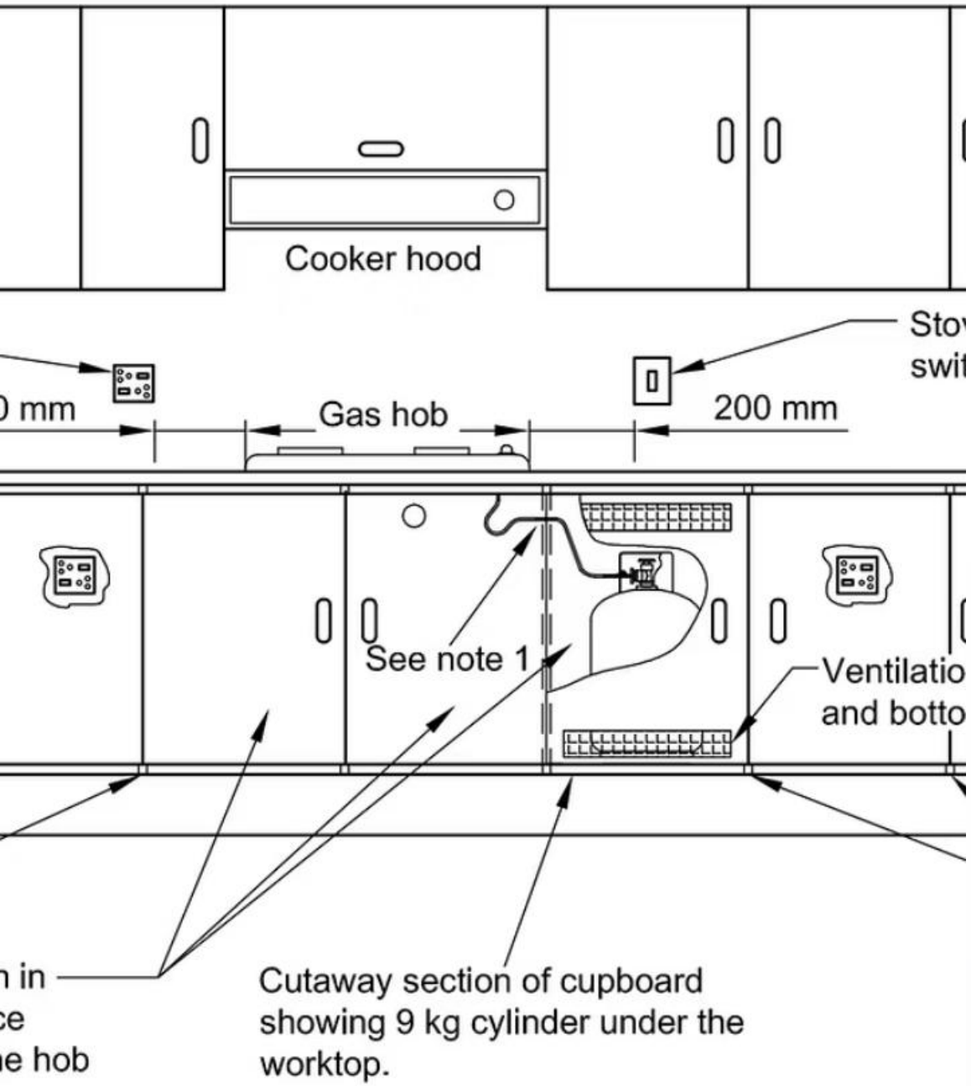
CSA Unit 4a

Chapter 1
Laws Governing the Gas Industry and Due Diligence

A number of laws specify who can work on gas equipment is acceptable and how equipment is installed. In addition to complying with all the relevant laws, a gas technician is expected to exercise due diligence in carrying out work.

This presentation outlines the laws governing the natural gas and propane industry in Ontario and identifies the gas technician's responsibility to apply due diligence.

Created by
MK **by Mike Kapin**



es not pass through the solid partition or divider between the cu
hosetail (see figure 5) on each side passes through and is fix
is attached to the hosetail in the cupboard in which the cylind
d to the hosetail in the cupboard space under the hob.

Objectives

Identify Legal Documents

Identify the legal documents that govern natural gas and propane installations

Identify Organizations

Identify the organizations involved in the development and administration of the Act and Regulations

Define Due Diligence

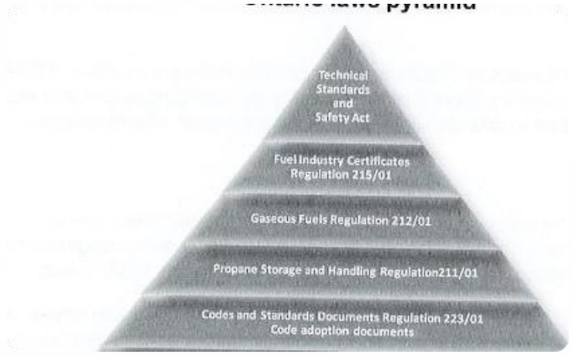
Define due diligence and understand its importance in the gas industry

Key Terminology

Term	Abbreviation (symbol)	Definition
Due diligence		Actions that are reasonable in the circumstances expected from a reasonable person
Ministry of Government and Consumer Services	MGCS	Ontario agency responsible for the administration of over 60 Acts in the province of Ontario, one being the Technical Standards and Safety Act, 2000
Technical Standards and Safety Authority	TSSA	A private, independent, non-government, not-for-profit organization designated by the Ontario government as the authority having jurisdiction (AHJ) regarding the Technical Standards and Safety Act, 2000

Red Seal Alignment

2014 national standard for the occupation of Gasfitter -- Class B, please review an expanded reference matrix at https://store.csagroup.org/.



Red Seal Alignment Chart

This chart shows how CSA Gas Trade Units align with the 2014 Red Seal Blocks and Tasks for the gasfitter occupation, ensuring comprehensive coverage of all required skills and knowledge.

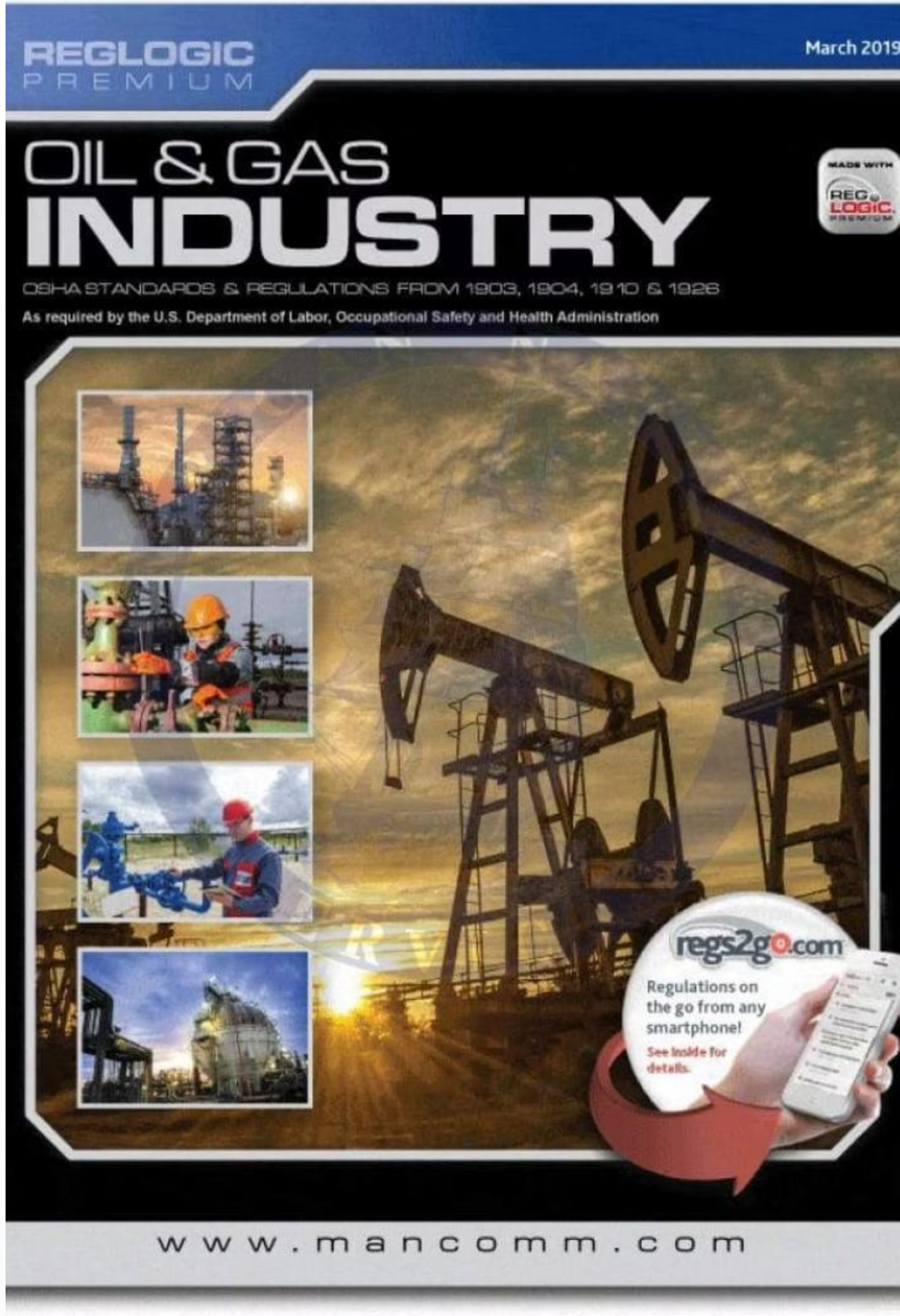
Red Seal Certification

The Red Seal Program sets common standards to assess the skills of tradespeople across Canada, including those in the gas industry.

Legal Documents for Gas and Propane Installations

Governments strictly regulate natural gas and propane appliances, components, and equipment, together with the installation, servicing, and supplying of gas to those appliances, to ensure that these meet minimum standards and practices to protect the environment, and the economy.

Given the importance of the gas industry to the safety, comfort, and financial well-being of its customers, it is not surprising that a set of legal requirements governs every aspect of the industry.



Importance of Gas Industry Regulations

Safety Concerns

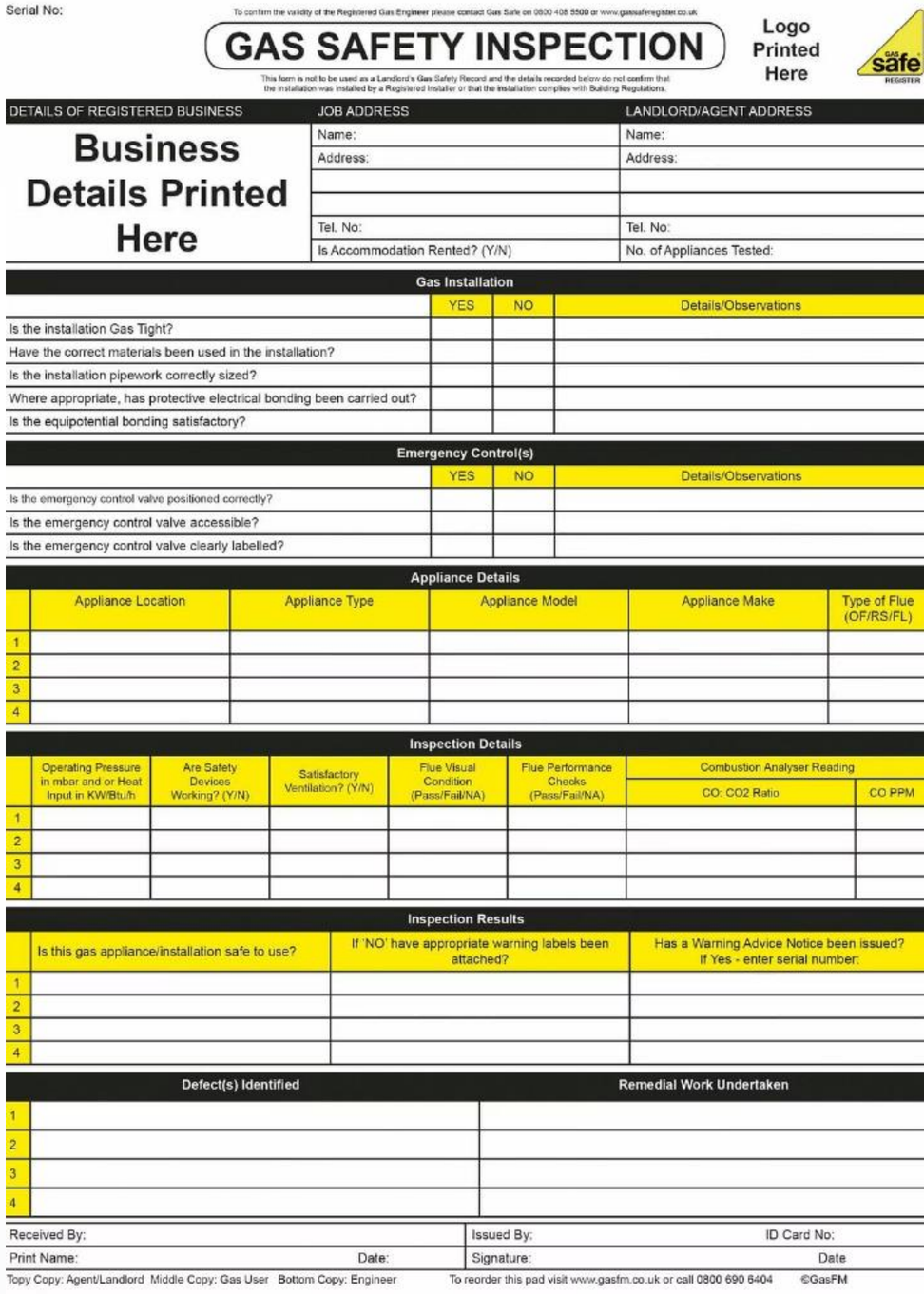
Imagine the personal and economic costs if even one model of appliance regularly causes a fire due to a design deficiency.

Training Requirements

Consider the risks if anyone has permission to install or service appliances without proof of successful training or without following basic safety rules.

Industry Self-Regulation

The gas industry largely established the laws governing itself to prevent safety problems.



Serial No:

To confirm the validity of the Registered Gas Engineer please contact Gas Safe on 0800 408 5500 or www.gassaferegister.co.uk

GAS SAFETY INSPECTION

Logo Printed Here

This form is not to be used as a Landlord's Gas Safety Record and the details recorded below do not confirm that the installation was installed by a Registered Installer or that the installation complies with Building Regulations.

DETAILS OF REGISTERED BUSINESS	JOB ADDRESS	LANDLORD/AGENT ADDRESS
Business Details Printed Here	Name:	Name:
	Address:	Address:
	Tel. No:	Tel. No:
	Is Accommodation Rented? (Y/N)	No. of Appliances Tested:

Gas Installation

	YES	NO	Details/Observations
Is the installation Gas Tight?			
Have the correct materials been used in the installation?			
Is the installation pipework correctly sized?			
Where appropriate, has protective electrical bonding been carried out?			
Is the equipotential bonding satisfactory?			

Emergency Control(s)

	YES	NO	Details/Observations
Is the emergency control valve positioned correctly?			
Is the emergency control valve accessible?			
Is the emergency control valve clearly labelled?			

