Health & Safety Policy & Procedure Manual

Exceeding Expectations

Updated 2014

WATERLOO MANUFACTURING

COMPLETE BOILER ROOM SOLUTIONS

Waterloo Manufacturing Company Ltd.

HEALTH AND SAFETY POLICY

It is the policy of Waterloo Manufacturing Company Ltd. to provide a safe and healthy work environment for all personnel.

Every reasonable effort shall be made to achieve that goal.

It is the responsibility of everyone from the newest employee to the company president to ensure that a healthy and safe work environment exists.

The management of Waterloo Manufacturing Company Ltd. is responsible to ensure that the machinery and equipment is safe and that workers work in compliance with established safe work practices and procedures and we will strive to eliminate any foreseeable hazards which may result in fires, security loses, damage to property and personal injuries/illness.

Each worker must protect their own safety and the safety of others by working in compliance with health and safety legislation and safe work practices and procedures established by the company.

As part of the team effort all employees are equally responsible for their own personal safety and the safety of others. All unsafe acts and conditions must be reported to the supervisor. Supervisors are responsible for taking immediate action to solve such problems. Good management in cooperation with active employee involvement can control accidental loss.

By a conscious effort to work in a healthy and safe manner, you are ensuring a substantial contribution towards a safer workplace for everyone.

“No job is so important that we can’t take the time to do it safely”

Table of Contents

INTRODUCTION

In terms of workplace safety, the service industry is unique. Besides involving tasks that are potentially hazardous by themselves, service work requires everyone to cope with the dangers of a constantly changing work environment. Subcontractor crews, project materials, processes, equipment and the workplace itself change from day-to-day; as result, every employee must take special precautions to prevent accidents and injuries.

The purpose of this manual is to assist Waterloo Manufacturing Company Ltd. and its employees, managers and subcontractors to prevent accidents and injuries. The information presented in this manual was, to the best of our knowledge, current at time of printing and intended for general application. This publication is not a definitive guide to government regulations or practices and procedures wholly applicable under every circumstance. The appropriate regulation and statutes should be consulted.

This manual is not designed to tell you how to do your job, but will provide you with a reference to the minimum performance standards adhered to by Waterloo Manufacturing Company Ltd. Where Waterloo Manufacturing Company Ltd. Safety Policy and Procedures conflict with Government Regulations or Customer Safety policy and Procedures the more stringent policy is to be followed. A copy of this manual is to be given to all personnel. Managers are to ensure this takes place without exception. From time to time revisions will be made to the information herein. It is your responsibility to ensure your manual is kept up-to-date.

INTRODUCTION SOURCES

This manual was designed as a reference guide to assist you in fulfilling your health and safety duties in the workplace. Occasionally you will encounter a situation where your training, experience and knowledge are not sufficient to do the job or task safely. The following is a directory of the various sources of information available to help you complete the job or task in a safe manner.

- Read and become familiar with the Provincial Health and Safety Acts and Regulations pertaining to your job.
- Read and become familiar with the Occupational Health and Safety Act and Regulations for Industrial Establishments for Ontario.
- Ask other trades people who know how to do the job safely for their input and advice. This may include a Health and Safety Committee and/or Representative.
- Ask your Manager or Project Supervisor for advice.
- Call the Provincial Safety Association.
- Call the local office of the Provincial Agency that enforces the Health and Safety Legislation in your province.

Ontario: Occupational Health & Safety Act & Regulations for Construction Projects administered by, Construction Health & Safety Branch, Occupational Health & Safety Division, Ministry of Labour, 400 University Avenue, Toronto, Ontario M7A IT7 (416) 326-7770

RESPONSIBILITIES

It is our belief that all levels of employees have specific and shared responsibilities to ensure our safety efforts are successful. The following responsibilities are to be used as guidelines, and it should be noted that these are not all-inclusive. The following responsibilities will change according to provincial legislation and jobsite. Please be aware of the appropriate responsibilities for your job. Should you require clarification or further information contact the Waterloo Manufacturing representative.

The Company

- Provide a safe and healthy work environment.
- Provide adequately maintained and proper tools, equipment, materials and protective devices.
- Ensure federal and provincial Health and Safety Acts and Regulations are complied with on all Waterloo Manufacturing Company Ltd. jobsites.

CEO/President

- Review at least annually the corporate occupational health and safety policy.
- Assign and review the implementation of the Occupational Health and Safety Program and Policy.
- Provide the necessary resources to implement, support, and enforce the Health and Safety Policy and Program within the company. (Note: that the provisions of the Occupational Health and Safety Act address the minimum requirements for the control of health and safety hazards for each provincial jurisdiction.)
- Promote the exchange of health and safety information with outside groups such as regional labour-management health and safety committees and trade associations.
- Review accident reports and communications with government agencies, unions, and other organizations regarding legally required notices regarding critical injuries, accidents, incidents, and other events.

Service Supervisor

- Provide orientation for new crew members.
- Implement, support, and enforce the safety program at crew level.
- Review safety aspects of each job with crew.
- Ensure employees use or wear the equipment, protective devices or protective clothing required. Assist in accident investigations.
- Report safety problems to CEO/President.

- Review Material Safety Data Sheets with crew before using hazardous materials.
- Ensure the Safety Department and/or senior management is notified of all accidents and injuries involving medical aid and lost time injuries.
- Accompany injured workers to emergency medical facilities or have workers accompanied, and ensure all appropriate paperwork is completed.
- Notify the Senior Management, and send copies of all Ministry of Labour, or Workplace Safety & Insurance Board inspections and reports to senior management.
- Notify Management on day the injured employee returns to work.

Workers

- Work safely in accordance with the corporate health and safety policy and program, and with the project health and safety program (including the OH&S Act and Construction Regulations).
- Report hazards or unsafe conditions to their supervisor after taking appropriate immediate action and any contraventions to the Act or Regulations. Report all accidents, injuries, and near misses to their supervisor.
- Initiate emergency response plans when necessary. Clean up their work area when the task is complete or at least daily.
- Inspect Personal Protective Equipment before use and report defects or damage to supervisor.
- Use or wear the equipment, protective devices, and clothing that is required.
- Work in a manner that will not endanger themselves or others.
- Abide by all site rules and regulations imposed *by* the General Contractor or Owner.
- Abide by all federal and provincial Occupational Health and Safety Acts and Regulations.
- Never alter safety equipment for ease of use.

Subcontractors

- Abide by all federal and provincial Health and Safety Acts and Regulations.
- Comply with project health and safety policy and program and make it clear to employees that failure to do so could result in termination of contract.
- Provide training in the requirements of the site safety policy and program.
- Coordinate all work activities through the site superintendent.

- Provide, inspect, and maintain Protective Equipment as required for direct-hire employees.
- Monitor site conditions daily and record all injuries, accidents, or near misses.
- Conduct clean-up of work areas at least daily.
- Obtain a copy of the Waterloo Manufacturing Company Ltd. Safety Policy and Procedure Manual or Booklet and ensure it is kept on-site *by* your supervisor.
- Provide adequate facilities (e.g., lunch area, wash up area and toilets, tool storage, and first aid) for employees.
- Notify superintendent of any lost-time injuries or medical aid cases occurring on the project.
- Cooperate in accident investigations.
- Request help in dealing with hazards created by another employer's workforces.

ADMINISTRATION ENFORCEMENT
DISCIPLINE PROCEDURES

Compliance with company and legislative standards is necessary to maintain a safe and healthy work environment. Corrective disciplinary actions may be necessary to deal with noncompliance.

The following is a guideline for disciplinary actions resulting from safety infractions:

- ***First Offence:*** the worker will be given a verbal warning, with the union steward present if possible or a suitable witness; the warning is to be documented and kept on file.
- ***Second Offence:*** the worker will be given a written violation notice with the union steward present if possible; a copy of the violation notice is to be sent to the workers union office.
- ***Third Offence:*** the worker will be given a second written notice, immediately dismissed from the job-site for the balance of the current shift and will be given an additional two days off without pay.
- ***Fourth Offence:*** are grounds for immediate and permanent dismissal.

If the violation is of a serious nature, the individual may be sent home without pay or employment may be terminated without prior warning.

A GUIDE TO GOOD CONDUCT

FOR WATERLOO MANUFACTURING COMPANY LTD. EMPLOYEES

During working hours, while on Waterloo Manufacturing jobsites, employees are expected to conduct themselves in a manner that promotes the safety and welfare of all employees. Management encourages congenial, orderly work habits and the protection of employees and company property. Employees engaging in conduct detrimental to such interests are subject to disciplinary action. Certain acts of misconduct are considered to be sufficiently detrimental to the best interests of the employee, other employees and the company that the risk of repetition will not be assumed. In such cases the employee may be subject to immediate discharge, as well as legal or police action.

Acts of Misconduct

- The following acts are considered serious infractions and may result in disciplinary action including immediate dismissal as well as legal or police action:
- Being in the possession of or under the influence of alcohol or illegal drugs while at work.
- Possessing or using any gun or firearm, illegal knife or other illegal weapon on company property or jobsite.
- Failure to wear personal protective equipment in a designated area or as required for a specific Task.
- Creating unsafe or unsanitary conditions or disregard for the safety of oneself or another.
- Failure to report an incident, work related injury, or a hazard.
- Showing disrespect for a supervisor, co-workers or any other person associated with this company.
- Refusing or failing to follow the instructions of a supervisor.
- Fighting, theft, gambling, horseplay, boisterous conduct, loitering, sleeping or unauthorized absence from a workstation.
- Damaging or defacing company property or smoking in a prohibited area.
- Tardiness or absence from work without calling in prior to the start of the shift.

Procedures for “Impaired Personnel”

- When a supervisor suspects that an employee is impaired, the following steps are to be followed: The employee is to be asked if they are feeling okay or if they are ill.

- The supervisor can then make the observation that he feels the employee does not appear to be functioning normally.
- The supervisor then must say that they are concerned that the employee may endanger their own safety or the safety of other workers and will not be allowed to complete their shift.

- The employee is to then be offered a ride to the nearest emergency medical treatment center or hospital.
- If the employee refuses a ride to medical treatment, they are then to be offered a ride home.
- If the worker refuses a ride home, they are then to be escorted off site. If required, call the local police department and ask for assistance, as the employee must not operate their own vehicle.
- The decision to discipline an employee will vary with each individual case. In all cases where the employee is disciplined for possible on site drug or alcohol infractions, the worker's union business agent or president should be notified.

Alcohol and Drug Enforcement Policy

Service work can be, by its very nature, dangerous. Service work combined with drugs or alcohol can be dangerous and deadly. There is no safe place on a job site for a worker who is impaired by either alcohol or drugs. Possession of alcohol or illegal drugs on site is grounds for immediate dismissal. The labelling on prescription drugs must also be followed as some of these legal drugs may cause drowsiness and impair your ability to operate machinery or even drive. Employees that find themselves on these types of prescription drugs must notify their supervisor immediately. If you report for work, or any part of your shift while under the influence of alcohol or drugs, you will not be allowed to work the balance of your shift and may be further disciplined. Where a unionized worker is disciplined for suspected alcohol/drug impairment or use, their union will be notified.

A company vehicle is never to be operated while the driver is under the influence of alcohol or illegal drugs. Operating a company vehicle while impaired or under the influence of drugs or alcohol shall result in disciplinary procedures up to and including immediate dismissal.

ACCIDENT/INCIDENT INVESTIGATION REPORTING

Purpose of Accident Investigations

There are two basic reasons why you should investigate an accident or incident:

1. To fulfill your legislated health and safety responsibilities.
2. More important, to identify the causes so steps can be taken to prevent the accident or incident from happening again.

The Need for a Thorough Investigation

To prevent accidents you need to know their causes, and to discover their causes you need to investigate them thoroughly enough to correctly identify the REAL causes. If you don't do this, your investigation will be a waste of time and money. ***Don't Speculate... Investigate!***

Find the True Cause of the Accident

In investigating accidents, many people look only for the unsafe acts or conditions, but fail to look for the cause. For example, an employee trips on a piece of scrap and sprains an ankle. The unsafe act was not looking where the worker was going or placing his feet. The unsafe condition was poor housekeeping, which resulted in the scrap, but the lack of adequate scrap containers was the true cause of the accident. Accident investigation is a fact-finding mission, not a fault finding exercise.

