist of:

- Engineering improvements – including rearranging, modifying, redesigning, providing or replacing tools, equipment, workstations, packaging, parts, processes, products, or materials in order to reduce or eliminate ergonomic risk factors
- Administrative improvements – including improved pattern of exposure (e.g. organize the work that physically demanding tasks are interspersed with less strenuous tasks), modification of work procedures (e.g. two individuals to lift an object of a pre-determined weight), pre-employment assessments to determine fitness for work

Table 2 lists examples of ergonomic control principles that should be considered for any manual material handling activity.

Table 2: Ergonomic Control Principles

Ergonomic Concern	Common Risk Controls
Manual materials handling	<ul style="list-style-type: none"> • Make the load lighter or reduce the force being applied • Split the load or make it less bulky • Make the load easier to grasp • Improve load stability • Make changes to reduce load hazards • Provide mechanical aids where they reduce hazards, and train workers to use them properly and safely
Workplace design	<ul style="list-style-type: none"> • Improve layout to keep the load close to the body • Reduce handling distances and twisting actions • Provide sufficient space to perform the task • Limit duration of any handling, and particularly if standing or sitting • Avoid the need for squatting, kneeling or crouching • Avoid steps and slopes, or make them less hazardous • Remove clutter, rough surfaces and obstacles
Organizational factors	<ul style="list-style-type: none"> • Provide sufficient rest breaks • Avoid repetitive actions and vary the work to rest different muscle groups • Schedule regular rest breaks and rotate staff between different activities • Provide training specific to the tasks being performed • Consult and inform workers about hazards, and how to avoid them

The evaluation of at risk behaviours and recommendations for specific ergonomic control measures should be conducted by the Cenovus’s Occupational Health team.

4.0 Roles and Responsibilities

The following responsibilities apply to this guideline:

Table 3: Roles and Responsibilities

Role	Description
Business Leaders and Frontline Supervisors	<ul style="list-style-type: none"> • Communicate the Manual Materials Handling Guideline to their operations or functional areas of authority • Allocate and make available the necessary financial and human resources that are required to recognize, evaluate and control MMH hazards • Confirm all workers are aware of this Manual Materials Handling Guideline and responsibilities outlined in the process requirements section of this document • Confirm workers reviewed the guideline and are knowledgeable of the hazards pertaining to MMH • Provide feedback to the document owner or representative concerning proposed changes or improvements to this document • Engage Cenovus’s Occupational Health regarding ergonomic/manual material handling concerns
Operations Health & Safety Field Teams	<ul style="list-style-type: none"> • Conduct worksite observations and assessments on a regular basis to verify compliance with the expectations described in this document • Assist with the implementation and communication of the MMH guideline requirements • Provide feedback to Occupational Health (OH) team concerning proposed changes or improvements to this document • Contact the OH team for further assessment of ergonomic hazards/manual materials handling concerns
Central Health & Safety Services	<ul style="list-style-type: none"> • Monitor and collect feedback related to this document to verify program effectiveness • Lead document reviews and revisions as per the expectations described in this document • Provide subject matter expertise when requested by Business Leaders or other functional teams • Conducted ergonomic/manual materials handling assessments as requested
Business Support Teams	<ul style="list-style-type: none"> • Provide support as requested by Health & Safety

5.0 Training and Competency

Competency describes the knowledge and skills required to successfully perform the technical aspects of a job safely. A worker must be able to demonstrate a basic awareness of manual materials handling hazards when performing work tasks or using equipment.

5.1 Training

Frontline supervisors and workers should review the Manual Materials Handling Guideline prior to conducting work that has risk of musculoskeletal injury.

Workers performing manual handling tasks should be educated on the ergonomic hazards that may put them at risk for musculoskeletal injury.

If controls are implemented to prevent musculoskeletal injuries (MSI), workers should be trained to use the risk control measures. For example, if you provide a worker with a mechanical lifting device, the worker must be trained to use the device properly.

6.0 Quality Assurance

6.1 Performance Measurement

Implementation of this guideline and its effectiveness shall be evaluated through health & safety assessments and internal audits, or other measurement criteria.

Central Health and Safety Services will review Cenovus-wide manual materials handling data at a minimum every three years in conjunction with this guideline.

6.2 Management of Change

Proposed changes to this guideline can be directed to H&S Programs and Projects.

6.3 Guideline Verification

The document owner will complete and document reviews of this guideline, as follows:

- At minimum once every three years
- If there is a significant regulation or industry best guideline change that indicates the need for review
- If an incident investigation indicates the causes were related to unclear or inadequate written instructions described within this guideline

If frequent and multiple variances are required due to operational needs, the reason(s) will be investigated and the document owner will determine if there is a business need to update the guideline.

If submitted MOC requests indicate gaps or significant improvement opportunities, the document owner will determine if there is a business need to update the guideline.

7.0 Glossary

Definitions and acronyms for safety documents are described in CEN-EHS243, Definitions and Acronyms. The following definitions and acronyms are specific to this document:

Table 4: Terms and Definitions

Term	Definition
Musculoskeletal injury	Chronic muscle, tendon and nerve disorders caused by repetitive exertions, rapid motions, high forces and extreme postures.
Manual materials handling	Any activity requiring a person to interact with their environment and use any part of their muscles or skeletal system to lift, lower, push, pull, carry, throw, move, restrain or hold any animate, or inanimate, object.

Table 5: Acronyms, Initialisms and Abbreviations

Term	In Full
MSI	Musculoskeletal injury
MMH	Manual materials handling
OH	Occupational Health

8.0 References

8.1 External Documents

The following external documents support this guideline:

Table 6: External Document References

Document Type or Number	Document Title
Alberta OHS	Part 14 Lifting and handling loads
Saskatchewan OHS	Part VI – General Health Requirements <ul style="list-style-type: none"> • Section 78 Lifting and handling loads • Section 81 Musculoskeletal injuries
Work Safe Alberta	Lifting and Handling Loads – Part 1, Reviewing the Issues
	Lifting and Handling Loads – Part 2, Assessing Ergonomic Hazards
	Lifting and Handling Loads – Part 3, Reducing Ergonomic Hazards
	Proper Height of Work Surfaces
	Push It or Pull It?
	You Want Me To Lift How Much?

8.2 Internal Documents

The following Cenovus documents support this guideline:

Table 7: Internal Document References

Document Type or Number	Document Title
Policy	Corporate Responsibility Policy
CEN-EHSReg787	Regulatory Definitions and Acronyms
Framework	Cenovus Operations Management System (COMS)
CEN-EHS243	H&S Definitions and Acronyms Standard
CEN-EHS019	Cenovus Hazard Assessment and Control Practice
CEN-EHS022	Cenovus EH&S/Operations Risk Management Practice
CEN 757	Cenovus Ergonomic Hazard Identification and Assessment Tool
Health Assessments	Fitness for Work Assessments