Appliance Details

	Appliance Location	Appliance Type	Appliance Model	Appliance Make	Type of Flue (OF/RS/FL)
1					
2					
3					
4					

Inspection Details

	Operating Pressure in mbar and or Heat Input in KW/Btu/h	Are Safety Devices Working? (Y/N)	Satisfactory Ventilation? (Y/N)	Flue Visual Condition (Pass/Fail/NA)	Flue Performance Checks (Pass/Fail/NA)	Combustion Analyser Reading	
						CO: CO2 Ratio	CO PPM
1							
2							
3							
4							

Inspection Results

	Is this gas appliance/installation safe to use?	If 'NO' have appropriate warning labels been attached?	Has a Warning Advice Notice been issued? If Yes - enter serial number:
1			
2			
3			
4			

	Defect(s) Identified	Remedial Work Undertaken
1		
2		
3		
4		

Received By:		Issued By:	ID Card No:
Print Name:	Date:	Signature:	Date

Topy Copy: Agent/Landlord Middle Copy: Gas User Bottom Copy: Engineer

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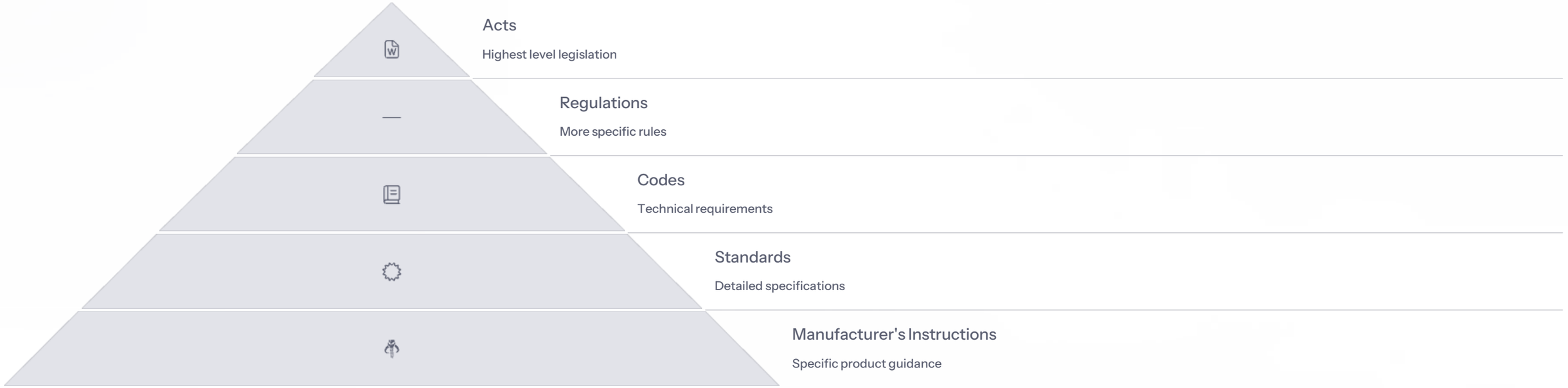
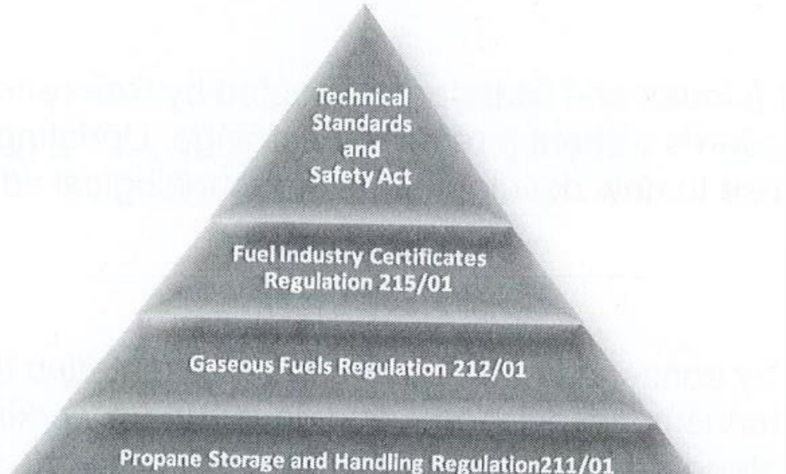
The Pyramid of Gas Industry Laws



Laws governing an activity or industry are easier to understand and interpret if you view it as a pyramid with three levels. As you descend the pyramid, the laws become less general in nature and more instructional in how to achieve the principles that the laws nearer the top of the pyramid established.

Figure 1-1
Ontario laws pyramid



Acts: The Foundation of Gas Industry Regulation

Created by Elected Representatives

An Act is the only set of rules that elected representatives debate on and pass in either the national parliament or a provincial legislature after consultation with the public and affected industry.

Technical Standards and Safety Act, 2000

Its purpose is to establish general principles, duties, and responsibilities, as well as define the administrative powers for monitoring, enforcing, and creating regulations.

Stability Over Time

Acts seldom change. The Energy Act, which was the predecessor of the current Technical Standards and Safety Act, 2000 came into effect in 1974 and served the industry for 27 years with only minor amendments.

Regulations: Implementing the Act

1

Government Proclamation

The elected government proclaims regulations after consultation with the public and the affected industry, but without debate in the legislature.

Specific Nature

They are much more specific in nature but still outline principles, duties, responsibilities, and powers.

Regular Updates

Regulations commonly change every five to ten years, or are amended more often, in response to changes in the industry or a major revision to a related or referenced code.

TSSA Authority

The Technical Standards and Safety Act, 2000 allows TSSA to make changes to the regulations after consulting with the Ontario Ministry of Government and Consumer Services (MGCS) and with stakeholders.

Key Gas Industry Regulations

Gaseous Fuels Regulation

Governs the installation, operation, and maintenance of gas appliances and equipment.

Propane Storage and Handling Regulation

Specifies requirements for propane storage facilities and handling procedures.

Fuel Industry Certificates Regulation

Establishes certification requirements for gas technicians and other industry professionals.

Ontario Regulation 223/01

Codes and Standards Adopted by Reference - allows TSSA to accept and amend codes and standards without a regulatory change.

Codes: Technical Requirements

Created by Committee

Committees create codes by consensus with balanced representation from users, manufacturers, suppliers, industry associations, and government working cooperatively under the structure of a national standards development organization like the CSA Group.

General Requirements

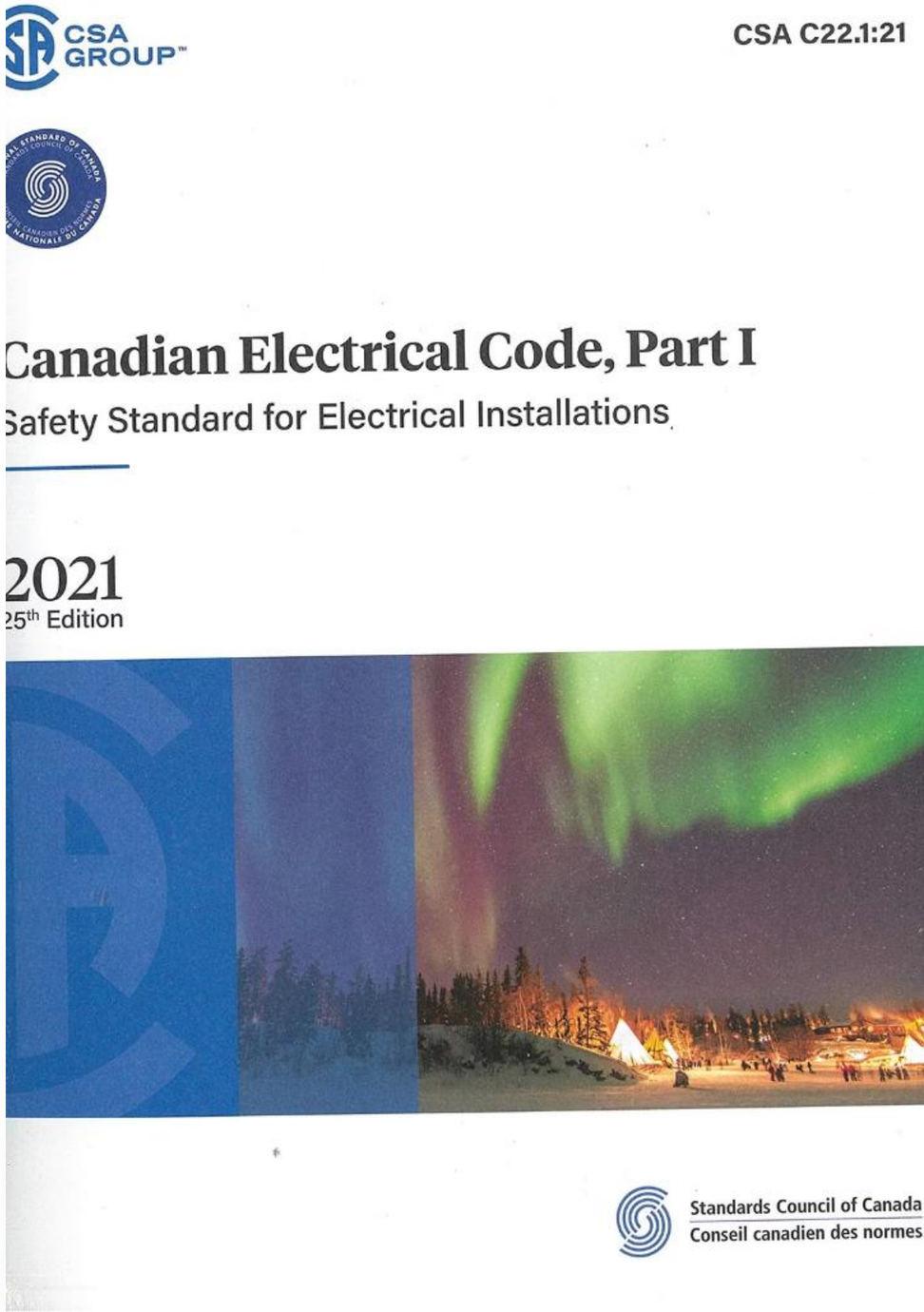
Codes provide general requirements and directions on what can be used and how to use it.

Regular Updates

Regularly updated (typically every five years) or amended in response to problems or new developments.

Legal Adoption

A national code becomes a legal requirement only when an authority having jurisdiction accepts it either in its entirety or with amendments.



Key CSA B149 Codes

CSA B149.1-15

Natural gas and propane installation code

CSA B149.2-15

Propane storage and handling code

TSSA-FA-2012

Field approval code

The authority having jurisdiction in Ontario accepted these CSA B149 series of codes into law in Ontario with a few amendments by means of TSSA's Code Adoption Documents.

Standards: Detailed Specifications

Creation Process

Standards are very similar to codes in terms of its creation and reform but are much more technical and specific to a component, appliance, or procedure.

Safety Assurance

Meeting a standard that the industry and the governing authority have agreed can largely assure the safety of the component, equipment, or procedure.

Technical Specifications

They state the materials or components that you can use and how you are to use and test them.

Certification

Certification organizations confirm compliance with a standard by testing, labelling, and inspecting a product.

Standards Application

Manufacturer Use

Manufacturers of the appliances and equipment normally use standards to ensure their products meet safety requirements.

Gas Technician Compliance

In some cases, the code requires gas technicians to comply with a standard when performing installations or maintenance.

Manufacturer's Instructions

Created by Manufacturers

The manufacturer creates and changes the manufacturer's instructions, but the applicable standard regulates them.

Certification Required

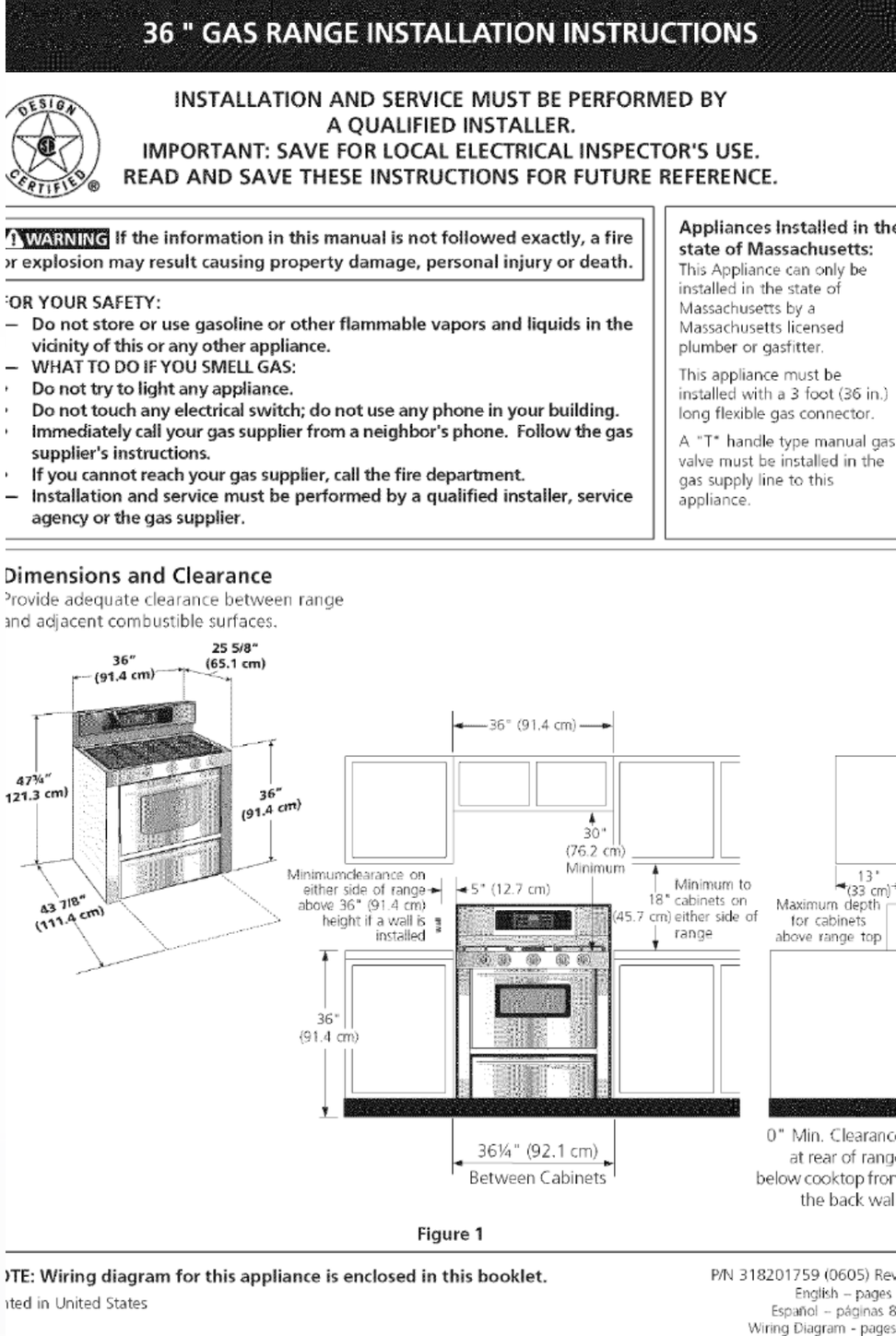
The provided information must meet minimum standards and obtain certification from a certification organization to become legal requirements.

Most Specific Requirements

Certified instructions are the most technical and specific legal requirements. They are as numerous and varied as the types of components and appliances in the gas industry.