TYPES OF ACCIDENT/INCIDENT INVESTIGATIONS

Significant Incidents

- A work stoppage due to unsafe conditions
- A close call or near miss
- Sabotage
- Environmental danger

Property or Equipment Damage

- Equipment failure, damage or loss
- Vehicle accidents (without personal injury)

Personal Injuries (Definitions)

Critical Injuries. These are injuries defined by legislation as an injury of serious nature that:

- Places a life in jeopardy;
- Produces unconsciousness;
- Results in substantial blood loss;
- Involves the fracture of a leg or arm but not a finger or toe;
- Involves the amputation of a leg, arm, hand or foot but not finger or toe; consists of burns to a major portion of the body; or causes the loss of sight in an eye.

Lost Time Injuries:

These are injuries that are disabling enough that a worker will not be able to do modified work on the day following the injury.

Medical Aid Injuries:

Are injuries that require treatment from a medical doctor, chiropractor or dentist, but allow the worker to return to a work assignment?

First Aid:

Treatment rendered (usually on the jobsite) to enable an employee to return to work immediately.

ACCIDENT REPORTING RESPONSIBILITIES

The Employee

- Will report all incidents involving personal injury and potential incidents to their supervisor.
- Will report any medical attention sought after working hours, to their immediate supervisor.
- Will report all equipment, vehicle and property damage, to their immediate supervisor.

The Supervisor

Will report details of all first aid, medical aid, lost time, equipment damage, vehicle damage, near misses and potential loss incidents in their area of responsibility to their immediate supervisor, as soon as notified.

The Superintendent or General Supervisor

All medical aid, lost time and critical injuries are to be reported to Senior Management and the client contact (if required) as soon as possible after the injured party has been attended to and the area isolated (if required)

- The Safety Manager is to be notified immediately in all cases where the injury could possibly be interpreted as "critical" or is of a serious nature.
- Where the jobsite supervisor is unable to reach the Safety Manager in the case of a "Critical Injury" (by definition) will immediately notify the local Ministry of Labour Safety Office by telephone, telegram or other direct means.
- All equipment, vehicle or property damage is to be reported to the Divisional Manager.
- Crane roll over and serious rigging failures are to be reported to the Safety Manager and/or Divisional Manager as soon as possible.
- All incidents where there was the potential for a serious loss are to be reported to the Safety Manager.

The Manager

Will report all medical aid, lost time, and critical injuries to the appropriate government agency and officers and to the company President.

ACCIDENT INVESTIGATION

Initial Accident / Incident Investigation

The immediate supervisor is responsible for conducting an initial investigation of all accidents in the work area. However, certain accidents due to their severity and complexity require investigation and participation by specific members of the line and corporate organization. The following is a guide to the selection of the investigation team. It should be recognized that these are guidelines and participation may vary due to the severity of the incident and the availability of personnel.

Accident / Incident Investigation

The project manager is responsible for ensuring that all accidents and incidents are investigated.

However, the level of investigation is dependent on the severity of the accident. First aid cases do not require investigating but should be analyzed in sufficient depth to be assured that no learning experience is missed.

Investigations should be conducted promptly and without bias. It is essential that all facts concerning the accident are covered.

To this aim, the following procedure is recommended.

- Physically check the conditions at the site of the accident including any equipment, material, tools, or environmental condition that could have been a contributing cause of the accident.
- Establish factually what happened by interviewing the injured persons, witnesses, and supervisor responsible. If possible, have the witnesses and the injured persons return to the positions they were in when the accident occurred provided that no danger is involved.
- Determine the conditions or actions that led to and caused the accident.
- Prepare a list of recommendations for preventing a similar accident.

In the case of a fatality or critically injured person, the constructor and employer must conform to all requirements as described in the Provincial Occupational Health and Safety Acts and Regulations of the province in which the accident occurred.

The project manager, or an appointed delegate, must inform their home office of any work-related injury or illness requiring treatment beyond the first-aid level, *on the same day as the accident occurred.*

ACCIDENT INVESTIGATION - WHO WILL PARTICIPATE

Near Misses

The immediate service supervisor will do the initial investigation and report it to their CEO/President. Where there was the potential for a serious injury or a major property loss, the CEO/President should be involved in the investigation.

First Aid Injuries

The injured worker's immediate foreperson is to complete the Accident Investigation Form and send one copy to the Manager. The superintendent or division manager is to be notified. Again, where there was potential for a serious injury, senior management is to take part in the investigation.

Medical Aid Injuries

The injured worker's immediate foreperson and superintendent or general foreperson are to investigate the accident. The manager is to be sent a copy of the report within 24 hours of the accident. Senior management is to take part in the investigation if there was potential for more serious injury.

Lost Time Injuries

The immediate foreperson, the general foreperson and/or superintendent are to begin the investigation and the divisional manager is to assist or take part as soon as possible. The manager is to be notified within 24 hours.

Serious Lost Time or Critical Injuries

(Note: It is important to establish as soon as possible whether the injury is in fact a critical injury by definition. If there is doubt as to whether it is a critical injury, a foreperson or worker who is not involved in the accident investigation should be dispatched to the hospital and should report back to the job site as soon as a description of the injuries is available).

The immediate foreperson, superintendent or general foreperson is to immediately notify the division manager. The investigation of a critical injury should also include the worker and senior manager. In the case of a critical injury the provincial safety enforcement branch (Ministry of Labour, Ontario) is to be notified immediately. The superintendent or general foreman is to start the investigation as soon as possible. Witnesses (who actually saw the accident happen) should not leave the workplace until interviewed by the "investigation team" and any provincial safety officials (Ministry of Labour, Ontario).

Fatality

The divisional manager is to be notified immediately. The divisional manager is to notify the Company President as soon as possible. The appropriate provincial government officials are to be notified immediately. Witnesses should be asked to remain at the workplace until interviewed by the investigation team.

NOTE: In the case of fatality or critical injury the accident scene is not to be disturbed until permission is granted by the appropriate government authority(Ministry of Labour), except to prevent further injury or major property damage. Do not complete official documents until the accident has been thoroughly investigated. Official forms should be signed and submitted by a senior company official only.

In Ontario, the Safety Manager is the only person to submit Workplace Safety & Insurance Board Accident Reports and Ministry of Labour Accident Notification Reports.

ACCIDENT INVESTIGATION FORMS AND GUIDES

The following is a guide to the various safety forms and their use.

Waterloo Manufacturing Company Ltd. Accident Investigation Form

For all injuries, this is to be filled out by the injured worker's supervisor and faxed or delivered to the Divisional office within 24 hours of the injury. In Ontario this is to be faxed or delivered to the Safety Manager within 24 hours.

Employee Work Limitation Form

To be filled out by the treating physician at the time the worker is first treated. The worker is to be accompanied to the hospital if possible by the worker's supervisor. The supervisor is to ensure the doctor is given the form to be filled out and the form is delivered to the Office.

Accident Investigation Form

Critical/Serious Lost Time Accident Investigation Guide: This guide was designed to assist in ensuring a complete description and "picture" of the accident as possible.

Safety Supplies

Tags, notices, signs, posters and copies of this manual are all available from Waterloo Manufacturing Company Ltd. Some are unique to the company and can only be obtained there. Others may also be acquired from your provincial construction safety organization, Workplace Safety & Insurance Board or commercial enterprises such as Safety Equipment Suppliers.

The most crucial safety supply you already have:

Your knowledge and common sense!

ACCIDENT / INJURY REPORT

Waterloo Manufacturing Company Ltd. requires that this form be: (1) Completed by the Foreman on-site. (2) That a phone call be placed IMMEDIATELY to the Manager notifying of serious accidents: (519)-884-0600 or 1-800-265-8809. (3) That this form be Faxed or Couriered to the Office ON THE DAY of the accident (519)-884-0213.

Guidelines for Conducting an Accident Investigation

The primary purpose of investigating an Accident or Injury is to determine the basic or underlying causes so that supervision can act to prevent a recurrence. Investigation should be started as soon as possible after the accident.

ACCIDENT/INJURY REPORT

Worker's Identification

Last Name: _____ First Name: _____

Address: _____ City/Town: _____Province: _____

Postal Code: _____ Phone: ( ) _____Social Insurance Number: _____

Date of Birth: Day: ___ Month: ____Year: ____ Sex: M F

Employee #:_____ Date of Hire: _____Occupation: _____

Years of Experience: _____ Injury: Date _____ Hour: _____(am) (pm)

Reported to Supervisor: _____ Date: _____ Hour: _____(am) (pm)

Did the injured worker return to work? Yes No

Name/Address of hospital or doctor: _____

_____

Any witnesses to this incident? Yes No

Witness Name: _____

Address: _____City/Town: _____Province: _____

Postal Code: _____Phone: _____

Company where he/she is employed: _____

Name of Project: _____Job: _____

Location of Project: _____ Site Phone: _____

Name of Superintendent: _____Name of Foreman: _____

ANSWER ALL QUESTIONS. Explain "YES" answers on the back of this form or attach a letter if necessary.

1. Was anyone not in your employ totally or partially responsible for the accident? **No Yes**
2. Do you have any reason to doubt the history of the injury? **No Yes**
3. At the time of the injury, was the employee doing work other than for the purposes of the employer's business? **No Yes**
4. Was there any serious and wilful misconduct involved? **No Yes**
5. To your knowledge, has the employee had a previous similar disability? **No Yes**

ACCIDENT/INJURY REPORT (Cont'd)

Do you have any information the employee could have returned to work earlier?

No Yes

Will the employee be totally or partially disabled beyond the day of the injury?

No Yes

(A) WHAT HAPPENED? (Explain the results of the accident. Example: Ladder fell on welding machine and both pieces of equipment were damaged; or worker was using an epoxy mixture and developed a rash on left arm. Please "SPECIFY" part of the body.)

(B) WHY DID THE ACCIDENT OCCUR? (This is the most critical section of the report - give your honest and sincere effort. Please state-why, when, what, where and who was involved in this accident?)

What instruction, warning, training or caution was given before the accident?

Was the injured worker wearing the appropriate protective equipment? If no, why?

How can a similar accident be prevented in the future?

"First Aid Report" **No Yes**

"Medical Aid" (Worker seen by Doctor) **No Yes**

"Lost Time" Injury **No Yes** Ambulance required **No Yes**

Does worker realize we have a light duty program to accommodate his temporary work limitations and restrictions, with no loss of pay? **No Yes**

Has the worker been requested to bring a Doctor's Report stating the condition of his/her injury? **No Yes**

Complete ONLY if Reporting a "Lost Time Injury"

Hours of work: From: _____ To: _____

Date/Hour last worked _____

Normal working hours on last day worked: _____ From: _____ To: _____

Estimated length of time off: _____ Additional Comments: _____

Supt./Foreman

Signature: _____ Position: _____ Date: _____

Functional Abilities Form

Waterloo Manufacturing Company Ltd.
Health & Safety
Policy & Procedure Manual

FAF

Functional Abilities Form
for Planning Early and Safe Return to Work

A. Section A to be completed by the employer and/or worker.

Worker's Last Name	First Name	Telephone
Address (no., street, apt.)	City/Town	Province / Postal Code

Employer's Name	Date of Birth (dd/mm/yyyy)
Full Address (No., Street, Apt.)	Date of Accident/ Awareness of Illness (dd/mm/yyyy)
City/Town / Prov. / Postal Code	Employer Telephone
	Employer Fax No.

fold

1. Type of job at time of accident (where available, please attach description of job activities)	Area(s) of injury(ies)/illness(es)
2. Have the worker and the employer discussed Return To Work ☐ yes ☐ no	if no, will be discussed on dd mm yyyy
3. Employer contact name	Position

fold

B. Worker's Signature

Signature	Date dd mm yyyy

C. Health Professional's Billing Information

Health Professional's Designation
☐ Chiropractor ☐ Physician ☐ Physiotherapist ☐ Registered Nurse (Extended Class) ☐ Other

PROVIDER BILLING INFORMATION IN THE BOLDED AREA OF SECTION C SHOULD NOT BE PROVIDED TO THE WORKER OR EMPLOYER.

Health Professional's Name (please print)	**Your Invoice Number**
Address (No. Street, Apt.)	Service Code **FAF**
City/Town / Province / Postal Code	Fax

I hereby declare that the information being submitted in Sections C, D, E and F of this form is true and complete.

Health Professional's Signature	Telephone	Date dd mm yyyy

Waterloo Manufacturing Company Ltd.
Health & Safety
Policy & Procedure Manual

FAF

Functional Abilities Form
for Planning Early and Safe Return to Work

Worker's Last Name	First Name	

D. The following information should be completed by the Health Professional to identify the patient's overall abilities and restrictions.