Certification Symbol

Certified installation instructions usually bear the symbol of the certification organization to prove that they meet a recognized standard just as the appliance does.



36 " GAS RANGE INSTALLATION INSTRUCTIONS

INSTALLATION AND SERVICE MUST BE PERFORMED BY A QUALIFIED INSTALLER.
IMPORTANT: SAVE FOR LOCAL ELECTRICAL INSPECTOR'S USE.
READ AND SAVE THESE INSTRUCTIONS FOR FUTURE REFERENCE.

WARNING If the information in this manual is not followed exactly, a fire or explosion may result causing property damage, personal injury or death.

FOR YOUR SAFETY:
- Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.
- WHAT TO DO IF YOU SMELL GAS:
- Do not try to light any appliance.
- Do not touch any electrical switch; do not use any phone in your building.
- Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
- If you cannot reach your gas supplier, call the fire department.
- Installation and service must be performed by a qualified installer, service agency or the gas supplier.

Appliances Installed in the state of Massachusetts:
This Appliance can only be installed in the state of Massachusetts by a Massachusetts licensed plumber or gasfitter.

This appliance must be installed with a 3 foot (36 in.) long flexible gas connector.

A "T" handle type manual gas valve must be installed in the gas supply line to this appliance.

Dimensions and Clearance

Provide adequate clearance between range and adjacent combustible surfaces.

Figure 1

NOTE: Wiring diagram for this appliance is enclosed in this booklet.

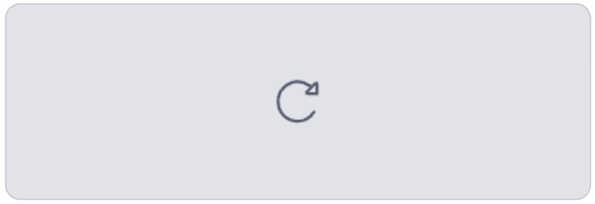
Printed in United States

P/N 318201759 (0605) Rev
English – pages
Español – páginas 8
Wiring Diagram - pages

The Unified Structure of Gas Industry Laws

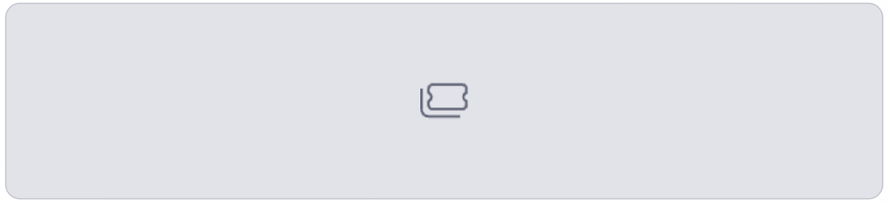
Pyramid Perspective

Understanding the hierarchy of rules provides valuable perspective



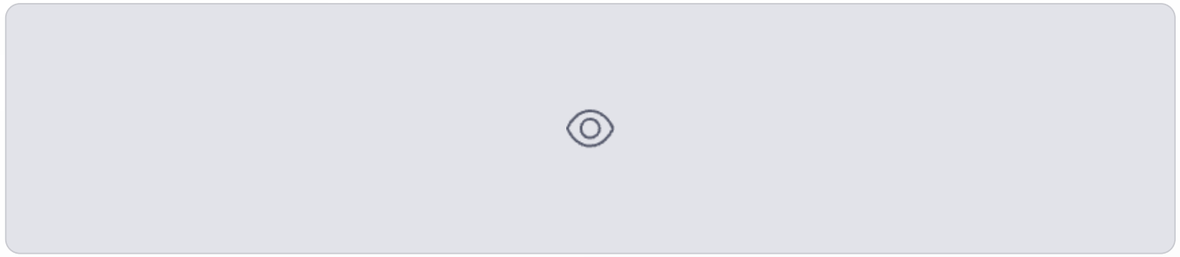
Creation and Change Process

Important to understand how rules are created and modified



Mutual Support

Rules support each other to form a unified body of laws



Wide Perspective

Maintaining a broad view helps understand and comply with all regulations

Keep in mind the concept of a pyramid of laws governing our industry so that you do not focus on one set of laws and forget its role in the overall structure of rules governing our industry. Only by maintaining a wide perspective can you understand, interpret, and comply with the "mountain of laws" governing the industry.

Organizations Involved in Gas Industry Regulation

The following two organizations have responsibility over the development, administration, and enforcement of the Ontario Technical Standards and Safety Act, 2000 and its corresponding Regulations.

Ministry of Government and Consumer Services (MGCS)

Ontario

Ultimately responsible for the administration of over 60 Acts in the province of Ontario, including the Technical Standards and Safety Act, 2000.

Technical Standards and Safety Authority (TSSA)

TECHNICAL STANDARDS TSSA & SAFETY AUTHORITY

A private, independent, non-government, not-for-profit organization designated by the Ontario government as the authority having jurisdiction regarding the Technical Standards and Safety Act, 2000.

Ministry of Government and Consumer Services (MGCS)

Government Ministry

The Ministry of Government and Consumer Services (MGCS) is ultimately responsible for the administration of over 60 Acts in the province of Ontario, one being the Technical Standards and Safety Act, 2000.

Delegation of Authority

The MGCS has delegated the administration of this Act to the Technical Standards and Safety Authority.

More Information

For more information on MGCS, visit https://www.ontario.ca/page/ministry-government-andconsumer-services

Technical Standards and Safety Authority (TSSA)

Independent Organization

Private, independent, non-government, not-for-profit organization designated as the authority having jurisdiction regarding the Technical Standards and Safety Act, 2000.

Established in 1997

Officially began operations on May 5, 1997, when the government divested the Technical Standards Division of the Ontario MCCR.

Online Resources

For more information on TSSA, visit https://www.tssa.org/

TSSA's Approach and Services

Risk-Based Prevention

TSSA is a risk-based, prevention-oriented organization that provides safety services to the public.

Safety Services

Services include education, training and certification, engineering design review, inspection, investigation, and prosecution.

Areas of Regulation

- Boilers, pressure vessels, and operating engineers
- Elevating devices, amusement devices, and ski lifts
- Fuels (gas, propane, butane, hydrogen, digester gas, landfill gas, fuel oil, gasoline, and diesel)

Due Diligence: Definition

What is Due Diligence?

Due diligence is a term that refers to the manner in which a gas technician is expected to carry out day-to-day activities. It refers to actions that are reasonable in the circumstances expected to carry from a reasonable person.

Due diligence entails taking responsibility for one's actions—making decisions and being able to explain logically why the actions were taken.

Due Diligence: Logical Decision Making

Gather Information

Collect all pertinent facts

Analyze

Consider all available information

Make Decision

Determine logical solution

Explain

Be able to justify actions

Logical decisions are ones that take into account all available pertinent facts to determine a final solution that is explainable by those facts.

Due Diligence: External Judgment

External Assessment

Others may judge your actions, from time to time, to determine if you follow proper procedures and safe practices.

Beyond Certification

This would not only be based on whether you hold a certificate of qualification, but also whether you are knowledgeable and competent to conduct the specific task before you.

Competence Matters

Being able to make logical decisions is a key component of demonstrating competence.

Due Diligence: Knowledge Requirements

Knowledge Foundation

Due diligence is only possible if the organization and the individual are knowledgeable about the activity they are involved in.

Safety Outcome

The result of proper due diligence is enhanced safety for all stakeholders.

Legal Understanding

Knowing the legal limitations and expectations placed upon employees and employers is the starting point for a safer workplace and industry.

Reasonable Action

It is impossible to act reasonably without a sound understanding of what is legally required by the rules governing the industry that you work in.

The Importance of Acts in Gas Industry Regulation

1

Highest Legal Authority

Acts form the top level of the regulatory pyramid

27

Years of Service

The Energy Act served the industry for 27 years before being replaced

2000

Current Legislation

Technical Standards and Safety Act enacted in 2000

The Role of Regulations in Gas Industry

Government Creation

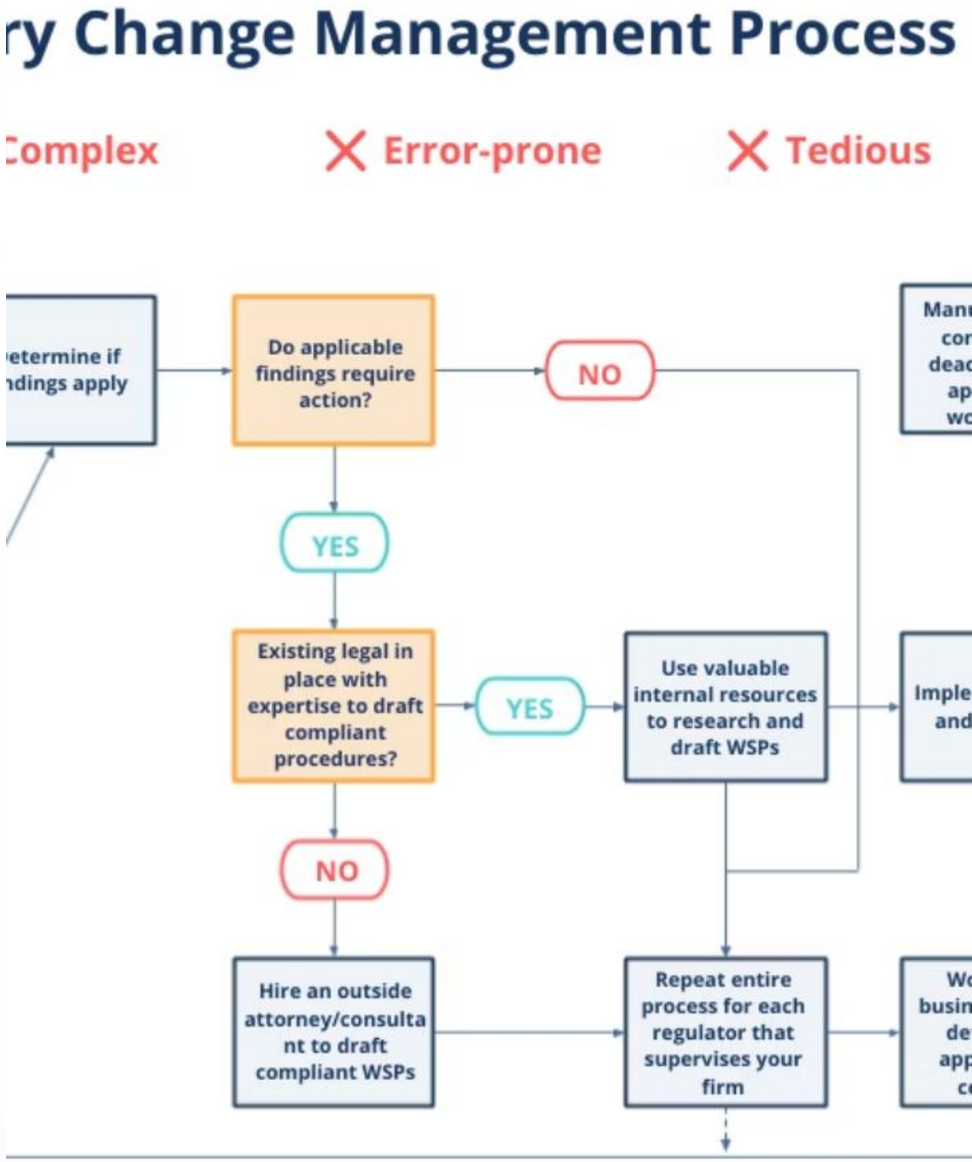
Regulations are proclaimed by the elected government after consultation with stakeholders but without legislative debate.

Specific Requirements

Regulations provide more specific requirements than Acts while still outlining principles, duties, responsibilities, and powers.

Regular Updates

Regulations are updated every 5-10 years or amended more frequently to respond to industry changes or code revisions.



Ontario Regulation 223/01

Codes and Standards Adoption

Ontario Regulation 223/01 (Codes and Standards Adopted by Reference) allows TSSA to accept and amend codes and standards without a regulatory change.

Responsive Updates

Updating codes and standards can now be quick in response to new developments or technological advancements.

Regulatory Flexibility

This provides the regulatory system with greater flexibility to adapt to changing industry needs.

Code Development Process

Committee Formation

Balanced representation from users, manufacturers, suppliers, industry associations, and government

Consensus Building

Working cooperatively under a national standards development organization like CSA Group

Code Creation

Development of general requirements and directions on what can be used and how to use it

Regular Updates

Typically updated every five years or amended in response to problems or new developments

Legal Adoption

Becomes legal requirement when accepted by authority having jurisdiction

CSA B149.1-15: Natural Gas and Propane Installation Code

Purpose

This code provides comprehensive requirements for the installation of natural gas and propane equipment and appliances.

- Piping and tubing systems
- Appliance installation
- Venting systems
- Testing procedures

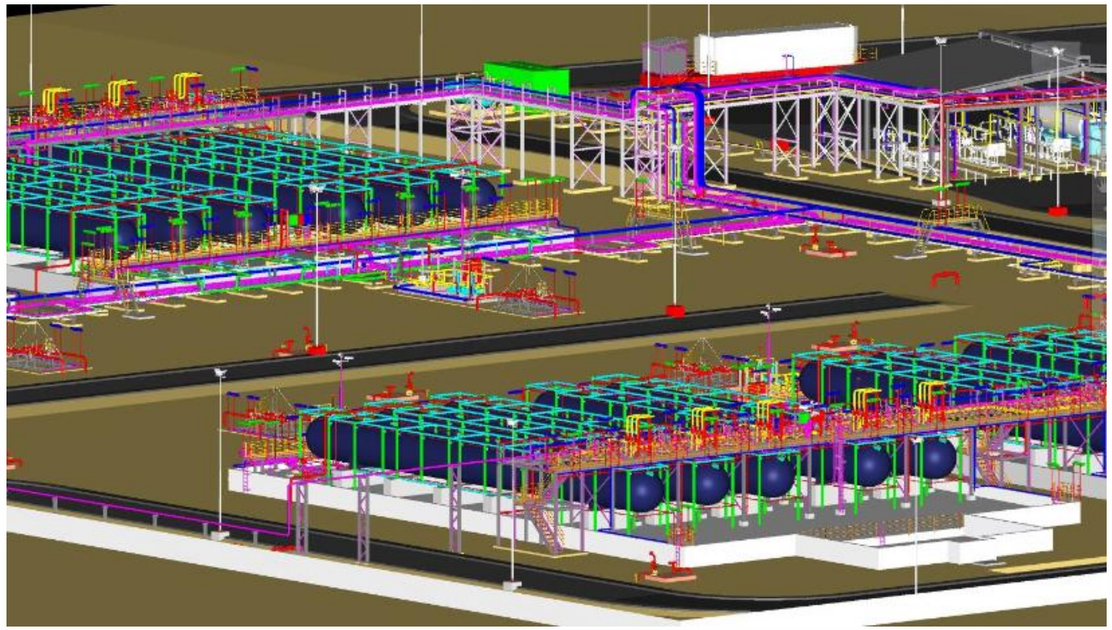
The code ensures that installations are performed safely and consistently across the industry.

CSA B149.2-15: Propane Storage and Handling Code

Key Requirements

This code focuses specifically on propane storage and handling requirements, including:

- Tank installation and location
- Cylinder filling procedures
- Transportation requirements
- Safety systems



Proper propane storage and handling is critical for safety due to the pressurized nature of the fuel.