1. Date of Assessment dd mm yyyy

2. Please check one:

- ☐ Patient is capable of returning to work with **no restrictions.**
- ☐ Patient is capable of returning to work **with restrictions.** Complete sections **E and F.**
- ☐ Patient is physically unable to return to work at this time. Complete section **F.**

E. Abilities and/or Restrictions

1. Please indicate **Abilities** that apply. Include additional details in section 3

Walking:
- ☐ Full abilities
- ☐ Up to 100 metres
- ☐ 100 - 200 metres
- ☐ Other (please specify)

Standing:
- ☐ Full abilities
- ☐ Up to 15 minutes
- ☐ 15 - 30 minutes
- ☐ Other (please specify)

Sitting:
- ☐ Full abilities
- ☐ Up to 30 minutes
- ☐ 30 minutes - 1 hour
- ☐ Other (please specify)

Lifting from floor to waist:
- ☐ Full abilities
- ☐ Up to 5 kilograms
- ☐ 5 - 10 kilograms
- ☐ Other (please specify)

Lifting from waist to shoulder:
- ☐ Full abilities
- ☐ Up to 5 kilograms
- ☐ 5 - 10 kilograms
- ☐ Other (please specify)

Stair climbing:
- ☐ Full abilities
- ☐ Up to 5 steps
- ☐ 5 - 10 steps
- ☐ Other (please specify)

Ladder climbing:
- ☐ Full abilities
- ☐ 1 - 3 steps
- ☐ 4 - 6 steps
- ☐ Other (please specify)

Travel to work:
- Ability to use public transit: ☐ yes ☐ no
- Ability to drive a car: ☐ yes ☐ no

2. Please indicate **Restrictions** that apply. Include additional details in section 3

- ☐ Bending/twisting repetitive movement of (please specify)
- ☐ Work at or above shoulder activity:
- ☐ Chemical exposure to:
- ☐ Environmental exposure to: (e.g. heat, cold, noise or scents)
- ☐ Limited use of hand(s):

	Left	Right
Gripping	☐	☐
Pinching	☐	☐
Other (please specify)	☐	☐

- ☐ Limited pushing/pulling with:
  - ☐ Left arm
  - ☐ Right arm
  - ☐ Other (please specify)
- ☐ Operating motorized equipment: (e.g. forklift)
- ☐ Potential side effects from medications (please specify) Do not include names of medications.
- ☐ Exposure to vibration:
  - ☐ Whole body
  - ☐ Hand/Arm

3. Additional Comments on **Abilities and/or Restrictions.**

4. From the date of this assessment, the above will apply for approximately:
☐ 1 - 2 days ☐ 3 - 7 days ☐ 8 - 14 days ☐ 14 + days

5. Have you discussed return to work with your patient? ☐ yes ☐ no

6. Recommendations for work hours and start date: ☐ Regular full-time hours ☐ Modified hours ☐ Graduated hours

Start Date dd mm yyyy

F. Date of Next Appointment

Recommended date of next appointment to review **Abilities and/or Restrictions.** dd mm yyyy

I have provided this completed Functional Abilities Form to: ☐ **Worker** **and/or** ☐ **Employer**

CRITICAL/SERIOUS LOST TIME ACCIDENT INVESTIGATION GUIDE

Use the following as a guideline to follow when performing an accident investigation to ensure you are getting as complete a picture as possible of what happened. Have you clearly identified:

Who?

- Who was involved in the accident?
- What is their job?
- What were they doing at the time of the accident?
- Were they properly trained for the job?
- Who else witnessed the accident?
- What were they doing at the time of the accident?
- Where were they at the time of the accident?
- Who saw what happened?
- Who heard what happened?
- Who reported the accident?

What?

- What equipment was involved?
- What was it being used for at the time?
- Was it being used under normal circumstances?
- What was its condition (use, maintenance etc.)?
- Was the equipment properly guarded?
- What materials were involved?
- What were they being used for?
- Was this a proper use?
- What known hazards do these materials present or pose (i.e. toxicity, radiation etc.)?
- If hazards exist, were the materials being used/handled properly?
- Were proper procedures in place?
- Do procedures need upgrading?

Where?

- Where did the accident happen?
- What was the layout?
- What was the condition of the workplace site at the time?
- Could weather have played a factor in the accident?
- Where did the accident happen in the flow of operations?

- Where were the people (identified in the 'who' above) positioned relative to the accident?

When?

- When was the accident reported?
- At what time in the working day did it occur? On what day/time?

How?

- How was the accident made known or discovered?
- Do you need to re-interview witnesses?

SITE SAFETY INSPECTIONS

It is recognized that good conditions reduce the risk of injury to all present at the work site and contribute greatly to the overall productivity of the project.

The various Provincial Occupational Health and Safety Acts and regulations describe the responsibility for conditions and people at the work site as that of line supervision, who therefore have the responsibility for safety inspections. Inspections conducted by the Safety Manager are for the purpose of auditing the effectiveness of supervision.

Visual Inspection

First line supervisors should always be on the lookout for unsafe acts and conditions in the workplace. Immediate action should be taken to correct such a situation. Management should be informed of any situations found, and of actions taken.

DOCUMENTED INSPECTIONS

Safety Audit

The Project Manager should do a monthly safety audit. The project manager's safety audit form should be completed and a copy sent to The Division Manager and Corporate Manager.

WORKPLACE INSPECTION FORM

ITEM	GOOD	ISSUE	REMARKS
Propane Stored			
Oxygen Acetylene			
Fire Extinguishers			
Exits Clear			
Lighting			
First Aid Station			
Walkway Clear			
Towmotor			
Safe Storage			
Emergency Lights			
Outside Lights			
Exit Lights			
Ladders			
Unit Heaters			

DATE:
ACTION ITEM:

SIGNATURE:

SAFETY AND HEALTH MEETINGS

Tool Box Meetings

The Project Manager shall ensure that bi-weekly tool box meetings of approximately five-minute duration are held. They shall be conducted by first line supervision and will include the entire workforce under their control.

Topics for discussion should include:

- Possible safety hazards and exposure that apply directly to the individual workers;
- Site rules and behaviour expected;
- Safety regulations.

Safety suggestions should be solicited, discussed and put into practice. Tool box safety meetings shall:

- Be held bi-weekly, or more often at the discretion of the Project Manager;
- Start on time (limited to five minutes);
- Be controlled (concentrate on safety);
- Be planned (use notes on accidents that occurred, unsafe practices noted during the past week, and notes on hazards and safe practices for the week ahead. Pass on information from project safety meetings).
- Encourage suggestions and discussions.
- Be recorded by an appointed representative.
- Be "followed-up" to see that all decisions are carried out.

The crew should feel free to contribute ideas about improving safety on site. Suggestions by employees must be followed up. Making changes based on workers' suggestions reinforces a feeling of involvement. Ignoring their suggestions creates resentment and destroys morale on the jobsite.

Safety Orientation

Upon hiring, all workers are to be given a site safety orientation. This is to include use of personal protective equipment, especially fall arrest; accident reporting procedures, safety rules specific to that job site, housekeeping, etc.

HOUSEKEEPING

Many injuries result from poor housekeeping, improper storage of materials and cluttered work areas are not safe. To maintain a clean, hazard-free workplace, all groups' management, supervision, and workers must cooperate.

General

Regulations for safe housekeeping require:

- Daily job site cleanup program
- Disposal of rubbish
- Individual cleanup duties for all workers
- Materials piled, stacked, or otherwise stored to prevent tipping and collapsing
- Materials stored away from overhead power lines
- Work and travel areas kept tidy, well-lit, and ventilated
- Signs posted to warn workers of hazardous areas

Specific

- Gather up and remove debris as often as required to keep work and travel areas orderly.
- Keep equipment and the areas around equipment clean of scrap and waste.
- Keep stairways and passageways free of materials, supplies and obstructions at all times.
- Secure loose or light material stored on roof or on open floors to prevent blowing by wind.
- Pick up, store, or dispose of tools, materials, or debris, which may cause tripping or other hazards.
- Wear eye protection when there is any risk of eye injury
- Do not throw materials or tools from one level to another.
- Do not lower or raise any tool or equipment by its own cord or supply hose.
- When guardrails must be removed to load, unload, or handle materials; wear fall-arrest equipment. The area must also be roped off with warning signs posted.
- Around pipe threading machines and similar equipment, keep the immediate area clean of scrap to avoid tripping hazards and provide sound footing.

Flammable Materials

- *Use* copper grounding straps to keep static electricity from building up in containers, racks, flooring, and other surfaces.
- Store fuel only in containers approved by the Canadian Standards Association (CSA) or Underwriters' Laboratories of Canada (ULC).

- Ensure that electric fixtures and switches are explosion-proof where flammable materials are stored.

Hazardous Chemicals

- Refer to material safety data sheets (MSDSs) for specific information on each product.
- Follow manufacturer's recommendations for storage
- Observe all restrictions concerning heat, moisture, vibration, impact, sparks, and safe working distance.
- Post warning signs where required.
- Have equipment ready to clean up spills quickly.
- For special handling and disposal later, store empty containers in secure area away from full containers.

Compressed Gas Cylinders

- Store and move cylinders in the upright position. Secure cylinders upright with chains or rope.
- Lock up cylinders to prevent vandalism and theft.
- Wherever possible store cylinders in a secure area outdoors.
- Keep full cylinders apart from empty cylinders. Empty cylinders are to be stored outside.
- Store cylinders away from heat sources.
- When heating with propane, keep 45-kilogram (100 lb.) cylinders at least 4.5 meters (15 feet) away from heaters; keep large tanks at least 7.6 meters (25 feet) away.

Fire Protection

Housekeeping includes fire prevention and fire protection.

Fire extinguishers must be:

- Accessible
- Regularly inspected
- Promptly refilled after use.

Extinguishers must be provided:

- Where flammable materials are stored, handled, or used
- Where temporary oil or gas fired equipment is being used
- Where welding or open-flame gutting is being done
- On each story of an enclosed building being constructed or renovated
- In shops for at least every 300 square meters of floor area.

Fire extinguishers are classified according to their capacity to fight specific types of fires. Don't wait for a fire before learning how to operate the extinguisher in your work area. Extinguishers have a very short duration of discharge-usually less than 60 seconds. Be sure to aim at the base of the fire. On industrial projects be aware of where the nearest fire hose is available.

Evacuation Procedure (Off-Site)

Prior to the start of a project, an emergency evacuation procedure will be determined by the client's representative and the Project Manager. The information contained will include the client's emergency signal system, the method and location of degrees, the emergency assembly points, emergency telephone numbers and client contact. All workers are to be informed about the evacuation procedure prior to starting work on the project.

The following is a minimum guideline:

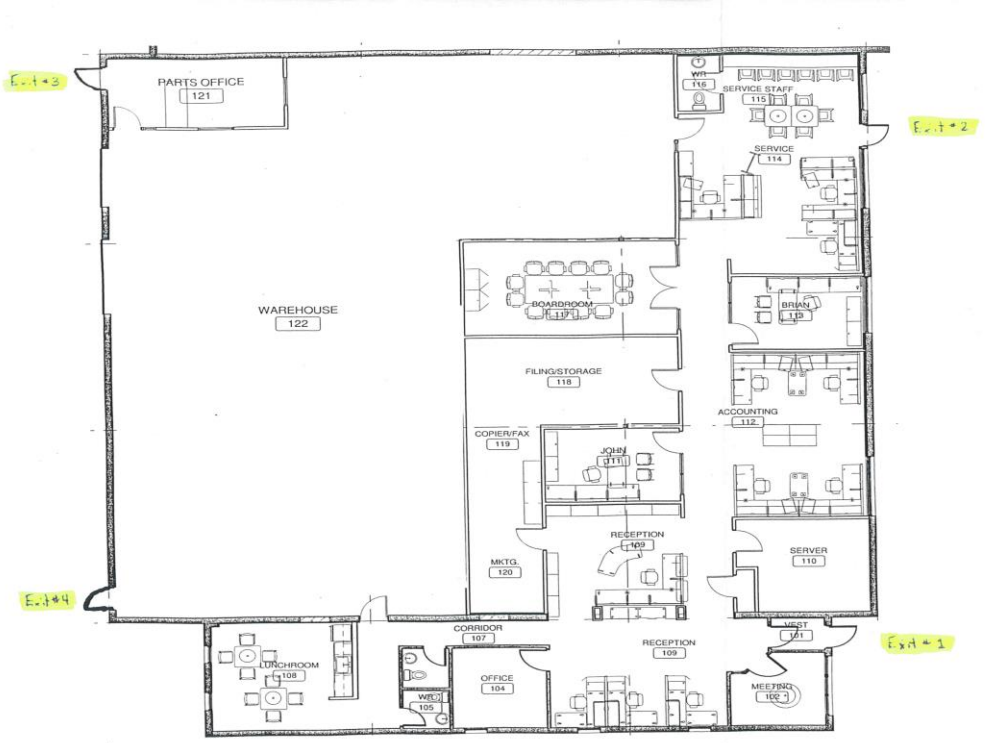
Upon hearing an emergency signal, all personnel must:

- Shut off all equipment (welders, oxyacetylene equipment, vehicles, cranes, etc.);
- Vacate the area via the predetermined method and locate at the assembly point;
- Be counted by delegated supervision, who will notify the client's representative;
- Wait further client instructions;
- Not re-enter the area until so instructed.

Evacuation Procedure (WATERLOO MANUFACTURING-SITE)

When the fire alarm is sounded the staffs is to exit out the closest door to their location and gather in the front out on the lawn or in the rear along the fence. See attached layout.

Waterloo Site Building Schematic



IN CASE OF EMERGENCY

Exit out of the closest door and assemble in the designated areas:

Exit 1 & 2, in front of the building, meet out on the lawn.

Exit 3 &4, in the rear of the building, meet alongside the fence.

Waterloo Manufacturing Employees:

Brian D. Taylor Sr.
John G. Kraemer Sr.
John J. Kraemer Jr.
Brian D. Taylor Jr.
Helen Wilhelm
Ann Denny
Doreen Budden
Donna McKay
Tammy Hopkins
Brad Finlayson
Ken Naugler
John Clay
Bob Stark
Bob Baker
Rudy Gostel
Rob Brown
Andy Goodwin
Bill Doerbecker
Luke Blundon
John McNaughton
Brian McDonald
Delford Schneider
Luc Brault

PERSONAL PROTECTIVE EQUIPMENT

General

The following are the minimum recommended requirements for personal protection. For your personal safety on the job **DO NOT WEAR**:

- Loose clothing or cuffs
- Greasy or oily clothing, gloves, or boots
- Torn or ragged clothing
- Finger rings
- Earrings

Neck chains are hazardous and must be worm under clothing so that they don't hang out; long hair must be tied back or otherwise confined.

Clothing made of synthetic fibres can be readily ignited and melted by sparks, flame, or electric flash. Cotton or wool fabrics are more flame-retardant and therefore recommended.

Head Protection

Workers must obtain and wear, at all times on the job when required, a Canadian Standards (CSA) certified safety hat, or if applicable, it's equivalent.

Safety hats must not be painted.

The shell and suspension of safety hats must be inspected regularly and replaced if cracks, deep scratches, or other defects are detected.

Foot Protection

At all times on the job, construction workers must wear CSA-certified Grade I footwear. Such boots bear a green triangular patch stamped with the CSA registered trademark on the outside and a rectangular green label on the inside.

It is recommended that workers wear electric shock resistant footwear identified by a white rectangular label bearing the CSA trademark and the Greek letter omega Ω in orange. This footwear does not provide absolute protection from electrocution but does provide some shock resistance in dry locations.

Skin Protection

Always dress suitably for work. Clothes are your first line of defence against hazards on the job. Items such as denim coveralls and long-sleeve cotton shirts protect you against minor scrapes and bruises as well as harmful ultraviolet exposure outdoors.

Regulations require protection where there is a risk of injury from contact between a worker's skin and;

- A noxious gas, liquid, fumes, or dust
- An object that may puncture, cut, or abrade the skin
- A hot object, hot liquid or molten metal radiant heat.

Gloves are very effective against most minor cuts, scrapes, and abrasions. Gloves are recommended for work with sharp or abrasive materials.

Eye Protection

- For basic eye protection, wear properly fitted industrial quality safety glasses with side shields.
- Specific classes of eye protectors should be matched to specific hazards.
- Detailed consideration should be given to the severity of all hazards in selecting the most appropriate protector or combination of protectors.
- Optimum eye protection sometimes requires a combination of different classes of eye protectors.
- When using bench grinders or portable grinders, full face shields must be used.
- When working with liquids that could splash, chemical goggles must be worn.

Hearing Protection

Each worker should have hearing protection available at work since continuous exposure to excessive noise from certain construction activities can lead to hearing loss.

Hearing protection is available in three general types:

- Disposable ear plugs (made of pliable material one size fits all but can be used only once)
- Permanent plugs (must be fitted to provide a good seal but can be washed and reused)
- Earmuffs (when properly fitted and worn, these generally provide more protection than earplugs)

Personnel working in noisy areas or with noisy equipment should wear hearing protection. Prolonged exposure to high noise levels is harmful.

Fall-Arrest Systems

Regulations require that, unless a safety net or travel-restraint system is being used, a fall-arrest system must be worn if a worker may fall:

- More than three meters
- Into operating machinery
- Into water or other liquids
- Into or onto hazardous substances or objects.

A fall-arrest system consists of:

- Full body harness
- Lanyard (shock absorbing type)
- Rope grab. Lifeline
- Lifeline anchor.

All full body harnesses and lanyards should be CSA-certified. Full body harnesses should be snug- fitting and worn with all hardware and straps intact and properly fastened. Lanyards must be a shock absorbing type. When a lanyard is wire rope or nylon webbing, a shock absorber must be used.

Lifelines

All lifelines must be:

- 16 millimetre diameter polypropylene or equivalent. Used by only one worker at a time
- Free from any danger of chafing, free of cuts, abrasions, and other defects
- Long enough to reach the ground or knotted at the end to prevent the lanyard from running off the lifeline
- Secured to a solid object (remember, the arrest load can be as high as 2,000 pounds)

Rope-Grabbing Devices

To attach the lanyard of a safety belt or safety harness to a lifeline, use a mechanical rope grab that meets CSA Standards.

Respiratory Protection

Service personnel are sometimes exposed to respiratory hazards generated by equipment, materials, or procedures such as spray-painting and welding. Although proper work practices and engineered controls may be used to reduce these hazards, often the only practical control is respiratory protective equipment.

Protection is ensured not only by the respirator but also by its proper selection and use.

To select the proper respirator for a particular job, you must know the characteristics of the hazard, the anticipated exposure, and the limitations of the equipment. Respiratory equipment should only be selected by a supervisor or safety manager who understands all three factors.

Respiratory hazards may be present as:

Gases - Common toxic gases in construction are carbon monoxide from engine exhaust and hydrogen sulphide in sewers.

Vapours - Vapours are produced by solvents such as xylene, toluene, and mineral spirits used in paints, coatings, and degreases.

Fumes - Welding fume is the most common type of fume in construction. Other examples include pitch fume from coal tar in built-up roofing and fumes from diesel engines.

Mists - The spraying of paint, form oils, and other materials generates mists of varying composition.

Dusts - Dusts are generated by crushing, grinding, sanding, or cutting. Two common dusts in construction are fibrous dust from insulation materials and non-fibrous silica dust from sandblasting.

Controls

Work areas must be ventilated to reduce hazards from dusts, fumes, mists, gases, or vapours.

Where ventilation is not practical, workers must be provided with respirators appropriate to the hazards and be trained to use and maintain the respirators properly.

Where disputes arise over the need for ventilation or the type of protection to be worn in a work area, the Provincial Safety Enforcement Office (e.g. Ministry of Labour) must be summoned to settle the dispute and advise the proper method and equipment to be used. Workers affected must not enter the area in question until the Ministry of Labour has resolved the dispute.

Respirators are divided into two types:

- Air-purifying respirators purify inhaled air from the surrounding air but cannot replenish or increase its oxygen content
- Supplied-air respirators deliver clean breathing air from a compressor or cylinder.
- For clarification or advice on selecting the correct type of respirator or cartridges contact your Manager.

- Air-purifying respirators simply remove certain airborne hazards. They do not increase or replenish the oxygen content of the air and should never be worn in atmospheres containing less than 19.5% oxygen.

Air-Purifying Respirators

These devices purify the air drawn through them. Although various filters have been designed for specific hazards, there are two basic types used with air-purifying respirators: mechanical and chemical.

Supplied-Air Respirators

Although supplied-air respirators provide the best protection against many hazards, they present their own set of problems. With self-contained breathing apparatus (SCBA), there are problems with weight and limited service life. With airline units, the breathing hose can be snagged or tangled. Another concern relates to the quality of air stored in cylinders and supplied by compressors. For good breathing, this air must meet high standards. Waterloo Manufacturing Company Ltd. must be contacted at least two weeks prior to the use of supplied-air respirators.

Fit Testing

With every respirator except hoods or helmets, a tight seal is required between face piece and face. Employees need to be clean shaven when wearing a respirator. Positive or negative pressure tests can be used to check fit.

Negative Pressure Test - Block inlets. Inhale gently. Respirator should collapse slightly and not allow any air into face piece.

Positive Pressure Test - Cover exhaust port and try to exhale gently. The face piece should puff away from the face but no leakage should occur.

Ladders

The following are major causes of accidents:

- Ladders are not held, tied off or otherwise secured.
- Slippery surfaces and unfavourable weather conditions cause workers to lose footing.
- Workers fail to grip ladders adequately when climbing up or down.
- Workers take unsafe positions on ladders (such as leaning too far)
- Placement on poor footing or at improper angles causes ladders to slide.
- Ladders are defective.
- High winds cause ladders to topple.
- Near electrical lines, ladders are carelessly handled or improperly positioned.

Wooden Ladders

- Never paint a wooden ladder. Paint hides signs of deterioration and may accelerate rotting by trapping moisture in the wood. Treat with a clean, non-toxic wood preservative or coat with a clear varnish.
- Inspect frequently for splits, shakes, or cracks in side rails and rungs, warping or loosening of rungs, loosening of metal hardware, and deformation of metal parts.

Fibreglass Ladders

- Fibreglass reinforced plastic side rails do not conduct electricity well and are resistant to corrosion but are heat-sensitive. They must not be exposed to temperatures above 32 degrees Celsius
- Inspect regularly for cracks and "blooming" - tufts of exposed glass fibre where the mat has worn off. Coat the worn area with an epoxy material compatible with the fibreglass.

Step, Trestle and Platform Ladders

Step, trestle and platform ladders must have strong spreader arms which lock securely in the open position. Never stand on the top or pail shelf of a step ladder.

Fixed Ladders

Ladders permanently fixed to structures such as tanks, stacks, silos, and bins are often used by work crews during construction and renovation. Safety belts and lifelines or safety belts and channel lock devices must be used by workers ascending, descending, or working from the ladders. Safety belt devices are recommended even where safety cages are installed because the devices provide more positive fall protection than cages.

Ladder Use

- Check ladder for defects before use.
- Clear scrap and material away from the base and top of the ladder.
- Secure the base and top of the ladder against accidental movement.
- Set the ladder on a firm, level surface. On soft, uncompacted, or rough soil, use a mudsill. Single- width job built ladders are only meant for one worker at a time. A double-width ladder can be used by two workers provided they are on opposite sides.
- Make sure that rails on ladders extend at least 90 cm (3 feet) above the landing. This allows for secure grip while stepping on or off.
- Set straight or extension ladders one foot out for every 3 or 4 feet up, depending on ladder length
- Before setting up ladders, always check for overhead power lines.

- Do not position ladders against flexible or moveable surfaces.
- Always face the ladder when climbing up or down and while working from it.
- Maintain 3-point contact when climbing up or down. That means two hands and one foot or two feet and one hand on the ladder at all times.
- Keep your centre of gravity between the side rails. Your belt buckle should never be outside the side rails.
- When climbing up or down, do not carry tools or material in your hands. Use a hoist rope instead.
- Keep boots clean of mud, grease, or any slippery materials which could cause loss of footing.
- When working 3 meters (10 feet) or more above the ground or floor, wear a safety harness with the lanyard tied off to the structure or a lifeline.
- Never erect ladders on boxes, carts, tables, or other unstable surfaces.
- Use fall-arrest equipment such as ladder climbing devices or lifelines when working from long ladders or when climbing vertical fixed ladders.
- Vertical access ladders must:
    - Be fixed in position with side rails extending 900 mm (3 feet) above the top landing
    - Have rungs at least 150 mm (6 in.) away from the surface to which the ladder is attached
    - Be offset at rest platforms at least every 9 meters (30 feet), unless workers on the ladder use fall- arrest equipment
- Be equipped with a safety cage where workers may fall more than 3 meters (10 feet)
- Never use ladders horizontally as scaffold planks, runways, or any other service they not been designed for.
- Do not splice short ladders together to make a long ladder. The side rails will not be strong enough for the extra loads.
- Do not use ladders for bracing. They are not designed for this type of loading.
- Do not set up ladders in doorways, passageways, driveways, or any other location where they can be struck or knocked over.
- Never rest a ladder on its rungs. Ladders must rest on their side rails. To erect long, awkward, or heavy ladders, get help to avoid injury from over exertion.
- Before erecting, using, or working from ladders, always check for electrical hazards.
- Never use aluminum ladders near live electrical equipment or wires.