TSSA-FA-2012: Field Approval Code

Field Evaluation

This code provides requirements for the field evaluation and approval of gas appliances and equipment that have not been certified by a recognized certification body.

Custom Equipment

Often used for custom-built or modified equipment that requires on-site approval.

Safety Verification

Ensures that even non-standard equipment meets minimum safety requirements.

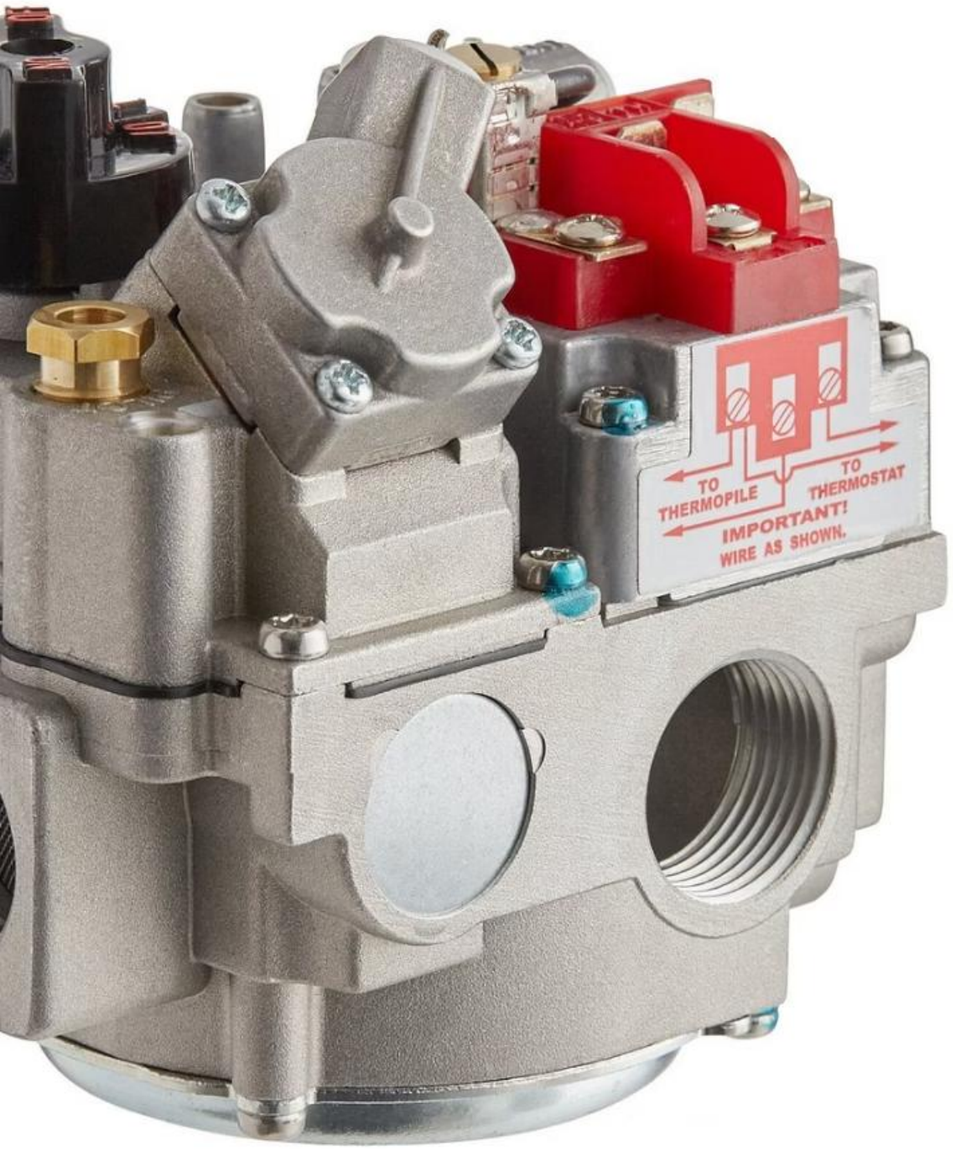
Standards vs. Codes

Standards

- Very technical and specific to a component, appliance, or procedure
- State materials or components that can be used and how to use and test them
- Used primarily by manufacturers to build products
- Certification organizations confirm compliance through testing and labeling

Codes

- Provide general requirements and directions
- Focus on what can be used and how to use it
- Used primarily by installers and technicians
- Become legal requirements when adopted by authority having jurisdiction



The Value of Standards in Gas Safety

Consumer Protection

By means of this process, neither the consumer nor the installer must determine the fundamental safety of a component (e.g., valve), equipment (e.g., burner), or procedure (e.g., installation of a chimney liner).

Safety Assurance

Meeting a standard that the industry and the governing authority have agreed can largely assure the safety of the component, equipment, or procedure.

User Responsibilities

Manufacturers of the appliances and equipment normally use standards. In some cases, the code requires gas technicians to comply with a standard.

installations

Manufacturer's Instructions: The Most Specific Requirements

Creation Process

The manufacturer creates and changes the manufacturer's instructions, but the applicable standard regulates them.

Certification Requirements

The provided information must meet minimum standards and obtain certification from a certification organization to become legal requirements.

Technical Specificity

Certified instructions are the most technical and specific legal requirements. They are as numerous and varied as the types of components and appliances in the gas industry.

Certification Marks on Instructions

CSA Certification Mark

The CSA mark indicates that a product has been tested and certified to meet applicable standards.

UL Certification Mark

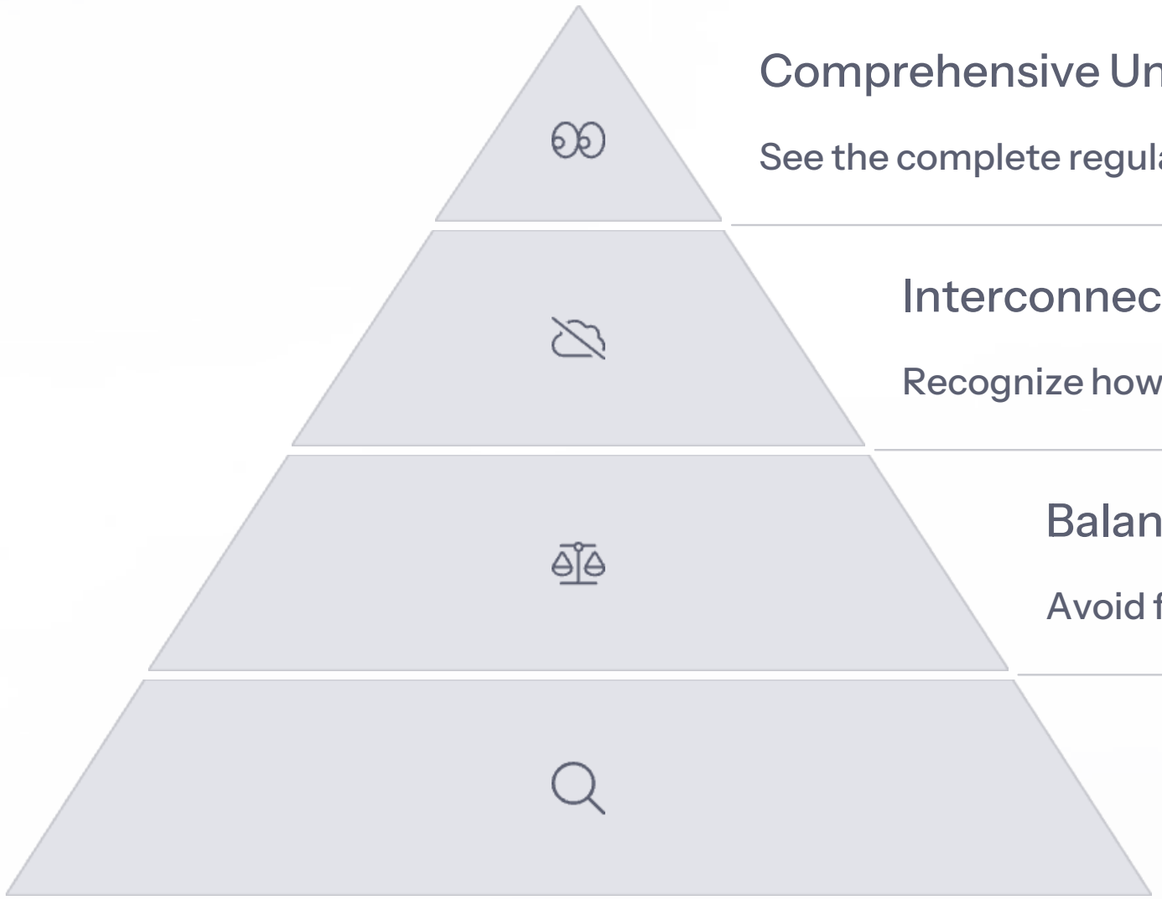
The UL mark signifies that a product has been tested and meets UL's safety standards.

ETL Certification Mark

The ETL mark indicates that a product has been tested to meet applicable standards.

Certified installation instructions usually bear the symbol of the certification organization to prove that they meet a recognized standard just as the appliance does.

The Pyramid Perspective: A Unified View



Comprehensive Understanding

See the complete regulatory structure

Interconnected Rules

Recognize how rules support each other

Balanced Perspective

Avoid focusing on one set of laws

Effective Compliance

Better interpret and follow all requirements

It is important to understand the process of creating and changing the rules, as well as how they support each other to form a unified body of laws that help achieve, maintain, and protect the high standards that the gas industry has attained.

Ministry of Government and Consumer Services (MGCS) Role

60+

Acts Administered

Responsible for over 60 Acts in Ontario

1

Key Act

Technical Standards and Safety Act, 2000

1997

Delegation Year

Delegated administration to TSSA

TSSA: A Comprehensive Safety Authority

Safety Focus

Risk-based, prevention-oriented organization

Education Services

Provides training and certification

Inspection Services

Conducts engineering reviews and inspections

Enforcement

Investigates and prosecutes violations

TSSA's Regulatory Areas

Pressure Equipment

Boilers, pressure vessels, and operating engineers

Elevating Devices

Elevators, escalators, and ski lifts

Amusement Devices

Amusement rides and attractions

Fuels

Gas, propane, butane, hydrogen, digester gas, landfill gas, fuel oil, gasoline, and diesel

Due Diligence: Taking Responsibility

Definition

Due diligence refers to actions that are reasonable in the circumstances expected from a reasonable person.

It entails taking responsibility for one's actions—making decisions and being able to explain logically why the actions were taken.

Gas technicians must be able to demonstrate that they took all reasonable precautions in their work.

Logical Decision Making in Gas Work

Gather Information

Collect all pertinent facts about the situation

Analyze Facts

Consider all available information carefully

Explain Rationale

Be able to justify your actions with clear reasoning

Make Decision

Determine the most logical solution based on facts

Logical decisions are ones that take into account all available pertinent facts to determine a final solution that is explainable by those facts.

External Judgment of Gas Technician Work

Periodic Assessment

Others may judge your actions, from time to time, to determine if you follow proper procedures and safe practices.

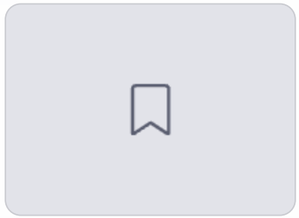
Beyond Certification

This would not only be based on whether you hold a certificate of qualification, but also whether you are knowledgeable and competent to conduct the specific task before you.

Demonstrating Competence

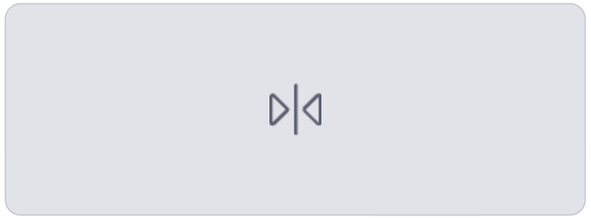
Being able to make logical decisions is a key component of demonstrating competence in your field.

Knowledge: The Foundation of Due Diligence



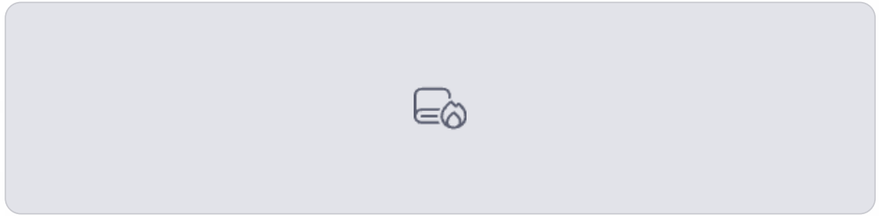
Legal Knowledge

Understanding laws and regulations



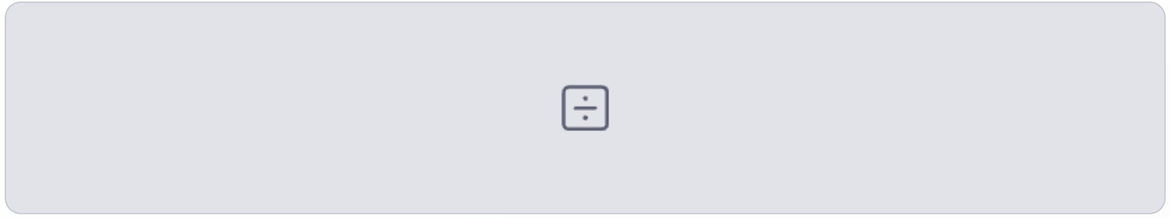
Technical Knowledge

Mastering equipment and procedures



Safety Knowledge

Recognizing hazards and precautions



Decision-Making

Applying knowledge to specific situations

Due diligence is only possible if the organization and the individual are knowledgeable about the activity they are involved in. Knowing the legal limitations and expectations placed upon employees and employers is the starting point for a safer workplace and industry.

Gas Technician 3 G3 Exam | Questions with 100% Correct Answers | Verified | Latest Update 2024

1. According to the workplace safety and insurance board act, which of the following statements is part of the workers obligation in all cases of injury and or disease.

A) obtain first aid promptly

B) notify the employer of any injury within eight hours

C) notify the employer of the possible onset of a work related disease/condition within two working days

D) find a doctor or qualified practitioner who will give a second opinion concerning the injury. - ✓✓B) notify the employer of any injury within eight hours

Which of the following statements is true?

A) workers do not have to wear hard hats on a job site, even if instructed not to do so by employer

B) workers must wear the protective clothing that the employer instructs them to wear on the job site

C) workers do not have to be aware of the contents of the occupational health and safety act.

D) unnecessary running or rough or boisterous conduct on job sites is NOT prohibited by the occupational health and safety actoisterous conduct on job sites is NOT prohibited by the occupational health and safety act - ✓✓B) workers must wear the protective clothing that the employer instructs them to wear on the job site.

3. Which of the following is true:

A) when lifting, it is best to use your back muscles as they are the strongest

B) when lifting, it is best to lift by bending your knees and using your leg muscles

C) when lifting a heavy load that is too heavy, lift and carry it short distances at a time.

D) none of these statements apply - ✓✓B) when lifting, it is best to lift by bending your knees and using your leg muscles

Which of the following lists best describes the key safety categories which should be considered by a fuel technician in Ontario:

The Impossibility of Reasonable Action Without Knowledge

Knowledge Requirement

It is impossible to act reasonably without a sound understanding of what is legally required by the rules governing the industry that you work in.

Continuous Learning

Gas technicians must stay current with changing regulations and technical requirements.