Inspection and Maintenance

Ladders should only be repaired by personnel competent in this kind of work.

Defective ladders should be taken out of service and either tagged for repair or scrapped.

- Inspect ladders for structural rigidity.
- Inspect non-skid feet for wear, imbedded material, and proper pivot action on swivel feet.
- Replace frayed or worn ropes on extension ladders with type and size equal to manufacturer's original rope.
- Check wooden ladders for cracks, splits, and rot.
- Check all ladders for grease, oil, caulking, imbedded stone and metal, or other materials that could make them unsafe.

HEALTH & SAFETY REPRESENTATIVES & COMMITTEES

There will be certain Waterloo Manufacturing Company Ltd. jobs where, under the Provincial Health and Safety Act and regulations, either Waterloo Manufacturing Company Ltd. or the general contractor will be required to establish and select either:

1. A Health and Safety Representative from among the workers, or
2. A joint Health and Safety Committee.

Either a representative or a committee can inspect safety conditions on the site by arrangement, or can accompany a Ministry of Labour Inspector with his/her permission. In addition, a committee can identify hazardous situations and can make recommendations regarding health and safety measures and procedures.

Please consult the Provincial Safety Association in your province for guidelines regarding safety representatives and committees.

First Aid Supplies and Personnel

Each site office will be equipped with a first aid kit, stocked as required by the Workplace Safety & Insurance Act. Re-stock these as required. As a job is staffed, a record must be made of names of holders of valid First Aid Course Certificates and their names posted conspicuously in the job office in case of accident.

The Inspector can give time limits for compliance and can also post notices, barricade areas and shut down equipment or operations. The job superintendent is to report at once: dates, times and other details of the order to the Waterloo Manufacturing Service Manager.

The Service Manager will file reports as called for under the Act to the appropriate bodies concerned.

What to Do When the Inspector Calls

Ministry of Labour, Department of Labour, or Workplace Safety & Insurance Board Officers/inspectors can enter a job site almost any time and have fairly broad powers to:

- Inspect
- Ask questions
- Give orders.

If the officer/inspector approaches you directly, answer their questions and co-operate. Locate your supervisor who should be told of any problem. Orders can be issued to "STOP WORK" or "COMPLY". If you receive, or are aware of, such an order, you must report it at once to your immediate supervisor and, of course, do what the order says.

NOTE: Copy of all orders issued must be faxed within 24 hours to the corporate office, 519-884-0213, Attention: Service Manager.

GENERAL GUIDELINES

Toxic and Flammable Substances

Do not enter any area or work on any line or tank, etc. used for storing or carrying flammable, explosive, toxic or noxious materials until you have (or are certain that someone else has) purged, vented and tested it to be free of any fumes or other risks.

Do not cut or weld in any such situation until you have the specific clearance of the in-plant fire department representative, if there is one, or the superintendent in charge. Make sure there is no other source of ignition around.

All such areas and containers are supposed to have clear warning notices or labels. Look for them. If any are missing, have them replaced or advise your supervisor immediately.

Workers exposed to toxic or other hazardous gases and materials may be required to take a medical examination from time to time.

Piping

Piping which contains materials that could explode, burn or otherwise hurt you is required to have labels stating contents and flow direction, placed at all valves and wherever the piping goes through walls. Look for and be guided by these labels. If they are not there, do not: work on, or close to the piping until a label has been put on by someone who knows the facts.

Never cut into a pipe or open a flange unless the pipeline has been cleaned and/or purged and valved off, pressure bled and locked out.

Machinery

Machinery, which has exposed moving parts, must have a guard to prevent injury. Stay outside the guards when working with or close to any operating machinery. See lockout procedure for working on machinery.

Gases and Welding

- All propane, oxygen and acetylene cylinders are to be upright and fastened securely on a portable buggy or to a solid support at all times, whether in use or not.
- All oxyacetylene torches shall be equipped with flashback arrestors.
- When cylinders are not in use or are being stored, you must close the valves securely and make sure the caps are properly in place.
- Do not store a cylinder on its side. Do not move it by rolling it. Do not leave it in the direct heat.

- An employee may cut, weld, burn or use open flame only when you have a proper fire extinguisher readily available to you.
- Place a shield around any of this work when you are doing it, if other workers not related to the operation are nearby. See that other workers involved in this operation are wearing proper eye protection.

Fishing Wires in Ducts, Conduits, Etc.

Handle fish wires only by hand or, on longer runs, with compressed air or vacuum. If you use other methods such as CO2, take appropriate safety precautions.

Company Vehicles

If you drive a company vehicle you are responsible for seeing that the vehicle and its equipment are in good working order. Report defects promptly to your supervisor.

You must obey all company regulations regarding vehicle safety and operation. At all times you must obey the law. On private property such as a job site you must operate in accordance with any special requirements such as the use of headlights, backup signals, etc.

Equipment, signs, etc. for special uses (e.g. carrying flammable materials, heavy hauling, and wide loads) are provided by the company. Request these as necessary through your supervisor.

Fork Lifts

Forklifts have maximum load labels. Check them and the separate load limit switches. Check the fastening and condition of the cab or screen. When a load is raised, do not leave the controls. Always rest the fork down solidly and set the brakes when leaving the vehicle. Any operator who can't clearly see the load and off-load points and the full path of travel should get a signaller. Both of them must know the "Standard Hand Signal" C.S.A. 0. 1966. Signallers must stand clear of the intended path of travel.

Forklifts are never to be used to lift personnel without the use of a proper lifting cage.

Forklifts, and any other internal combustion powered equipment being used indoors, must be taken outside to refuel, with the motor stopped and no ignition source within ten (10) feet.

Never lift a load greater than the rated capacity.

Temporary Barricades

Temporary barricades may not be moved unless the job superintendent or project safety coordinator specifically approves. If you get authorization to move one, you are responsible for putting it back.

Danger Tagging of Equipment

Where equipment presents a safety hazard that cannot immediately be eliminated or repaired, a danger tag should be attached to warn of the hazard.

a) Tags are red and black on white background saying
"DANGER - Do Not Operate."

They are available from Waterloo Manufacturing's Service Manager or from safety supply houses.

Each superintendent must ensure that there is a good supply on each site. Tags have a place for the date and time plus the name of the individual placing them. If you place one, fill it in; if you encounter one, read it.

B) Use tags to prohibit operation of anything they are placed on: valve, switch, circuit breaker or other equipment, which has been found defective.

Note: This applies to any defective item, including tools, scaffolding, rigging and other equipment. The person responsible for completing repairs can remove it after final testing.

CONFINED SPACES

A confined space is a work area where entry and exit are restricted by location, design, or construction and where equipment, operations or atmospheres may pose hazards to health and safety. Typical examples in our industry are de-aerators, feed tanks, fire tube boilers, and water tube boilers.

The physical hazards of confined spaces include:

- Poor entry or exit
- Cramped work conditions
- Extremes of temperature
- Operating equipment
- Reactive or corrosive residues
- Electrical, hydraulic, and pneumatic hazards.

Hazardous atmospheres can be:

- Flammable. Explosive
- Toxic
- Oxygen-enriched
- Oxygen-deficient

Regulations

- The Regulations for construction projects require that a worker must not be present in a confined space where there is, or is likely to be, hazardous gas, vapour, mist, dust, smoke, fume, or oxygen content less than 19.5% or more than 23% unless the following measures are taken.
- The confined space must be purged and ventilated to create and maintain an atmosphere that will not endanger workers.
- Suitable arrangements must be made to remove a worker from the confined space in case of emergency.
- Another worker must be stationed outside the space. If this worker is not trained to provide artificial respiration, a person trained to do so must be conveniently available.
- If the confined space cannot be adequately purged or ventilated, a worker may enter the space only under the following conditions:
- The worker must be equipped with suitable respiratory protection and a full body harness attached to a rope tied to a fixed support outside the space and held by a worker equipped with an alarm.
- There must be a means of communication between the worker inside the space and the worker outside.
- A person trained in artificial respiration, equipped and able to perform rescue operations must be readily available outside the confined space.

WARNING

Never try to rescue a worker overcome in a confined space unless you are trained and equipped to do so. Many workers trying to save their buddies have only become victims themselves. Call for emergency help.

Air- Testing

Special equipment for testing air quality may be required to identify or verify suspected atmospheric hazards in a confined space. The testing must be conducted by a competent, trained individual. If tests indicate a hazardous atmosphere, workers must not enter the space until adequate ventilation and subsequent tests ensure safe air quality. Ventilation must be continued and air quality monitored as long as workers are in the space.

Labelling

Read and understand the WHMIS supplier labels and other warnings on the products that you are required to use on the job.

- Follow the instructions for safe handling and use, particularly with regard to ventilation and any respiratory protection required.

Flammable Products

When using flammable materials in a confined space, take these precautions:

- Provide adequate ventilation, as described above.
- Control sparks and other potential ignition sources.
- Extinguish all pilot lights.
- Have fire extinguishers handy.

Contact cement is one example of a product with fire or explosion potential when used in a small room with poor ventilation, such as a bathroom. Deaths have occurred from explosion and fire when workers finished work and switched off the light in a room where solvent vapours from contact cement or adhesives had accumulated.

Tunnels and Utility Spaces

These confined spaces may present physical or atmospheric hazards. Many utilities are routed through tunnels or spaces below ground where hazardous atmospheres may collect from containers or operations above or be created by leaks in utilities such as gas and oil.

Shafts

Work to be done in shafts must be carefully planned. Because the work may be of short duration and require only a temporary platform, these jobs are often not given proper attention. But shafts can present various physical and atmospheric hazards against which safeguards must be planned and carried out.

The same requirements that apply to exterior work platforms apply to platforms used inside shafts, tanks, and similar structures, including the regulations regarding suspended access equipment. Because of the natural draw in shafts, airborne contaminants can be carried through quickly and in large volumes, sometimes with fatal results.

Other Spaces

In addition to the locales already described, beware of apparently harmless areas that can become hazardous because of the products being used there or the work being done. Basements, halls, and small rooms can be dangerous when lack of ventilation and hazardous materials or operations combine to create atmospheric hazards, e.g. application of floor sealants.

Heating

Heating in confined areas, particularly with propane, involves special hazards and safeguards. Propane is heavier than air and can collect in low-lying areas such as trenches, basements, and shaft bottoms. Propane can also be absorbed into clothing. Workers must therefore use extreme caution in the event of leakage or flameouts.

When propane is burned to fuel heaters and other equipment, it uses up oxygen and releases carbon monoxide and nitrogen oxides. To keep these gases at acceptable levels and to ensure enough oxygen for breathing, adequate ventilation must be provided and maintained.

- Store and secure cylinders upright at all times. Do not store propane indoors or near other fuel storage areas.
- Store cylinders away from buildings, preferably in a separate compound where there is no danger of being struck by falling material or moving equipment. A compound can be constructed from snow fence and T-bars. The barrier provides a means of tying the cylinders upright as well as controlling stock.
- Keep valves fully open to prevent freeze-up.
- Secure cylinders at least 10 feet but no more than 25 feet from the heater.
- Fuel-fired heating devices must not be used in a confined or enclosed space unless there is enough air for combustion and adequate ventilation.
- Protect heaters from damage and overturning.
- Vent exhaust from heaters outside the building or structure.

- Protect fuel supply lines and steam piping for temporary heat from damage.
- Keep a 4A, 40BC-fIre extinguisher available wherever propane fuel is being used.

Procedures for Confined Spaces

Confined space entries present so many different possible hazards that the best way to ensuring safety is to address each problem systematically.

1. Determine the likelihood of a dangerous atmosphere caused by the contents of the space, the work to be done and the activities or processes conducted nearby.
2. Review the drawings, specifications and notes to determine the physical hazards to be dealt with, for example, equipment to lock out, lighting requirements and access.
3. Review the work to be done taking into account the tools and materials needed as well as the possibility of a dangerous atmosphere generated by the work itself.
4. Review emergency procedure and communications with the standby worker.
5. Check the safety equipment needed: safety harnesses and rope, gas detectors, ventilator, fire extinguisher, first aid kit, gloves, respirators, other protective equipment.
6. Get "local knowledge" of any special toxic gases to be checked for (e.g.: in or adjacent to refineries and industrial settings)
7. Ensure all pipes and equipment that could endanger a worker are blanked and/or locked off.
8. Check for dangerous atmospheres at the scene (oxygen content, toxic gases and explosive gases) with a gas tester. Record the readings on the attached record form, Oxygen levels must not be lower than 19.5% and not higher than 23%. There must be a zero (0) explosive reading. There must be a zero (0) Carbon Monoxide (CO) reading. There must be a zero Hydrogen Sulphide (H2S) reading. Any readings outside of these guides will result in the stoppage of the work process in preparation for confined space entry. An immediate phone call to the Safety Manager is to be made. No work is to proceed until the Safety Manager or the onsite Safety Coordinator gives approval to do so.
9. If readings are OK to proceed with work, ventilate the confined space.
10. If gas checks are OK after ventilation, proceed with the work but continually test the atmosphere at breathing level of the worker in the confined space.
11. If the gas tester alarms for any reason, the worker in the confined space is to immediately stop work and leave the confined space taking the gas tester with him if possible.
12. If the Standby Worker hears the tester alarm, he is to immediately try communicating with the worker in the confined space. If the worker in the

confined space cannot exit on their own, the safety watch is to call for assistance.

13. The Standby Worker should then attempt to retrieve the worker in the confined space by use of the rope/cable retrieval system. At NO point is the Standby Worker to enter the confined space. Rescue entry is to be attempted only by personnel wearing appropriate personal protective equipment.
14. No worker is allowed to enter the confined space unless they are wearing a full body harness with a rope or cable is attached to the "D" ring of the harness. The other end of the rope must be attached to a fixed object (or cable attached to a retrieval unit) and must be attended by a Standby Worker.
15. A copy of the test results and the Confined Space Entry Permit are to be kept at each confined space entry area. Copies of all results and permits are to be kept on the project until completion of the project and then sent to the Service Department. For more information on procedure and equipment regarding spaces, contact the Waterloo Manufacturing Service Department or your Provincial Construction Safety Association.

Waterloo Manufacturing Company Ltd.

Confined Space Entry Permit

LOCATION & DESCRIPTION: DATE:

SUPERVISOR: TIME:

WORK TO BE DONE:

GAS TEST RESULTS:

EQUIPMENT USED: PERFORMED BY:

(CHECK IN ORDER) ----------

1) OXYGEN: %
2) EXPLOSIVE/COMBUSTIBLE %
3) TOXIC
H25 PPM
CO PPM

LOCKS & TAGS REQUIRED (SPECIFY TYPE & LOCATION):

EMERGENCY PROCEDURES REVIEWED BY:

ADDITIONAL NOTES:

COMPLETED BY:

WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEMS (WHMIS)

Introduction:

In the interest of protecting the health and safety of our employees, we have developed this program for the transportation, handling and storage of hazardous substances. The main focus point in making this program successful is communication. It is everyone's responsibility, manager or supervisor, to ensure that all workers are told of the precautions required when handling hazardous substances and the appropriate people are trained to the proper level to do their part in handling and using of hazardous substances.

WHMIS Procedures

This section of the Safety and Procedure Manual covers the Workplace Hazardous Material Information System (WHMIS)

WHMIS Procedures and Material Safety Data Sheets are to be kept:

- On every project, by the person in charge of that project;
- In the service divisions, in the vehicle.
- The WHMIS section of the manual is to be kept current by the supervisor, area manager or delegate.
- An MSDS (Material Safety Data Sheet) is to accompany any material ordered. A copy of the MSDS is to be sent to the Job site and to the Service Manager.

When a Waterloo Manufacturing Company Ltd. employee is required to pick up material for a job, the site foreperson or superintendent must ensure that an MSDS (Material Safety Data Sheet) is in the site file. If a new or revised MSDS is received copies must be sent to the safety department.

It is imperative that all material being delivered to a job site has the proper Material Safety Data Sheets from the supplier.

It is the foreperson/superintendent's responsibility to ensure that a copy of each MSDS is placed in the job site Safety Policy and Procedure Manual as it is received.

In the event that a job site does not have a required MSDS on hand the foreman or superintendent in charge of the job will immediately obtain it from:

- The supplier of the materials, or
- Their purchasing agent.

Scope

a. These procedures are intended to control and limit the possibility of a Hazardous Substance incident such as a spill or release by setting out guidelines for proper identification, handling and storage of hazardous substances.
b. These procedures are designed to assist the user in understanding the applicable government regulations and **BY NO MEANS** relieve the user from compliance with the regulations.
c. These procedures will be available as a supervisor's resource material for training purposes.
d. All contractors, subcontractors and suppliers shall adhere to local hazardous substance regulations as part of the contract responsibilities.

Definitions

a. Hazardous Substance is any substance which is included on the O.H.S.A., List of Hazardous Substances, and the Chemical Hazard Regulations of the local Health and Safety Act and the Federal Transportation of Dangerous Goods Regulations.
b. Material Safety Data Sheet (MSDS) is a written report containing information about the hazardous substances as designated by various acts.
c. Exposure is a situation arising from work conditions where an employee may ingest, inhale, absorb or come in contact with a hazardous substance.
d. Exposure Limits - a time weighted (specific time duration) maximum average concentration of a hazardous substance that a worker can be exposed to.
e. Workplace Hazardous Materials Information System (WHMIS) is a Canadian Hazard Communication System dealing with chemicals at work sites.

Responsibilities

a. Waterloo Manufacturing's Service Manager shall distribute information through the organization on recent policies, standards or developments in the area of hazardous substances. The Service Manager shall also develop and maintain a hazardous substances information system such as MSDS and applicable Safety Toolbox Talks for Waterloo Manufacturing's support and field staff.

b. The Divisional Manager shall ensure that each project includes hazardous substance information as part of the contractor/subcontractor project orientation and documentation.

c. They shall ensure that an Emergency Response Plan for projects is developed for hazardous substances spill or release, should it be required. The Divisional Supervisor shall ensure all supervisory and purchasing personnel receive appropriate hazardous substances training. They will forward new MSDS information to the Service Department.

d. The Purchasing Agent/Buyer will request all suppliers send a MSDS with any hazardous material that is ordered.
e. The Project Superintendent shall ensure that all hazardous substances on site are stored properly. They will also ensure that transportation documents of hazardous substances are stored in the project file. They will also maintain the MSDS file and ensure its availability to all project staff. They shall ensure containment and clean up of any spill, and that the incident is reported to the Divisional Manager and appropriate government department.
f. The Project Superintendent shall maintain at each job site, in the project office, a completed MSDS for each hazardous substance used. In most cases, the MSDS will be available from the supplier or else from our MSDS Information Systems. A hazardous substance shall not be used when an MSDS for the substance is not "in hand."
g. The Project Superintendent shall make provisions for MSDS training for project employees and ensure that subcontractors train their employees during the work shift. An MSDS for designated products shall also be available, upon request, to an employee's representative, physician, and the Division of Occupational Safety and Health.
h. When doing renovation or remodelling work, the project superintendent shall be alert to the dangers, which may exist for our employees who are working near unlabeled pipes or material, which contains hazardous substances, and shall take proper precautions.
i. The Foreperson shall ensure that the workers are aware of the MSDS and where to find the information. The foreperson is also responsible to ensure that the workers are properly trained and are wearing proper protective equipment when using hazardous substances.

Handling

a. Only trained personnel shall handle and use hazardous substances.
b. Tailgate meeting instruction sessions shall be set up by the foreperson prior to handling potentially hazardous substances to review proper procedures and the MSDS.
c. When hazardous substances are received, the project supervisors shall ensure that the containers are examined to determine if the hazardous materials labels provide the following information:
    i. The identity of the hazardous substances they contain; and
    ii. Appropriate warnings of the physical and health hazards associated with those substances.
d. When hazardous substances are transferred into portable containers, the project supervisors shall ensure that the portable containers are labelled with the following information:
    i. The identity of the hazardous substances they contain and

ii. Appropriate warnings of the physical and health hazards associated with those substances. Portable containers may be labelled with an extra copy of the manufacturer's label or with a WHMIS which includes "i" and "ii" from above.

EXCEPTION: When an employee transfers a hazardous substance into a portable container for immediate use, the portable container need not be labelled as long as the container is emptied after use.

e. The project superintendent shall ensure that the labels on containers of hazardous substances are not removed or defaced; otherwise containers MUST immediately be relabelled with the following information:

i. The identity of the hazardous substances they contain and,
ii. Appropriate warnings of the physical and health hazards associated with those substances.

Containers without complete labels or with defaced labels will not be kept on the job.

Training

a. When employees could be exposed to hazardous substances in their work area, they shall be provided information and training based on the data contained in the MSDS for those hazardous substances.

b. Training shall be done before employees are assigned duties, which may cause exposure to hazardous substances, or when an MSDS is changed.

c. Training shall be conducted and documented including a list of names of attendees using the "tailgate" safety meeting as the format, and shall provide at least the following:

i. Information on which hazardous substances are in the work area
ii. How to read and interpret information on hazardous labels
iii. Physical or health hazards associated with the use of a hazardous substance or mixture being used in the work area
iv. Precautions for handling, including specific procedures implemented to protect worker e) Emergency procedures for spills, fires, disposal, and first aid; and reporting procedures
v. The methods and observations that can be used to detect the presence of a hazardous substance in the work place (odour, visual appearance or monitoring)
vi. The right of employees, their physicians or their agents to receive information on hazardous substances to which they may be exposed
vii. The availability of MSDS or other information.

Spills

a. State vehicles carrying hazardous substances must be equipped to handle spills.
b. All spills shall be reported IMMEDIATELY as follows:
    i. To the Safety Manager, the Branch Manager and the Area Office
    ii. To the local government hazardous substance agency (this contact must be established at the (initial safety policy meeting)
    iii. The hazardous substance emergency response phone number must be available to the driver.
c. All spills will follow normal investigation procedure for accidents.

LOCK-OUT PROCEDURE FOR MACHINERY

Scope

- This procedure will cover all employees who install service, repair, adjust, lubricate, inspect, surveyor perform work on machinery.
- This procedure is to be followed for lock out and tagging equipment undergoing such work where injury or death could result from unexpected motion, or contact with energized circuits.
- In the event that the unit must be left shut down for repair or further work, a different system must be used to secure the machinery. Disable the equipment with a method approved by your employer, e.g. alternative lock system. Always take your personal lock when you leave the job.
- When working within range of energized circuits, pinch points, points of operation, rotating or oscillating parts or where operation is not required, the machinery must be completely de- energized, locked out and tagged. Stored energy must be neutralized. This includes the release of hydraulic or pneumatic pressure and blocking or releasing any spring-driven or gravity-operated mechanism.
- When working on the hydraulic system of hydraulic equipment the equipment must be "landed" on pipe stands or similar supports to prevent accidental motion resulting from the loss of hydraulic pressure.
- Equipment using a plugged 110 volt power supply will be considered locked out if the plug is disconnected, and left untagged, with the end clearly in view.
- Personnel must be trained to perform lockout/tag-out procedures and will have access to lockout tags and a lockout device. Only one key or combination shall be available to personnel for each lock in use. A master key, duplicate keys or combinations shall be available to supervisory personnel to be used in emergency situations.
- CAUTION: Power sources may be hydraulic but controls are electric or other combinations. Both the source and controls need to be locked-out.

Supervisor’s Responsibility

- It shall be the responsibility of all supervisors to:
- Instruct workers in the operation of this procedure.
- Periodically follow-up to ensure compliance.
- Have a company lock for shift change overlap.
- The supervisor may delegate the instruction of employees and follow-up of compliance with this procedure to the Foreman, worker-in-charge or the worker.
- If extraordinary conditions require operation of equipment, which is locked out, this is permissible only by direct order of the supervisor who must ensure

that it can be done safely before removing the lockout. Ensure communication and complete inspection is done.
- The supervisor must ensure that the equipment is locked out again before work recommences.