Reference Materials

Having access to and using appropriate reference materials is part of due diligence.

The Technical Standards and Safety Act, 2000

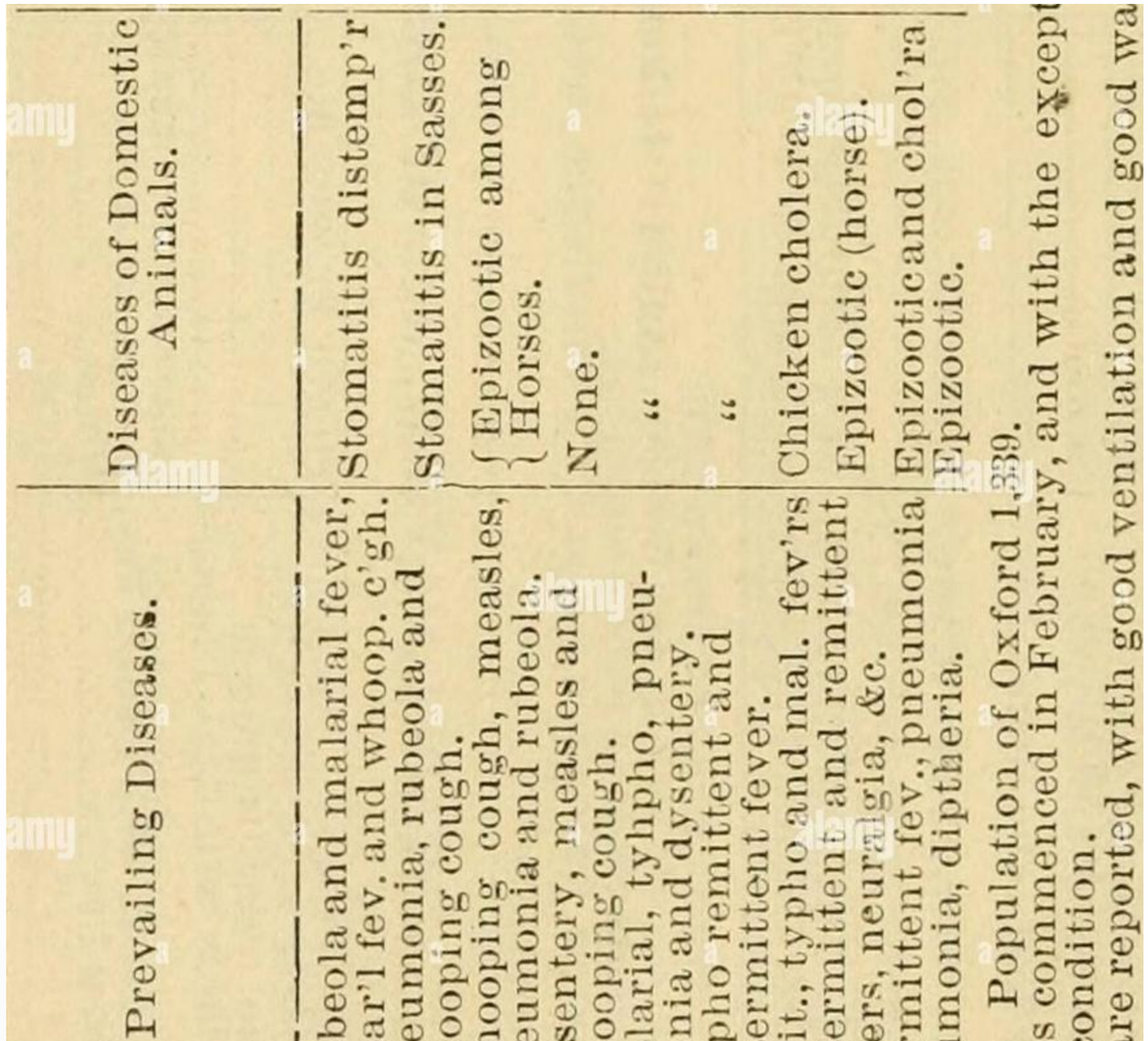
Key Provisions

- Establishes general principles for safety in regulated industries
- Defines duties and responsibilities of various stakeholders
- Outlines administrative powers for monitoring and enforcement
- Provides framework for creating regulations

Historical Context

Replaced the Energy Act, which had been in effect since 1974.

Represents a modernized approach to safety regulation with greater flexibility and responsiveness.



Prevailing Diseases.	Diseases of Domestic Animals.
beola and malarial fever,	Stomatitis distemp'r
ar'l fev. and whoop. c'gh.	
eumonia, rubeola and	Stomatitis in Sasses.
ooping cough.	
hooping cough, measles,	{ Epizootic among
eumonia and rubeola.	{ Horses.
sentery, measles and	None.
ooping cough.	"
larial, tyhpho, pneu-	
nia and dysentery.	"
pho remittent and	
remittent fever.	
it., typho and mal. fev'rs	Chicken cholera.
remittent and remittent	
ers, neuralgia, &c.	Epizootic (horse).
rmittent fev., pneumonia	Epizootic and chol'ra
umonia, diptheria.	Epizootic.
Population of Oxford 1,339.	
s commenced in February, and with the excep	
condition.	
re reported, with good ventilation and good wa	

Gaseous Fuels Regulation

Installation Requirements

Specifies requirements for the installation of gas appliances and equipment.

Maintenance Standards

Outlines standards for the maintenance and servicing of gas systems.

Certification Requirements

Establishes who can perform work on gas equipment and what qualifications they must have.

Safety Procedures

Defines safety procedures that must be followed when working with gas systems.

Propane Storage and Handling Regulation

Storage Requirements

Specifies requirements for propane storage facilities, including location, safety features, and construction standards.

Handling Procedures

Outlines procedures for the safe handling of propane, including filling, transportation, and transfer operations.

Safety Systems

Defines requirements for safety systems, emergency procedures, and risk management at propane facilities.

Fuel Industry Certificates Regulation

Certification Types

Defines the various types of certificates required for different roles in the gas industry, including gas technicians, oil burner technicians, and propane handlers.

Qualification Requirements

Specifies the training, examination, and experience requirements for obtaining each type of certificate.

Scope of Work

Outlines what work each certificate holder is permitted to perform and what limitations apply to their activities.

Ontario Regulation 223/01: Enabling Responsive Updates

Codes and Standards Adoption

Ontario Regulation 223/01 (Codes and Standards Adopted by Reference) allows TSSA to accept and amend codes and standards without a regulatory change.

Responsive Updates

Updating codes and standards can now be quick in response to new developments or technological advancements.

Technological Advancement

Enables the regulatory system to keep pace with technological innovation in the gas industry.

CSA B149.1-15: Key Requirements

Installation Requirements

- Piping and tubing systems
- Appliance installation clearances
- Venting systems
- Air supply requirements

Testing and Inspection

- Pressure testing procedures
- Leak testing methods
- Inspection requirements
- Commissioning procedures

CSA B149.2-15: Propane-Specific Requirements

Storage Containers

Requirements for propane tanks and cylinders

Location Requirements

Clearances and placement of propane containers

Transportation

Requirements for moving propane containers

Filling Procedures

Safe methods for filling propane containers

TSSA-FA-2012: Field Approval Process

Application

Submit request for field approval of non-certified equipment

Documentation

Provide technical specifications and drawings

Inspection

TSSA inspector examines equipment on-site

Testing

Equipment undergoes required safety tests

Approval

If compliant, equipment receives field approval

Standards: Ensuring Product Safety

Manufacturing Guidance

Standards provide detailed specifications for manufacturers to follow when designing and building products.

Testing Requirements

They specify how products must be tested to ensure safety and performance.

Certification Process

Certification organizations test products against these standards and issue certification marks when compliant.

Consumer Protection

This process ensures consumers receive products that meet minimum safety requirements.

Manufacturer's Instructions: Legal Status

Legal Requirement

Certified manufacturer's instructions are legal requirements that must be followed during installation and maintenance.

Certification Process

Instructions must meet minimum standards and obtain certification from a certification organization to become legal requirements.

Identification

Certified installation instructions usually bear the symbol of the certification organization to prove that they meet a recognized standard just as the appliance does.

The Importance of Following Manufacturer's Instructions

Safety Implications

Manufacturer's instructions contain critical safety information specific to each appliance or component.

Failure to follow these instructions can lead to unsafe conditions, equipment damage, or personal injury.

Legal Implications

Since certified instructions are legal requirements, failing to follow them can result in:

- Code violations
- Failed inspections
- Liability issues
- Voided warranties

MGCS and TSSA: Complementary Roles

Ministry of Government and Consumer Services (MGCS)

- Ultimate responsibility for Technical Standards and Safety Act
- Oversees TSSA's activities
- Sets broad policy direction
- Administers over 60 Acts in Ontario

Ontario

Technical Standards and Safety Authority (TSSA)

- Day-to-day administration of the Act
- Develops and enforces regulations
- Provides safety services
- Conducts inspections and investigations

TECHNICAL STANDARDS TSSA & SAFETY AUTHORITY

TSSA's Safety Services

Education

Providing information and resources to promote safety awareness

Training

Offering programs to develop skills and knowledge

Certification

Issuing credentials to qualified individuals

Engineering Design Review

Evaluating technical designs for compliance

Inspection

Examining installations and equipment

Investigation

Looking into incidents and violations

Due Diligence in Practice

Stay Informed

Keep up-to-date with current codes, regulations, and standards that apply to your work.

Follow Procedures

Adhere to established safety procedures and manufacturer's instructions for all installations and service work.

Document Work

Maintain detailed records of all work performed, including tests conducted and results obtained.

Continuous Learning

Regularly update your skills and knowledge through training and professional development.

The Consequences of Failing to Exercise Due Diligence

Safety Risks

Potential for gas leaks, fires, explosions, or carbon monoxide poisoning that could result in property damage, injuries, or fatalities.

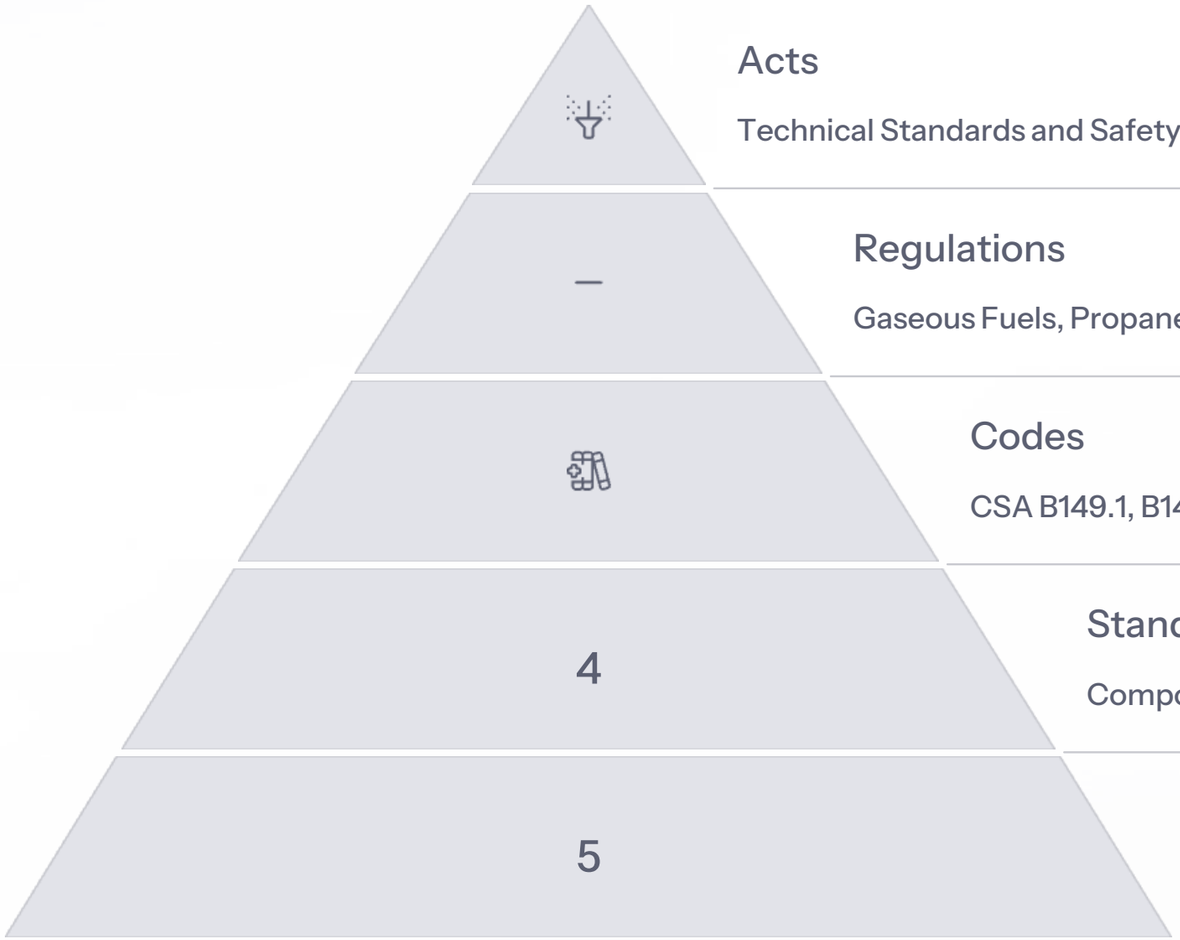
Legal Consequences

Violations of codes and regulations can lead to fines, penalties, license suspension or revocation, and potential criminal charges in serious cases.

Professional Impact

Damage to professional reputation, loss of customer trust, and potential civil liability for damages resulting from negligent work.

Summary: The Gas Industry Regulatory Framework



Acts

Technical Standards and Safety Act, 2000

Regulations

Gaseous Fuels, Propane Storage, Certificates

Codes

CSA B149.1, B149.2, TSSA-FA-2012

Standards

Component and equipment specifications

Manufacturer's Instructions

Specific installation and maintenance requirements

Keep in mind the concept of a pyramid of laws governing our industry so that you do not focus on one set of laws and forget its role in the overall structure of rules governing our industry. Only by maintaining a wide perspective can you understand, interpret, and comply with the "mountain of laws" governing the industry.

CSA Unit 4a

Chapter 2
Technical Standards and Safety Act, 2000

The Ontario Technical Standards and Safety Act, 2000 provides a high level set of legal requirements that enable the government to publish regulations. In setting this framework, the Act includes a number of basic requirements and identifies and assigns administrative powers.

The gas technician needs to become familiar with the Act. This Chapter will examine the contents of the Act with the main focus on the responsibilities it assigns.