Workers Responsibility

- Understand the equipment; be aware of its potential hazards. If uncertain, contact the supervisor before proceeding.
- All affected workers must be notified that a lock out and tag out system is going to be utilized and the reason for it.
- If more than one worker is assigned to a task, each will be responsible for placing his/her own lock and "DO NOT START" tag, so the controls cannot be operated. If controls are located that only one lock can be accommodated, a multiple lock out device must be used.
- On electrical equipment, where accidental starting would create a hazard, open the switch to shut off the power, apply a personal lock and a "DO NOT START" tag. Use a voltmeter on control system to ensure absence of power. (Test and verify)
- Where it is impossible to lock the switch, the fuses must be removed or assurance made that the circuit is dead. The mechanic at the point where the circuit was de-energized will place a "DO NOT START' tag. (Fuse pullers must be used when removing fuses.) Box must then be locked to prevent reinstallation of fuses by qualified personnel.
- CAUTION: There may be more than one power source. If necessary, lock out the car lighting supply circuit as well as any other auxiliary source of power.
- Valves or other energy disconnecting means shall be operated so that the energy sources are isolated from the machinery. Where the potential for injury exists, stored energy in capacitors, and hydraulic, spring, or pneumatic pressure must also be dissipated or blocked prior to performing work in their vicinity.
- If a machine is locked out and it becomes necessary to leave, recheck upon returning to make sure the machine is still locked out.
- If more than one shift is involved to complete the work, the relief worker should place his/her lock on the energy-isolating device prior to the removal of the original lock and tag.

Return to Service

After all work is completed, the following procedure shall be used to restore the equipment to service.

a. Only the employee who performed the lockout may remove the lock and tag. Each person must personally remove their own lock.

b. When the work is complete and the equipment is ready for testing, check the area for personnel, tools and other equipment before removing the Lock and Tag.
c. Before leaving the area, notify all other affected personnel that the work is complete.

Safety Orientation Guide

- Employees and sub-contractors' employees will abide by the Provincial Occupational Health and Safety Statutes and Regulations, the Waterloo Manufacturing Company Ltd. Safety Manual, the owner's safety program when working in their facilities, and any other safety regulations as they are implemented.
- Each person on the site shall wear a CSA or certified-approved hard hat, when required.
- It is mandatory that each person on site wear CSA or certified safety work boots or shoes. The shoes or boots must have a triangular green CSA Logo. Electrical workers should also have a boot with a CSA Omega Symbol.
- Approved safety glasses should be worn at all times, when required. Goggles or face shields shall be supplied by the Company and worn when there is a danger to the eyes from chemicals, welding pops, flying chips, dust or other dangerous materials.
- Gloves shall be worn to protect the hands against cuts, bruises and chemical burns; however, extreme caution should be used when wearing them around any rotating equipment.
- Hearing protection shall be worn in any hearing hazard/high noise area.
- All personnel shall wear close-fitting shirts and long trousers on site. Undershirts, tank top or short pants are not acceptable. Special protective clothing (i.e. coveralls, protective rubber suits, and leather welding jackets) shall be worn as required. Clothes that burn easily or melt (e.g. polyesters and nylon) should not be worn.
- No person shall possess, consume or be under the influence of any alcohol or illegal drugs on the construction site. Noncompliance will be considered grounds for immediate termination and removal from the site. Prescription drugs need to be reported to the supervisor prior to work that day.
- Rowdiness, horseplay, practical jokes, gambling, stealing, sleeping or fighting have absolutely no place on any construction site and shall be considered grounds for immediate termination and removal from the site.
- Conveyance or the use of firearms on site is strictly prohibited.
- Radio or tape, headphones or interference with other electronic communication shall not be permitted on site since they could render the user unaware of potential dangers.

- There shall be absolutely no riding in the back of, or on the sides of trucks, crane lines, or any moving equipment.
- Any person driving on site shall have their seat belt buckled. They shall obey the posted speed limit.
- The project work site maybe designated a non-smoking area. Smoking is allowed in "designated smoking" areas only.
- Each person on site shall be required to clean up waste materials, etc., after completion of each task and/or at the end of each shift.
- Any employee entering a confined space shall have a safe work permit and shall carry out the requirements outlined in the permit, including safety harness and life line, breathing equipment available, etc.
- Any employee working more than three meters above ground shall wear a fall-arrest system or be protected by guardrails or similar devices.
- Any employee operating or riding in a telescoping boom-man lift shall wear a body harness and lanyard, which is to be secured at all times to the man-lift.

Accidents and Incidents

- Personal injury - vehicle accidents - equipment failure or loss, property damage or loss, environment danger construction downtime, sabotage and near misses.
- Any of the above mentioned items must be reported immediately to your foreman. The construction manager will be notified as soon as possible. Immediate and follow-up action will be taken as required. Failure to report injuries immediately may result in delay or loss of workers compensation benefits. Ensure you report all injuries to your supervisor immediately.

Confined Space Entry Permit

- A confined space entry permit must be secured prior to entering a vessel, pit, tank, vat, furnace, or other confined spaces. Special tests and procedures will be involved with this permit.
- Excavations and hot taps will be covered with a special permit and conditions as required.
- Confined Space Entry Permits must be posted at entry point, or be in the possession of the safety guard.
- All permits must be available for presentation on request.
- All conditions on work permits must be followed.
- Work permits, where required, will be picked up daily by the foreman prior to commencing work. It is the foreman's responsibility to ensure that the workers understand and comply with the conditions and special precautions as stated on the permit.
- Work permits will be issued by a designated Waterloo Manufacturing representative. Work permits must be returned to issuer at the end of each day.

Features

All employees will receive The Waterloo Manufacturing Company Ltd. Safety Booklet.

SAFETY IS SERIOUS BUSINESS!

FAILURE TO OBEY RULES

WILL NOT BE TOLERATED.

SCAFFOLDING

General Requirements

Scaffolding is a very important facet of our industry. Good judgment is imperative in the placement, selection and grade of materials utilized in erecting scaffolding. Specific requirements on scaffolding are detailed in the Provincial Occupational Health and Safety Regulations; however, the following paragraphs will aid in the selection, erection and use of scaffolding.

- The footing of scaffolds must be sound and rigid, capable of supporting the expected weight of workers, equipment, and material. Unstable objects such as bricks or blocks shall not be used as support or shins.
- Only competent persons shall erect, dismantle or move a scaffold.
- Scaffolds in excess of ten feet above the ground must have top rails, intermediate rails and toe boards on all open sides.
- Guard rails shall be 42" high with vertical supports at least every eight feet. Toe-boards shall be six inches high.
- Scaffolds and components shall be able to support at least four times the intended load.
- Any components of a scaffold damaged or weakened from any cause shall be immediately repaired or replaced.
- The maximum span for 2 inch x 12 inch planks shall be 8 feet.
- Planking or platforms shall be overlapped a minimum of 12 inches and secured from movement.
- A ladder or other safe access shall be provided.
- Scaffold planks shall extend over their end support at least 6" but not more than 12".
- The legs or uprights of scaffolds shall be plumb and rigidly braced to prevent swaying.
- Overhead protection shall be provided for workers on a scaffold exposed to overhead hazards.
- Wire rope used for scaffold suspensions shall be capable of supporting six times the intended load.
- Shore or lean-to scaffolds shall not be used.

Tubular Welded Frame Scaffolds

- The scaffolding and its component parts shall be designed to support four times the rated load.
- Scaffolds shall be braced and the braces shall be of the proper length that the scaffold will remain plumb and rigid.
- Scaffold legs shall be set on adjustable bases, plain bases or other foundations adequate to support the maximum rated load.

- To prevent movement, the scaffold shall be secured to the building or structure at intervals not to exceed 20 feet horizontally and 15 feet vertically.
- Cross bracing and bracing struts more than 12 inches apart are not ladders.

Boatswain's Chairs

- The chair seat shall be not less than l' x 12" x 24".
- Seat shall be reinforced on underside of cleats securely fastened to prevent the board from splitting.
- The two fibre rope seat slings shall be of 5/8" diameter, reefed through the four seat holes so as to cross each other on the underside of the seat.
- Employees shall be protected by a harness and lifeline.
- The tackles shall consist of correct size ball bearings or bushed blocks and properly spliced 5/8" diameter first grade manila rope or equivalent.
- The roof irons, hooks or the object to which the tackle is anchored shall he securely installed.
- Tie backs, when used, shall be installed at right angles to the face of the building and securely fastened.

Swing Stages Two-Point Suspension

- Two-point suspension scaffold platforms shall be not less than 20" or more than 36" wide overall.
- The platform shall be securely fastened to the hangers by V-bolts or by other equivalent means.
- The hangers of two-point suspension scaffolds shall be capable of sustaining four times the maximum rated load and shall be designed with a support for guardrail, intermediate rail and toe-board.
- Two-point suspension scaffolds shall be suspended by wire, synthetic fibre ropes capable of supporting at least six times the rated load. All other components shall be capable of supporting at least four times the rated load.
- On suspension scaffolds designed for a working load of 500 pounds, no more than two workers shall be permitted to work at one time.
- On suspension scaffolds with a working load of 750 pounds, no more than three workers shall be permitted to work at one time.
- Each employee shall be protected by an approved safety harness attached to an independent lifeline.
- The lifeline shall he securely attached to substantial members of the structure (not scaffold) or to securely rigged lines, which will safely suspend the employee in case of a fall.
- Two-point suspension scaffolds shall be securely lashed to the building structure to prevent them from swaying.
- Prior to each installation, all scaffolding equipment is to be inspected by a competent worker and a record of this inspection is to be kept on site.

- Where scaffolding is in position for an extended period of time, inspection of all components is required and must be documented.

Suspended Cages

- A worker working in a suspended cage shall wear a safety belt attached to a lifeline.
- The lifeline and the support for the suspended cage shall be secured to separate anchor points.
- When it is impractical to use a safety belt and lifeline due to the design of the cage, the cage shall be equipped with a secondary safety line securely attached to the structure in case of failure of the suspension system and the worker shall secure the lanyard to an adequate area of the cage.
- Power units shall be equipped with positive pressure controls.
- Power units shall be equipped with positive drives for both raising and lowering.
- Except as permitted in the following point, power operated suspended cages shall be equipped with an independent secondary mechanism or an individual approved escape device. This is to be used in the event of a mechanical or power failure to enable the cage to be moved by the worker to a point of safe egress or to permit the worker to reach a point of safe egress. When not so equipped, the power operated suspended cage may only be used on structures where safe egress is accessible in the event of mechanical or power failure.
- Manually operated units shall be equipped with spring-actuated locking pawls.
- A cage or work platform suspended from a crane shall not be used without the prior approval of a director of inspection.
- Requests for approval shall include a professional engineer's specifications for the design, installation and use of such a cage or work platform and a copy of the approval shall be kept with the equipment at the place of employment.

Rolling Scaffolds

- The height of a rolling scaffold shall not be more than three times the smallest base dimension. When outriggers are used to maintain the 3:1 ratio, they shall be firmly attached to ensure scaffold stability.
- Workers may not ride on a rolling scaffold while it is being moved.
- Wheels on rolling scaffolds shall be equipped with locking devices or adequate blocking shall be provided. Locking devices must be engaged or blocking used at all times when workers are on the scaffold.
- All components of a rolling scaffold shall be securely fastened together.
- A rolling scaffold shall only be used on surfaces which are firm, level and clear of materials or debris.

Scaffold Planking

- Good judgment should be used in the selection of scaffold plank and the planks should conform to the established structural grades.
- Scaffold lumber should not be used for other purposes. The ends of the plank may be painted a bright color for easy identification and the ends can be banded with strap iron bands to prevent splitting.
- The table will assist in the determination of the safe center loads for various types and sizes.

Do not use any lumber under the nominal thickness of 2 inches (actual PS/8 inches) for scaffold plank.

Scaffold Ladders

- Bracing struts more than 12" apart are not ladders.
- An approved ladder must be used when the scaffold is not equipped with built-in ladders.