Learning Objectives

Name the Ontario Act

Name the Ontario Act directly related to standards and safety within the gas industry

Apply Terminology

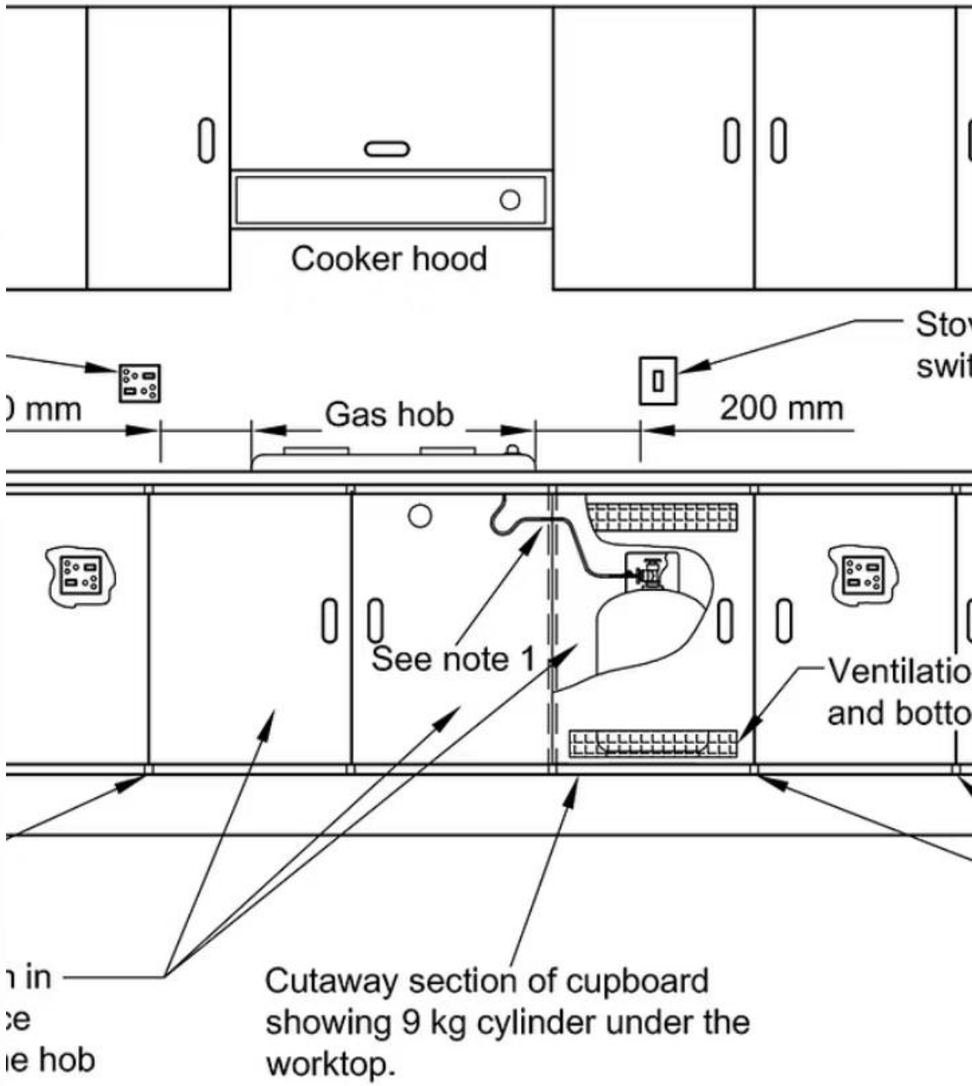
Correctly apply specific terms used in the Act by referencing their definitions

Understand Appointments

Describe how the directors and inspectors are appointed

Identify Authorized Individuals

Identify the individuals that the Act requires to be authorized



es not pass through the solid partition or divider between the cu
hosetail (see figure 5) on each side passes through and is fixe
is attached to the hosetail in the cupboard in which the cylind
d to the hosetail in the cupboard space under the hob.

Additional Learning Objectives

Understand Orders and Powers

Describe the various orders and powers outlined in the Act

Identify Penalties

Identify the offences, fines, and penalties specified in the Act

Describe Duties

Describe the duties of employers and contractors

Key Terminology in the Act

Term	Definition
Administrative authority	A not-for-profit corporation without share capital incorporated under the laws of Ontario or Canada that operates in Ontario but that does not form part of the Government of Ontario, any other government, or an agency of a government
Authorization	Any form of authorization under this Act including certificates, identification, licenses, or registrations for persons; and approvals, certificates, licenses, permits, or registrations for things
Designated administrative authority	An administrative authority that the Lieutenant Governor in Council has designated under Subsection 3 (2)

More Key Terminology

Term	Definition
Director	A person appointed as a director under this Act or a predecessor Act
Inspector	A person appointed as an inspector under this Act or a predecessor Act
Minister	The Minister responsible for the administration of this Act
Person	An individual, an association, a partnership, or a corporation
Seal	To mark, tag, seal, or label, and its noun has a corresponding meaning

Overview of the Act

Purpose

The Technical Standards and Safety Act, 2000 became law in Ontario in 2001 and had its last amendment in 2019. The Act enhances public safety in Ontario by identifying the administrative powers of the authority having jurisdiction.

Scope

The Act states the basic rights, duties, and responsibilities of persons that the Act governs, and provides an efficient and flexible administration of technical standards with respect to hydrocarbon fuels and operating engineers.

Structure

This section presents the text in the same order as the sections of the Act, with only some sections of the Act reproduced in highlighted boxes. It is worthwhile reading through the entire Act in addition to this summary.

Understanding "Authorization"

Definition

"Authorization" means any form of authorization under this Act and includes:

a) with respect to a person, a certificate, identification, license, or registration; and

b) with respect to a thing, an approval, certificate, license, permit, or registration.

Significance

The Act and Regulations extensively use the word authorization, which was identified in previous legislation as a certificate, license, registration, or approval, to replace these words.

This consolidation of terms simplifies the language while maintaining the legal requirements for proper credentials and approvals in the gas industry.

Administrative Authority

Definition

"Administrative authority" means a not-for-profit corporation without share capital incorporated under the laws of Ontario or Canada that operates in Ontario but that does not form part of the Government of Ontario, any other government, or an agency of a government.

Designated Authority

"Designated administrative authority" means an administrative authority that the Lieutenant Governor in Council has designated under subsection 3 (2).

The designated administrative authority in Ontario is the Technical Standards and Safety Authority (TSSA).

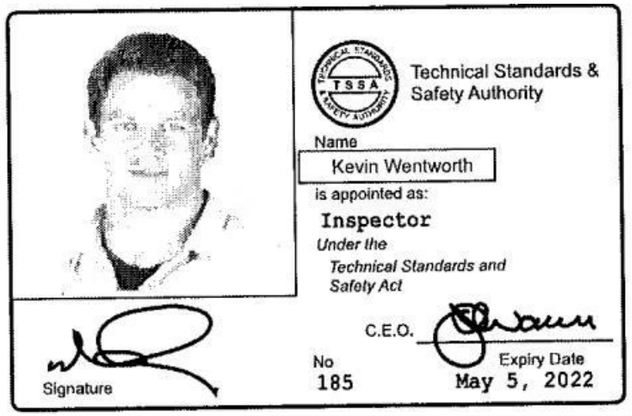
Director and Inspector Roles

Director

"Director" means a person appointed as a director under this Act or a predecessor Act.

The President and CEO of the TSSA appoints a Director authorized to perform functions necessary for the regulation of the fuels industry.

When the Act, Regulations or Codes refer to the "authority having jurisdiction", it means the Director of Fuels Safety with TSSA.



Inspector

"Inspector" means a person appointed as an inspector under this Act or a predecessor Act.

An inspector for the purposes of the Act means the Director or a Fuels Safety Inspector. The powers assigned to an inspector under the Act do not apply to the inspection divisions of gas utilities or propane suppliers.

Inspectors carry identification as proof of their designation.

Minister and Person Definitions

Minister

"Minister" means the Minister responsible for the administration of this Act.

The Minister of the Ministry of Government and Consumer Services is ultimately responsible for the administration of the Act.

Person

"Person" means an individual, an association, a partnership, or a corporation.

Often the word "person" implies an individual in normal conversation. It is important to realize that when the word is used in the Act, Regulation and Codes it has a much wider application. When used in the Act, it refers to an individual, an association, a partnership, or a corporation.

Understanding "Seal"

Definition

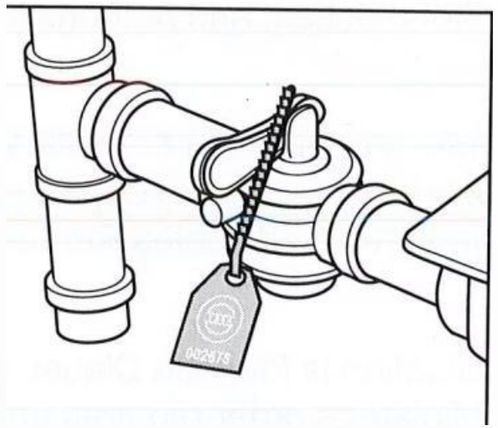
"Seal" means to mark, tag, seal, or label, and its noun has a corresponding meaning.

"Seal" has a wide range of meanings and uses under the Act. One use is as a replacement for the term "tag" used in previous legislation. As such, a "seal" is a restriction placed upon equipment that the director or inspector has determined is unsafe for use.

Examples

A "seal" may also mean a TSSA field label on an appliance as shown in the images.

These seals serve as official markings that indicate the status of equipment with respect to safety and compliance with regulations.



TSSA Field Label Example

Field Label

This is an example of a TSSA field label that would be applied to an appliance.

These labels serve as official markings that indicate the status of equipment with respect to safety and compliance with regulations.

The field label contains important information about the appliance inspection and approval status.

Appointments Under the Act

Appointment Authority

After the definition section in the Act, the first two clauses deal with the appointment of directors and inspectors. TSSA appoints directors and inspectors or, in the absence of a designated authority, the Minister may appoint directors and inspectors.

Director's Status

A director is also an inspector. Knowing who a director or inspector is under the Act is important for anyone working in the gas industry, as these officials have significant powers and responsibilities that affect daily activities within the industry.

Proof of Appointment

As illustrated under the definition of inspector, the proof of appointment may be a badge and I.D. card, or it may be a letter of appointment or delegation. In either case, documentary proof of appointment must be produced on request.

Authorizations Under the Act

Requirement

As indicated earlier, the term authorization can refer to your certificate or registration. Sections 6 through 16 of the Act outline your rights, duties, and responsibilities as a certificate holder or registered contractor.

Certification

It is a requirement to obtain a certificate of qualification prior to performing work on a hydrocarbon-fuelled appliance. The type of certificate depends on the type of work to be performed as specified in the Fuel Industry Certificates Regulation.

Legal Basis

The basic requirement to have certification is found in Clause 6 of the Act, which simply states that where the Act, regulations, or Minister's order requires an authorization, a person shall obtain the authorization before carrying out the activity.

Important Note

Notice that the Act does not include the exemption found in the previous Energy Act that permitted an uncertified person to work as long as they were "in the presence of a holder of a certificate".

Obtaining an Authorization

Meeting Requirements

To attain an authorization, a person must meet all the requirements that the regulations have established or that TSSA has specified in writing.

Right to Authorization

The Act states that the person has the right to the authorization if he/she meets the requirements and may be refused that right if he/she doesn't. See Clauses 6. (2) and 6.(3) of the Act.

Suspension or Revocation

Clauses 6. (7) and 13. (1) of the Act outline the possible reasons for suspending, revoking, or refusing to grant or renew a certificate or registration. You should study these two important clauses carefully.

TSSA's Powers Regarding Authorizations

Mandate

The powers of the director under the Act provide TSSA with the ability to carry out its mandate of enhancing public safety and improving services to its clients.

Critical Component

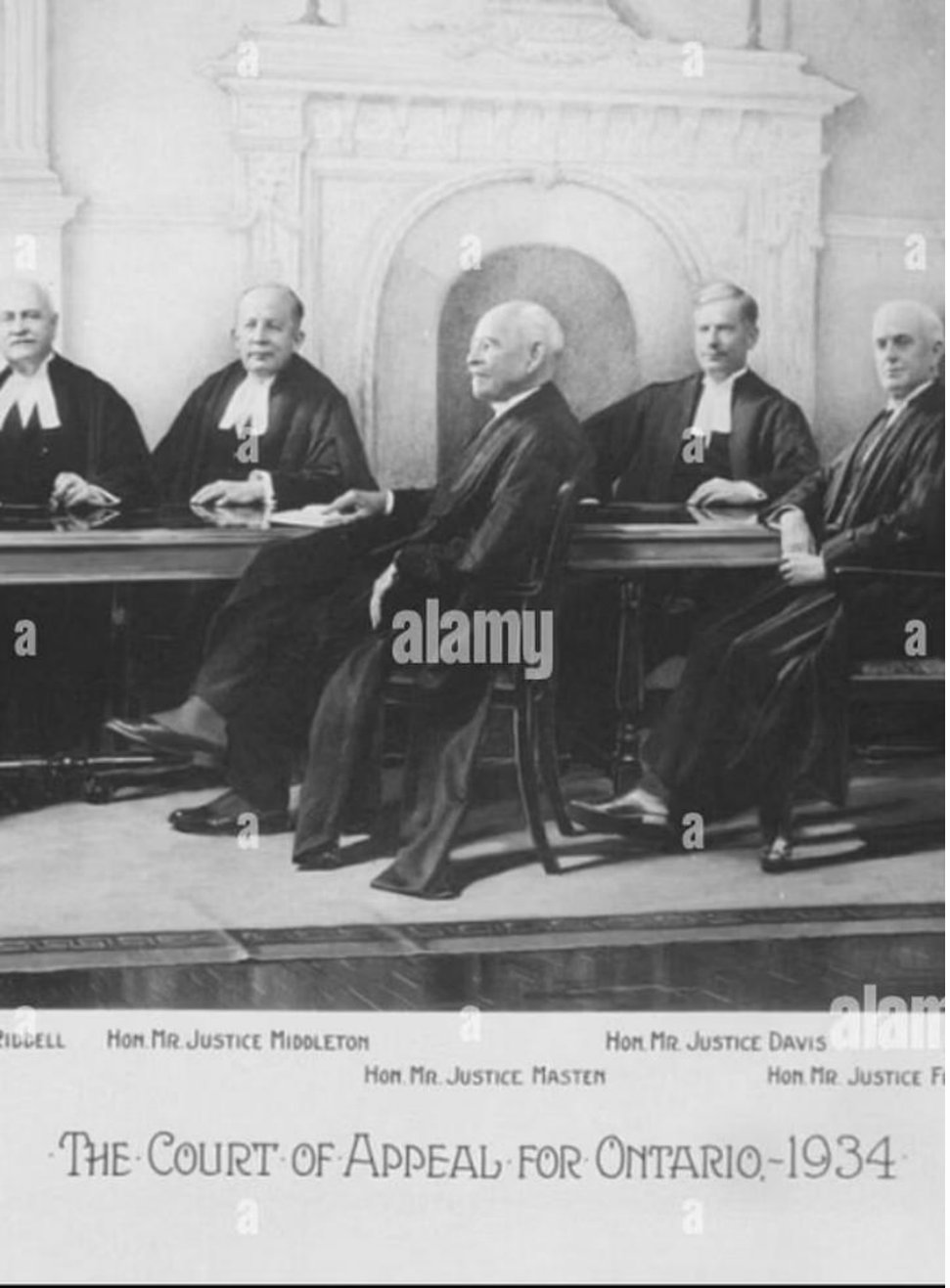
Regarding the gas industry, a critical component of this mandate is to ensure that persons authorized to work in the industry are competent and compliant with the rules governing the gas industry.

Enforcement

TSSA is empowered to ensure a "level playing field" for all technicians and companies by refusing or removing a person's certificate or registration to work in the industry. It only uses this power in dealing with those persons (including companies) who fail to meet minimum standards that the industry and government have established.

Important Consideration

All authorization holders should closely consider Clause 13, especially as it relates to the default on the payment of a fee. This is the most common reason for the suspension of a certificate or registration.