SCAFFOLDS

Date: _____

Scaffold Inspection Check List

	Yes	*No*
1. Scaffold erection supervised by a competent worker		
2. Scaffold square, straight and plumb in all directions		
3. All scaffold components installed, tight and secure		
4. Scaffold secured at vertical intervals not exceeding 3 X smallest base dimension		
5. No tubes or members over-extended or hazardous		
6. Base plates and screws firmly supported on all legs (Mudsills used where required)		
7. Levelling screws not overextended, lock nuts tightened		
8. Platform planks cleated on underside at each end		
9. Platform planking tied down securely		
10. Platform planking maximum span 2.1 meters		
11. Toe boards at least 100 mm high surrounding the work platform		
12. Handrail 0.9 to 1.1 meters high, with midrail surrounding platform		
13. Separate rope or hand line at all platforms to raise and lower tools and material		
14. Warning devices/signs provided if erected over walkways or roadways (flashing lights, reflective tape streamers, or area roped off)		
15. Safe clearance from overhead power lines		
16. Rolling scaffold wheel brakes locked and outriggers extended to maintain maximum height of 3 X smallest base dimension		
17. Separate ladders being used for scaffold access		
18. Scaffolding constructed and maintained in accordance with certified engineered drawings if custom designed or required.		

CRANES AND RIGGING

Premise

Because of the potential hazards to workers and equipment while lifting and winching, this guideline was compiled to ensure safe job performance.

General Requirements

- The job cannot be done safely with unsafe or undersized equipment.
- Only qualified personnel shall operate powered equipment. If it is discovered the equipment operator is unqualified, stop work immediately.
- Use caution when working with or around suspended loads and never be under or between the lifting equipment and load.
- Use taglines or other suitable devices to handle suspended loads.
- Establish overhead line clearances and maintain a safe working distance. See overhead lines at end of this section.
- A designated signal person shall direct the work where the crane operator does not have a clear view of the material being lifted or moved or the path of travel.
- For major lifts, cordon off area and assign perimeter guard.

Cranes and Pickers

- The following is a guideline for the use of cranes and pickers. The area supervisor reviews regulations before starting work to ensure awareness of job aspects and worker responsibility.
- Powered mobile equipment used for lifting, hoisting or the like, must have a rating plate or weather proof chart permanently affixed which is kept legible and shows the safe working loads of the equipment in one or a combination of the following:
    - Radius of operation with or without outriggers - Boom angle indicators - Single line load rating
    - Load rating for layers of rope on the drum - Minimum wire rope types and sizes
    - Manufacturer's braking power rating
    - A log book is provided for each crane maintenance or structural repairs. Record the type and size of wire rope. Keep the log book available for inspection.

Crane Operator:

- Is the person designated to operate equipment
- Inspects unit prior to starting work to ensure it is operable

- Operates a crane without endangering personnel and keeps unit under control

- Practices good housekeeping - keep decks, cabs and floors free of oil, rags, grease, tools, etc.
- Does not leave suspended load unattended.
- Places outriggers on solid footings.

Rigging

- Rigging can be defined as the ropes, slings, chains, hooks, eye-bolts and other equipment used for lifting, securing or handling a load.
- Use rigging which is in good condition and proper rating for work being done.
- The following safety precautions enable workers to perform tasks safely:
  a. Do not use hands or feet to spool cables.
  b. Use only approved, properly installed cable clamps.
  c. Inspect ropes, chains, slings, hooks and fittings thoroughly at regular intervals.
  d. Do not use any unapproved material for any part of a lifting device.
  e. Be careful not to put a kink in wire rope.
  f. Avoid knots and sharp bends, which can reduce rope strength by 50%.

Use of Basket

- While using a basket the person inside must wear a safety harness with the lanyard latched to the eye on the basket.

Premise

- Consult operating procedure for safe distances before working beside or under overhead lines.

Working Guidelines

- Personnel working beside or under overhead lines must establish overhead clearance before using equipment which may contact lines.
- Safe working distance requirements for power transmission lines are determined by line voltage. Notify Power Company before personnel work by or under a power line to establish minimum distances. Post "Caution Overhead Power Line" signs.

Clearances

For lines more than 75,000 volts but less than 125,000 volts - 3 meters.
For lines more than 125,000 volts but less than 250,000 volts - 4.5 meters.
Over 250,000 volts - 7.5 meters.

ELECTRICAL SAFETY

General Requirements

In accordance' with provincial legislation, the installation, use and maintenance of all electrical wiring, tools and equipment either fixed or portable shall comply with the provisions of the Canadian Electrical Code CSA C22. 1-1978.

No employee shall be permitted to work close enough to any part of an electric power circuit to contact the same in the course of the work unless the employee is protected against electric shock.

Before work is begun, it shall be ascertained by inquiry, direct observation, or instruments, whether any part of an electric power circuit, exposed or concealed, is so located that the performance of the work may bring any person, tool or machine into physical or electrical contract. The project supervisor shall post and maintain proper warning signs where such a circuit exists. Employees shall be advised of the location of such lines, the hazards involved and the protective measures to be taken.

Equipment or circuits that are de-energized shall be rendered inoperative and have tags at all points where such equipment or circuits can be energized. Controls that are deactivated during the course of the work shall be tagged. Tags shall be placed to identify plainly the equipment or circuits being worked on. Lock-outs in conjunction with the tags will also be used.

Non current carrying metal parts of portable and/or plug connected equipment shall be grounded.

Exposed non-current carrying-metal parts of fixed electrical equipment, including motors, generators, frames and tracks of electrical operated cranes, electrically driven machinery, etc., shall be effectively grounded.

Extension cords used with portable electric tools and appliances shall be of three-wire type. They shall not be fastened with staples, hung from rails or suspended by wire.

Precautions shall be taken to make any necessary open wiring inaccessible to unauthorized personnel.

Work will be performed only by personnel familiar with and qualified for the class of work. Temporary power lines, switch boxes, receptacle boxes, metal cabinets and enclosures around equipment shall be plainly marked to indicate the maximum operating voltage. Portable and semi- portable electrical tools and equipment shall be grounded by the use of a multi-conductor cable having identified grounding conductor and a multi-contact polarized plug-in receptacle. Grounds shall be provided for non-current carrying metallic parts of equipment.

Visual Inspection

The employees shall be instructed that each cord set and any equipment connected by cord and plug, except cord sets and receptacles which are fixed and not exposed to damage, shall be visually inspected by the user before each day's use. They should be inspected for external defects, such as deformed or missing pins or insulation damage and for indication of possible internal damage. Equipment found damaged or defective may not be used until repaired.

Work on Live Apparatus:

Two or more journey persons must work together on any energized circuit with a potential of 440 volts or more. This does not apply to testing or trouble shooting. Approved eye protection, insulating gloves, mats, sleeves and other protective equipment must be provided by the employer and used by employees as required.

Where workers are required to work on or around live apparatus in a manhole vault or switch- room, a suitable rescue system or lifeline of adequate length and meeting the legislated requirements must be provided at the entrance of the manhole, vault or switch-room. The rescue system or lifeline must be readily available to aid any worker "hung up" on live apparatus and to remove the worker from the immediate danger area. Metal ladders, or ladders with vertical wire reinforcing, must never be used by electrical workers.

All measures shall be taken to ensure that workers will not be endangered by the disconnection or repair of a pipeline under pressure. Where repairs or alterations are to be made on a drum tank, pipeline or other container, the drum, tank, pipeline or other container shall:

- Have internal pressures adjusted to atmospheric pressure before any fastening is removed;
- Be drained, cleaned and ventilated or otherwise rendered free from any explosive, flammable or harmful substance, and
- Not be refilled while there is any risk of vaporizing or igniting the substance which is being placed in the drum, tank, pipeline or other containers

---

WARNING

All required safety procedures must be followed by anyone entering a manhole, vault or other confined space. See confined space procedure.

FIRE PROTECTION

Classes of Fire Extinguishers

Class A Commonly includes the combustion of wood, paper, trash and is associated with glowing embers as a result of solid residue.

Class B Includes the combustion of flammable liquids such as gasoline, oil, grease, solvents, paints, etc. There normally is little residue from combustion.

Class C Involves the combustion of electrical equipment where the equipment is energized and presents a danger of electrocution to the fire fighter.

Class D Involves combustion of combustible metals. Special extinguishing agents are required.

General

The project manager must ensure the project personnel are familiar with warning alarms, fire extinguisher locations and all other fire prevention programs on the client's plant site. It is particularly important to ensure proper fire fighting equipment is on hand during any work, which presents or could present an ignition source in the work place.

Ignition Hazards

Electrical wiring and equipment for light, heat or power purposes shall be installed in compliance with the requirements of the Electrical Protection Act.

Internal combustion engine powered equipment shall be so located that the exhausts are well away from combustible materials. When the exhausts are piped outside a building, a clearance of at least (6) six inches shall be maintained between such piping and combustible material.

Smoking shall be prohibited at or in the vicinity of operations which constitute a fire hazard and shall be conspicuously posted: **"No Smoking or Open Flame"**

Portable battery powered fighting equipment, used in connection with the storage, handling or use of flammable gases or liquids shall be of the type approved for the hazardous locations.

The nozzle of air, inert gas and steam lines or hoses, when used in the cleaning or ventilation of tanks and vessels that contain hazardous concentrations of flammable gases or vapours, shall be bonded to the tank or vessel shell. Bonding devices shall not be attached or detached in hazardous concentrations of flammable gases or vapours.

Flammable and Combustible Liquids

General

Only containers and portable tanks approved by a recognized testing laboratory e.g.: (ULO or CSA) shall be used for storage and handling of flammable and combustible liquids. Approved metal safety cans shall be used for the handling and use of flammable liquids in quantities greater than one gallon, except that this shall not apply to those flammable liquid materials which are highly viscous (extremely hard to pour), which maybe used and handled in original shipping containers. For quantities of one gallon or less, only the original container or approved metal safety can shall be used for storage, use and handling of flammable liquids.

Flammable or combustible liquids shall not be stored in areas used for exits, stairways or areas normally used for the safe passage of people.

Indoor Storage of Flammable and Combustible Liquids

No more than (15) fifteen gallons of flammable or combustible liquids shall be stored in a room outside of an approved storage cabinet.

Quantities of flammable and combustible liquid in excess of (15) fifteen gallons shall be stored in an acceptable or approved cabinet meeting the following requirements:

- Acceptable wooden storage cabinets shall be constructed in the following manner or equivalent:
- The bottom sides and top shall be constructed of an exterior grade of plywood at least (1) one inch in thickness, which shall not break down or delaminate under standard fire test conditions. All joints shall be rabbeted and shall be fastened with an overlap of not less than 1 inch.
- Steel hinges shall be mounted in such a manner as to not lose their holding capacity due to the loosening or burning out of the screws when subjected to fire.
- Such cabinets shall be painted inside and out with fire retardant paint. . Approved metal storage cabinets will be acceptable.
- Cabinets shall be labelled in conspicuous lettering, **"Flammable - Keep Fire Away."**

Not more than (60) sixty gallons of flammable or (120) one hundred and twenty gallons of combustible liquids shall be stored in anyone storage cabinet. Not more than three such cabinets may be located in a single storage area. Quantities in excess of this shall be stored in an inside storage room.

Inside storage rooms shall be constructed to meet the required fire resistive rating for their use. Such construction shall comply with the test specifications set forth in Standard Methods of Fire Testing of Building Construction and Material, NEPA 251.1969.

Materials which will react with water and create a fire hazard shall not be stored in the same room with flammable or combustible liquids.

Electrical wiring and equipment located in inside storage rooms shall be approved for Class 1, Division 1, Hazardous Locations.

Every inside storage room shall be provided with either a gravity or a mechanical exhausting system. Such system shall commence not more than twelve (12) inches above floor and be designed to provide for a complete change of air within the room at least six (6) times per hour. If a mechanical exhausting system is used it shall be controlled by a switch located outside the door. The ventilation equipment, and any lighting fixtures, shall be operated by the same switch. An electric pilot light shall be installed adjacent to the switch if flammable liquids are dispensed within the room. Where gravity ventilation is provided, the fresh air intake, as well as the exhaust outlet from the room, shall be on the exterior of the building in which the room is located.

In every inside storage room there shall be maintained a clear aisle at least (3) three feet wide. Containers over (30) thirty gallons capacity shall not be stacked one upon the other.

Flammable and combustible liquids in excess of that permitted in inside storage rooms shall be stored outside.

Fuelling of Equipment

Fuelling of machines will be done during "off hours". Machines will be stopped and cooled off. If fuelling is required, otherwise, shut off machines in the immediate area and stop hot work in the immediate area.

For fuelling of portable equipment, stop and remove to a safe area.

Store all fuel in a designated area and in proper safety container.

WATERLOO MANUFACTURING

COMPLETE BOILER ROOM SOLUTIONS