Appeal Procedure for Authorization Decisions

Appeal Process

Clauses 7 through 13 of the Act provide the steps that a director must follow when refusing to grant or revoking an authorization.

Rights of Affected Persons

The Act also discusses the rights of the person affected by the director's decision in detail.

Limitations on Director's Powers

The Act limits the far-reaching powers of the director, which can ultimately be appealed to the Provincial Divisional Court.

Orders Under the Act

Definition

The Act enables specified individuals to issue Orders, which are official legal requirements.

Types of Orders

The Act provides for different types of orders including Safety Orders and Compliance Orders, each with specific purposes and procedures.

Legal Force

Orders issued under the Act have legal force and must be complied with according to the terms specified in the order.

Safety Orders

Authority

The director of the Fuels Safety Division of TSSA may issue a safety order to one or all persons that identifies and addresses a safety issue. Safety orders allow the director to take immediate and effective action to protect public safety.

1. (1) a director may give a safety order to any person or class of persons with respect to any matter governed by this Act that pertains to safety.

Requirements

(2) The safety order may require that any thing or part of a thing, or class of things, be dealt with as set out in the order, including:

(a) being shut down:

(b) being used only in accordance with the order; and

(c) not being used.

(3) Subject to clause (2.3) (a), the safety order may be given orally or in writing, and be made without prior notice or the holding of a hearing.

Compliance with Safety Orders

1 Notification

If the director issues a general safety order, all certificate holders and registered contractors will receive notification.

2 Compliance Requirement

All persons subject to a safety order must comply with its terms within the timeframe specified.

3 Consequences

Failure to comply may result in the suspension of your authorization.

4 Appeal Process

The Act provides a process for appealing safety orders if you believe they are unreasonable or unnecessary.

Compliance Orders

Court-Issued Orders

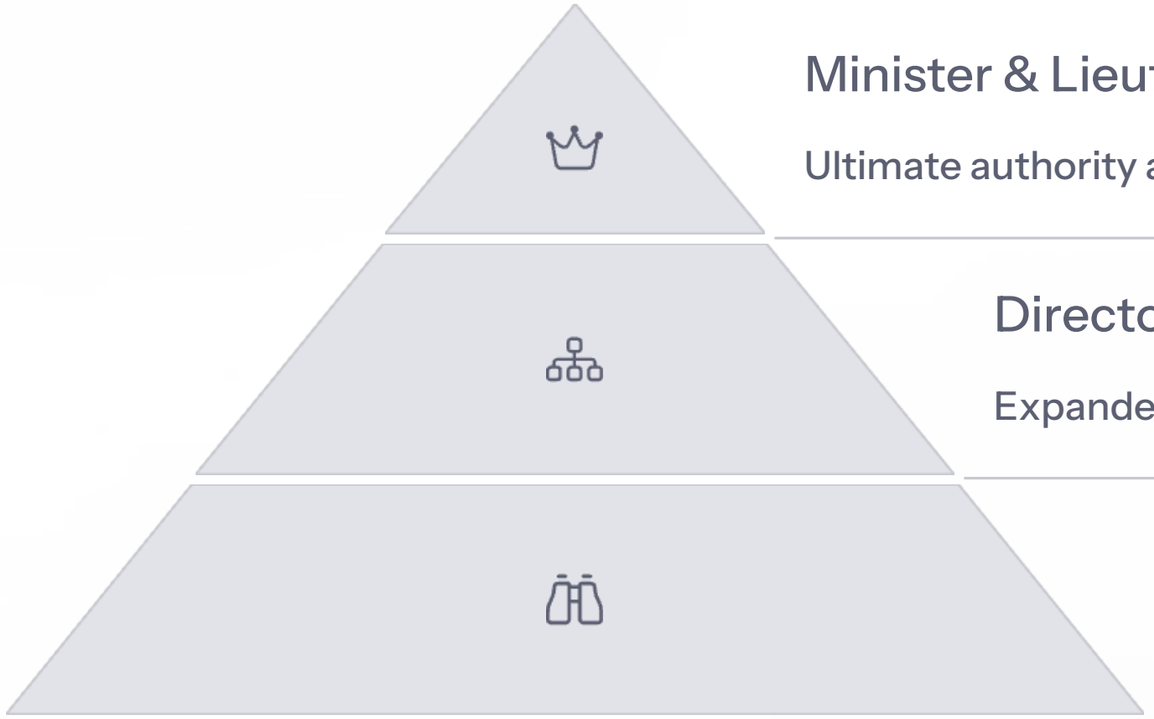
1. (1) If it appears to a director that a person is not complying with any provision of this Act, the regulations or a Minister's order, the director may apply to a judge of the Superior Court of Ontario for an order directing compliance.

Purpose and Significance

The above section of the Act gives the director another tool for dealing with individuals or companies that do not comply with the laws governing the gas industry. In extreme cases, the director can seek a Superior Court order requiring compliance.

Court-issued compliance orders have a higher status in law and therefore higher penalties and powers of enforcement than normally available to the director. Of course, the court functions independently of TSSA, but if it agrees with the director's request, the court reinforces the requirement to comply by using the full weight of the law.

Powers Under the Act



Minister & Lieutenant Governor

Ultimate authority and regulatory powers

Director

Expanded powers beyond those of inspectors

Inspector

Field enforcement and investigation powers

The Act defines and assigns powers to specific individuals in a hierarchical structure. Each level has distinct responsibilities and authorities to ensure the proper implementation and enforcement of safety standards in the gas industry.

Powers of an Inspector

Entry and Inspection

Clauses 17 through 21 outline the powers of an inspector designated under the Act. An inspector may enter any lands or premises to carry out an inspection for the purpose of determining compliance with the Act, regulations, or a Minister's order or presence of a hazardous condition.

Dwelling Limitations

An inspector shall not enter a place or part of a place that functions as a dwelling without the occupier's informed consent.

Examination and Testing

An inspector may remove anything for the purpose of examination of tests to determine compliance with the Act and regulations. He/she must provide notice and receipt to the appropriate person (i.e., owner, supervisor, and operator).

Additional Inspector Powers

Sealing Authority

An inspector may seal anything that poses a public safety threat or that the director designates. A seal restricts the use of the thing as the inspector or director sets out in writing. This may be a partial or total restriction on its use.

Compliance Orders

An inspector may issue an order in writing directing compliance with the Act or regulations (including codes, standards, and certified manufacturer's instructions). He/she will give a time period for compliance, which may be immediate or whenever reasonable. It may involve a followup to confirm compliance.

Responsibilities

The powers of an inspector under the Act also place some important duties and responsibilities on any person involved in the execution of those powers. Certificate holders and contractors working in the gas industry must clearly understand these duties and responsibilities.

Interaction with Inspectors

Frequency of Contact

Based on the number of fuel inspectors, the likelihood of coming into direct contact with an inspector is very high. Inspectors are active in the field conducting investigations, appliance approvals, and compliance audits.

Important Responsibilities

One of the most important duties and responsibilities of a technician or contractor concerning inspectors is compliance with an inspector's order. The inspector gives a time period for compliance with the order, which you can appeal using the procedure given in the Act.

Inspector's Orders for Contraventions

Contravention Orders

21. (1) If an inspector finds that any provision of this Act, the regulations or a Minister's order is being contravened, or that a thing under this Act is unsafe or is not being operated or used in accordance with the authorization relating to it, the inspector may:

(a) serve the person he or she believes to be the contravener or that person's supervisor or employer, or both, with an order in writing directing compliance with the provision or authorization and may require that the terms of the order be carried out forthwith or within such other time specified in the order; or

(b) seal any thing to which this Act or the regulations apply where there is or may be a demonstrable threat to public safety, whether or not the thing is subject to an authorization.

Non-Immediate Hazards

(2) An inspector who has reason to believe that there is a contravention of this Act, the regulations or a Minister's order that does not present an immediate hazard may serve the contravener or a person who has authority to correct the contravention with a written order directing that the correction be carried out within the time specified in the order.

Compliance Protection

(5) Any person who receives an order under subsection (2) and complies with it or who has made all reasonable efforts to comply with it is not guilty of an offence in respect of the contravention or other matter that formed the basis of the order.

Immediate vs. Non-Immediate Hazards

Immediate Hazards

If the contravention presents an immediate hazard, the inspector may issue an order under 21. (1) requiring immediate correction and may also seal the hazard to prevent its use.

In this case, a technician/contractor must comply with the order (although compliance does not exclude further legal action from the inspector).

Non-Immediate Hazards

For a non-immediate hazard, an order may be issued under 21. (2) related to a non-immediate hazard.

The inspector cannot take further action if the technician/contractor is still carrying out compliance or a reasonable effort at compliance with this type of order.

Powers of a Director

Inspector Status

A director is an inspector but has additional powers, duties, and responsibilities under the Act as set out in Clauses 22. (9) through to 32.

Director's Orders

Clause 31 outlines the most important of these powers. A Director's Order is similar to the safety order powers provided under Clause 14, but allows TSSA to respond quickly to problems not addressed in the Act, regulations, or codes.

Public Safety Threats

In cases where there is or may be a demonstrable threat to public safety, a director may make an order with respect to matters if they have not otherwise been provided for in this Act, the regulations or a Minister's order.

Specific Director's Powers

1 Notices and Markings

Requiring and establishing the form and location of notices, markings or other forms of identification to be used in conjunction with equipment or other things that are prescribed.

2 Regulation of Equipment

Regulating, governing and providing for the authorization of the design, fabrication processing, handling, installation, operation, access, use, repair, maintenance, inspection, location, construction, removing, alteration, service, testing, filling, replacement, blocking, dismantling, destruction, removal from service and transportation of any thing, whether new or used, or a part of a thing and any equipment or attachment used in connection with it.

3 Additional Powers

For the same purpose of providing speedy response to new developments or technological advances or requests for a variance from code requirements, the Act gives the director additional powers (see 32.(3) and 33.(1)).

Powers of the Minister and Lieutenant Governor

Ministerial Authority

The Act gives a number of powers to the Minister of Consumer Relations and the government as represented by the "Lieutenant Governor in Council", which is essentially the Premier and cabinet.

Although the government has designated TSSA as the authority having jurisdiction over the Act, the government-specifically the Minister-retains ultimate responsibility for the Act.

Minister's Orders

Minister's orders (see Clause 32) are extremely rare in the area of fuels safety given past experience.

The list of issues that the government may make regulations concerning is very long and general (see Clause 33). It is similar to other acts in this regard.

The function of these sections (32 and 33) is important from a legal sense. These sections establish the scope and extent of government control over an industry or activity. Lawyers, rather than technicians, study them.

Offences Under the Act

Definition of Offence

Clause 37 defines what constitutes an offence under the Act:

37. (1) Every person who:

(a) contravenes or fails to comply with any provision of this Act, the regulations or a Minister's order;

(b) knowingly makes a false statement or furnishes false information under this Act, the regulations or a Minister's order;

Additional Offences

(c) contravenes or fails to comply with a term or condition of an authorization; and

(d) contravenes or fails to comply with an order or requirement of an inspector or obstructs an inspector, is guilty of an offence and on conviction is liable to a fine of not more than $50,000 or to imprisonment for a term of not more than one year, or to both, or, if the person is a body corporate, to a fine of not more than $1,000,000.

Duty of Directors and Officers

Corporate Responsibility

Duty of director or officer

(2) Every director or officer of a body corporate has a duty to take all reasonable care to prevent the body corporate from committing an offence under subsection (1).

Offence

(3) Every director or officer of the body corporate who has a duty under subsection (2) and who fails to carry out that duty is guilty of an offence and on conviction is liable to a fine of not more than $50,000 or to imprisonment for a term of not more than one year or to both.

Separate Offences

Separate offence

(4) Where a person contravenes any of the provisions of this Act, the regulations, a Minister's order or any notice or order made under them on more than one day, the continuance of the contravention on each day shall be deemed to constitute a separate offence.

Another consequence of carrying out an offence may be an administrative penalty. This is an allowance given to TSSA under the regulations to levy a fee against a person found to be in contravention of the Act or regulations. It does not preclude charges being laid or fines being assessed (see 37.(5)).

Time Limit for Offences

Limitation Period

Time limit

37. (6) No proceeding in respect of an alleged offence under this Act may be commenced after two years following the date on which the facts that gave rise to the alleged offence were discovered.

Discovery-Based Timing

The Act confirms that the expiry date of an offence is based on the time of its discovery—not the time of its commission.

For example, if a chimney liner company improperly installed a liner five years ago (let's say by inserting three feet of liner at the bottom of the chimney and three feet at the top but nothing in between!), and it was not discovered until the chimney collapsed on January 1, 2002, then TSSA could still lay charges for the offence until January 1, 2004.

Of course, TSSA would have to prove to the court beyond a reasonable doubt that no one removed the middle section of the liner between the date of installation and the date of discovery.

Duties of Employers and Contractors

Reasonable Precautions

Every contractor and employer shall take all reasonable precautions to ensure that they and their agents and employees comply with this Act, the regulations or a Minister's order.

Understanding "Reasonable"

Notice the use of the word reasonable. Remember the definition of due diligence and the meaning and expectations of this Clause will be transparent. A certificate holder is individually responsible for his or her actions, but so is his or her employer.

"Reasonable precautions" may include, among other things, having a procedure and evidence of monitoring and responding to compliance issues.

Examples of Reasonable Precautions

Employee Knowledge

For example, how can you reasonably prove that a new employee knows the requirements of the Act and regulations and follows legal requirements?

Response to Infractions

What actions have you taken as an employer when infractions of the code were brought to your attention?

Ongoing Training

What training has been provided or required on new appliances or activities?

Legal Importance

This section of the Act is very important and often referenced in charges laid against companies.

TSSA's Role in Public Safety

Regulation

Establishing and enforcing safety standards

Inspection

Conducting field inspections and audits

Enforcement

Taking action against non-compliance

Certification

Issuing authorizations to qualified individuals

Importance of Compliance

$50,000

Individual Fine

Maximum fine for individuals who violate the Act

$1M

Corporate Fine

Maximum fine for corporations who violate the Act

1 year

Imprisonment

Maximum prison term for violations

The significant penalties established in the Act underscore the importance of compliance with all provisions of the Technical Standards and Safety Act, 2000, its regulations, and associated orders. Both individuals and corporations must take their responsibilities seriously to avoid these severe consequences.

Administrative Penalties

Definition

Administrative penalties are financial penalties that TSSA can impose for violations of the Act or regulations without going through the court system.

Purpose

These penalties serve as an intermediate enforcement tool between warnings and formal charges.

Important Note

Administrative penalties do not preclude charges being laid or fines being assessed through the court system.

Due Diligence in the Gas Industry

Public Safety

Ultimate goal of all safety measures

Documentation

Records of training, inspections, and compliance

Proper Procedures

Following established safety protocols

Training & Knowledge

Understanding regulations and requirements

Due diligence in the gas industry involves taking all reasonable steps to prevent violations and ensure safety. This includes proper training, following established procedures, maintaining documentation, and prioritizing public safety in all decisions and actions.

Employer Responsibilities

Training

Ensure all employees are properly trained on the requirements of the Act, regulations, and codes.

Supervision

Provide appropriate supervision for employees, especially those with lower-level certifications.

Documentation

Maintain records of employee certifications, training, and compliance activities.

Compliance Monitoring

Regularly monitor work to ensure compliance with all applicable requirements.

Response to Issues

Take prompt corrective action when compliance issues are identified.

Equipment

Provide proper tools and equipment needed for safe and compliant work.

Contractor Responsibilities

Registration

Maintain valid contractor registration with TSSA.

Employee Certification

Ensure all employees performing regulated work hold valid certificates.

Code Compliance

Ensure all work complies with applicable codes and standards.

4 Documentation

Maintain proper records of all installations and service work.

Technician Responsibilities

1 Certification

Maintain a valid certificate appropriate for the work being performed.

2 Knowledge

Stay current with codes, regulations, and manufacturer's instructions.

3 Compliance

Perform all work in compliance with applicable requirements.

4 Documentation

Properly document all work performed.

5 Safety

Prioritize safety in all work activities.

The Role of TSSA in the Gas Industry

Regulatory Oversight

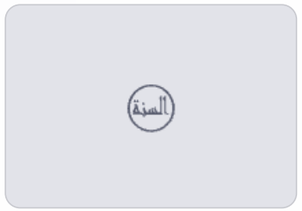
TSSA serves as the designated administrative authority responsible for enforcing the Technical Standards and Safety Act, 2000 in Ontario.

This includes oversight of the gas industry to ensure compliance with all applicable regulations and codes.

Key Functions

- Issuing authorizations to qualified individuals and companies
- Conducting inspections and investigations
- Approving equipment and installations
- Enforcing compliance with regulations
- Responding to incidents and complaints
- Providing education and outreach

Importance of the Act for Gas Technicians

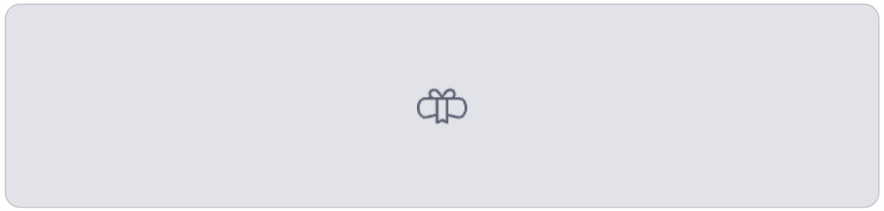


Legal Foundation

Establishes the legal basis for all regulations

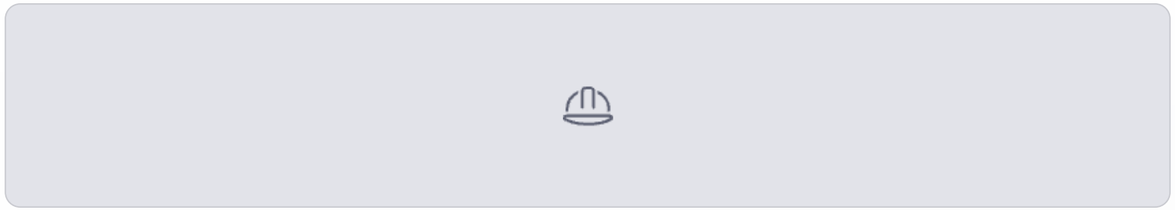
Regulatory Framework

Defines the structure for industry regulations



Certification Requirements

Establishes the need for proper authorization



Safety Standards

Promotes public safety through compliance

Understanding the Technical Standards and Safety Act, 2000 is essential for gas technicians as it forms the foundation for all the regulations, codes, and standards that govern their daily work activities. Compliance with the Act is not just a legal requirement but a professional responsibility that ensures public safety.

Relationship Between the Act and Regulations

The Act

Establishes legal framework and authority

Regulations

Provide specific requirements and procedures

Implementation

Practical application in the field

Codes & Standards

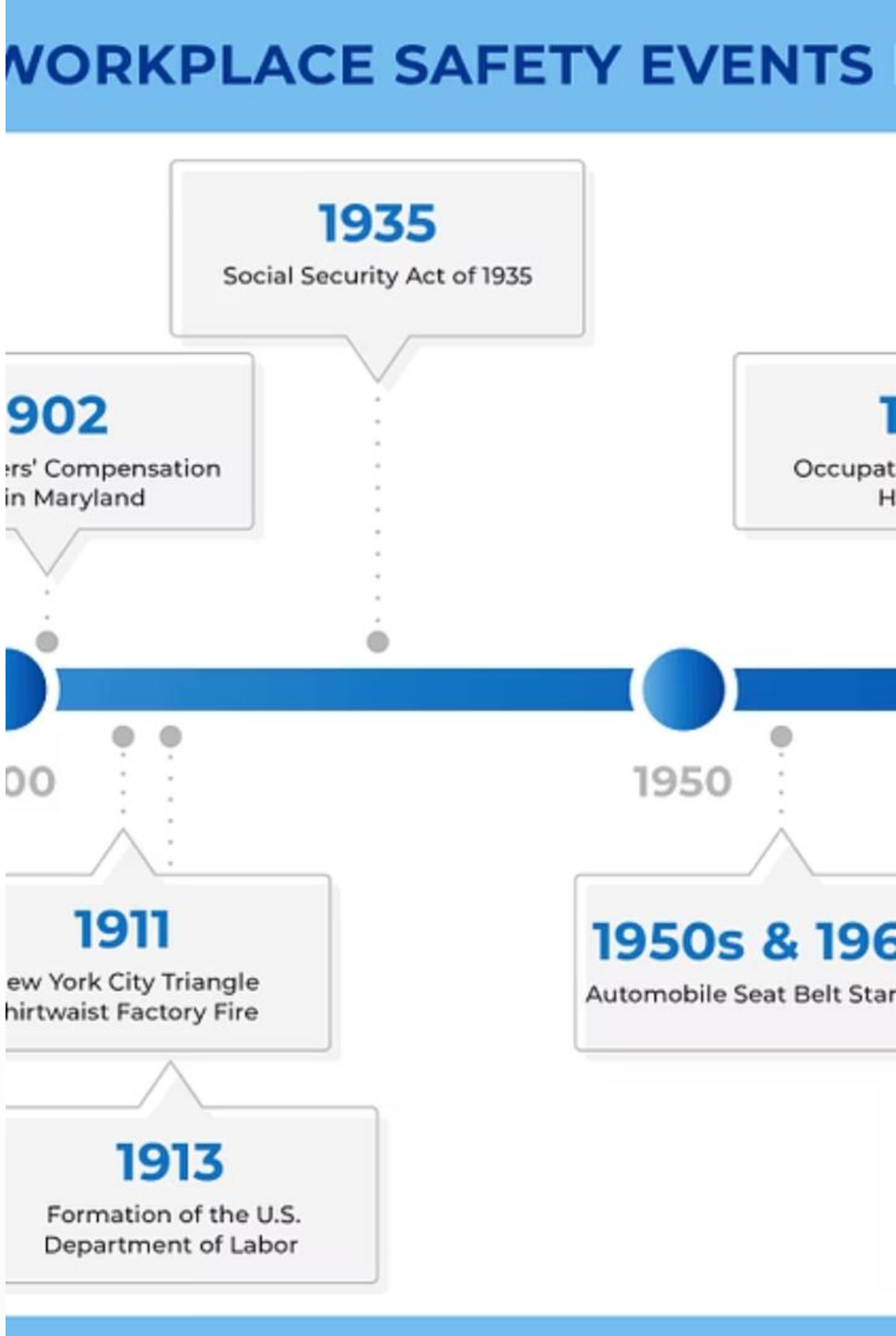
Detail technical specifications and practices

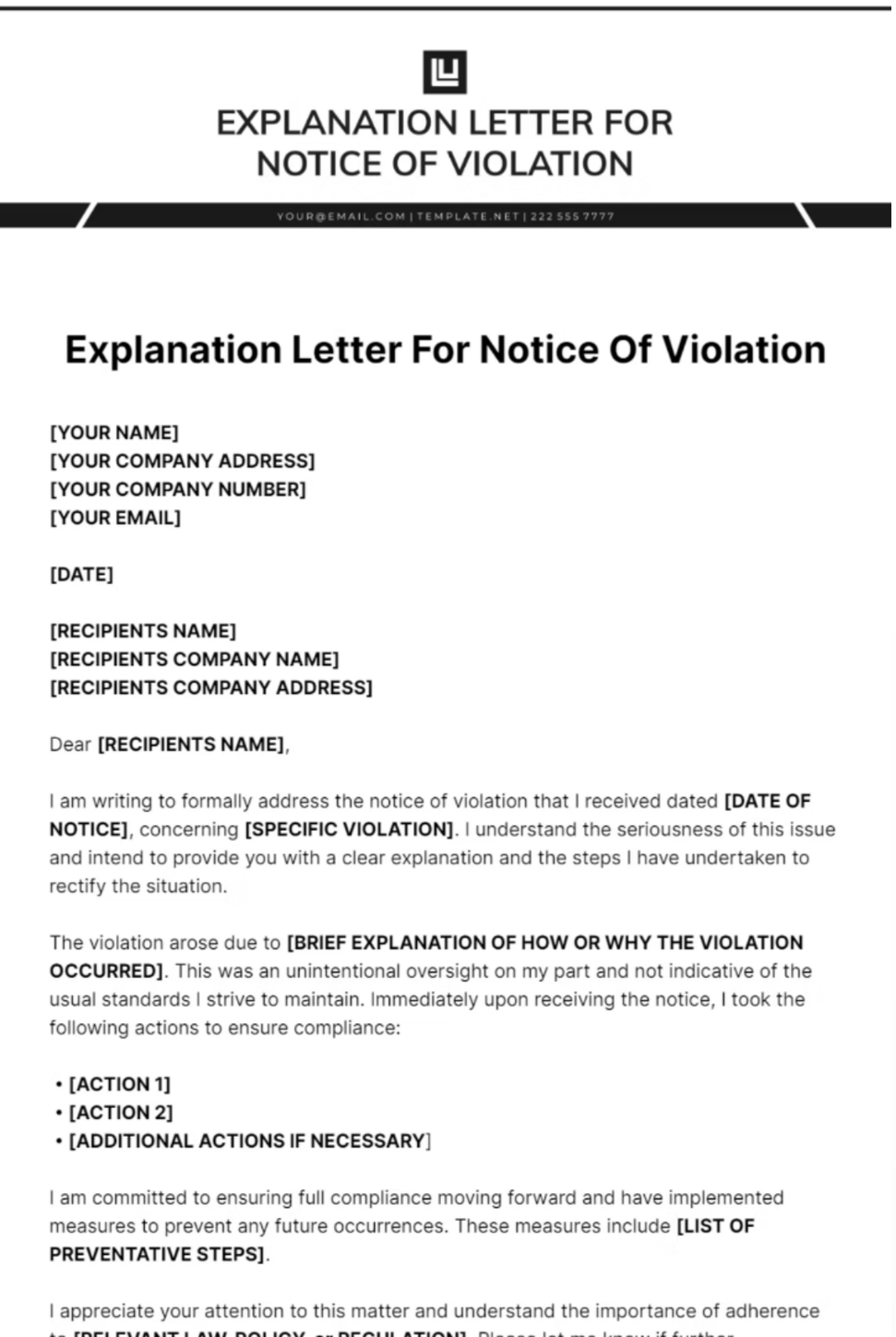
The Technical Standards and Safety Act, 2000 provides the legal foundation upon which regulations are built. These regulations, in turn, reference specific codes and standards that provide detailed technical requirements. This hierarchical structure ensures comprehensive coverage of all aspects of safety in the gas industry.

Evolution of the Act

1. **2000**
   Technical Standards and Safety Act passed
2. **2001**
   Act comes into force in Ontario
3. **2019**
   Last amendment to the Act

The Technical Standards and Safety Act, 2000 has evolved over time to address changing industry needs and safety concerns. Since its initial passage in 2000 and implementation in 2001, the Act has undergone amendments, with the most recent occurring in 2019. These changes reflect the ongoing commitment to enhancing public safety in Ontario through effective regulation of the gas industry.





EXPLANATION LETTER FOR
NOTICE OF VIOLATION

YOUR@EMAIL.COM | TEMPLATE.NET | 222 555 7777

Explanation Letter For Notice Of Violation

[YOUR NAME]
[YOUR COMPANY ADDRESS]
[YOUR COMPANY NUMBER]
[YOUR EMAIL]

[DATE]

[RECIPIENTS NAME]
[RECIPIENTS COMPANY NAME]
[RECIPIENTS COMPANY ADDRESS]

Dear **[RECIPIENTS NAME]**,

I am writing to formally address the notice of violation that I received dated **[DATE OF NOTICE]**, concerning **[SPECIFIC VIOLATION]**. I understand the seriousness of this issue and intend to provide you with a clear explanation and the steps I have undertaken to rectify the situation.

The violation arose due to **[BRIEF EXPLANATION OF HOW OR WHY THE VIOLATION OCCURRED]**. This was an unintentional oversight on my part and not indicative of the usual standards I strive to maintain. Immediately upon receiving the notice, I took the following actions to ensure compliance:

- **[ACTION 1]**
- **[ACTION 2]**
- **[ADDITIONAL ACTIONS IF NECESSARY]**

I am committed to ensuring full compliance moving forward and have implemented measures to prevent any future occurrences. These measures include **[LIST OF PREVENTATIVE STEPS]**.

I appreciate your attention to this matter and understand the importance of adherence

Enforcement of the Act

Monitoring

TSSA inspectors conduct regular inspections and audits to monitor compliance with the Act and regulations.

Identification of Violations

When violations are identified, inspectors may issue orders requiring corrective action within a specified timeframe.

Escalation

For serious or repeated violations, enforcement may escalate to administrative penalties, suspension or revocation of authorizations, or legal charges.

Court Proceedings

In the most serious cases, charges may be laid leading to court proceedings and potential fines or imprisonment.

Compliance with Inspector's Orders

Importance of Compliance

When an inspector issues an order, it is a legal requirement to comply within the specified timeframe. Failure to comply can result in serious consequences, including:

- Additional orders or penalties
- Suspension or revocation of authorizations
- Legal charges and potential fines
- Damage to professional reputation

Appeal Process

If you believe an inspector's order is unreasonable or unnecessary, the Act provides a process for appeal:

1. Submit a written appeal to the director within the timeframe specified in the Act
2. Provide clear reasons why you believe the order should be reconsidered
3. Continue to comply with the order unless and until it is modified or revoked
4. If necessary, further appeal to the Safety and Consumer Statutes Administration Appeal Body

Sealing of Equipment

Purpose of Sealing

Under the Act, inspectors have the authority to seal equipment that poses a safety hazard or does not comply with regulations. Sealing restricts the use of the equipment as specified by the inspector or director.

A seal may indicate a complete prohibition on use or may allow limited use under specific conditions.

Types of Seals

The Act defines "seal" broadly to include various forms of marking, tagging, sealing, or labeling. Examples include:

- Physical seals that prevent operation of equipment
- Warning tags indicating restrictions on use
- TSSA field labels indicating approval status

The images shown earlier in this presentation illustrate examples of seals used by TSSA.

Responding to Sealed Equipment

1 Respect the Seal

Never remove, alter, or tamper with a seal placed by an inspector. Doing so is a serious violation of the Act.

2 Understand the Restrictions

Carefully review any documentation provided with the seal to understand the specific restrictions on use.

3 Take Corrective Action

Address the issues that led to the sealing of the equipment, following all applicable codes and regulations.

4 Request Inspection

Once corrections are complete, request a follow-up inspection to have the seal removed if appropriate.

Director's Safety Orders

Purpose

Safety orders allow the director to take immediate and effective action to address safety concerns that may affect multiple individuals or organizations.

Scope

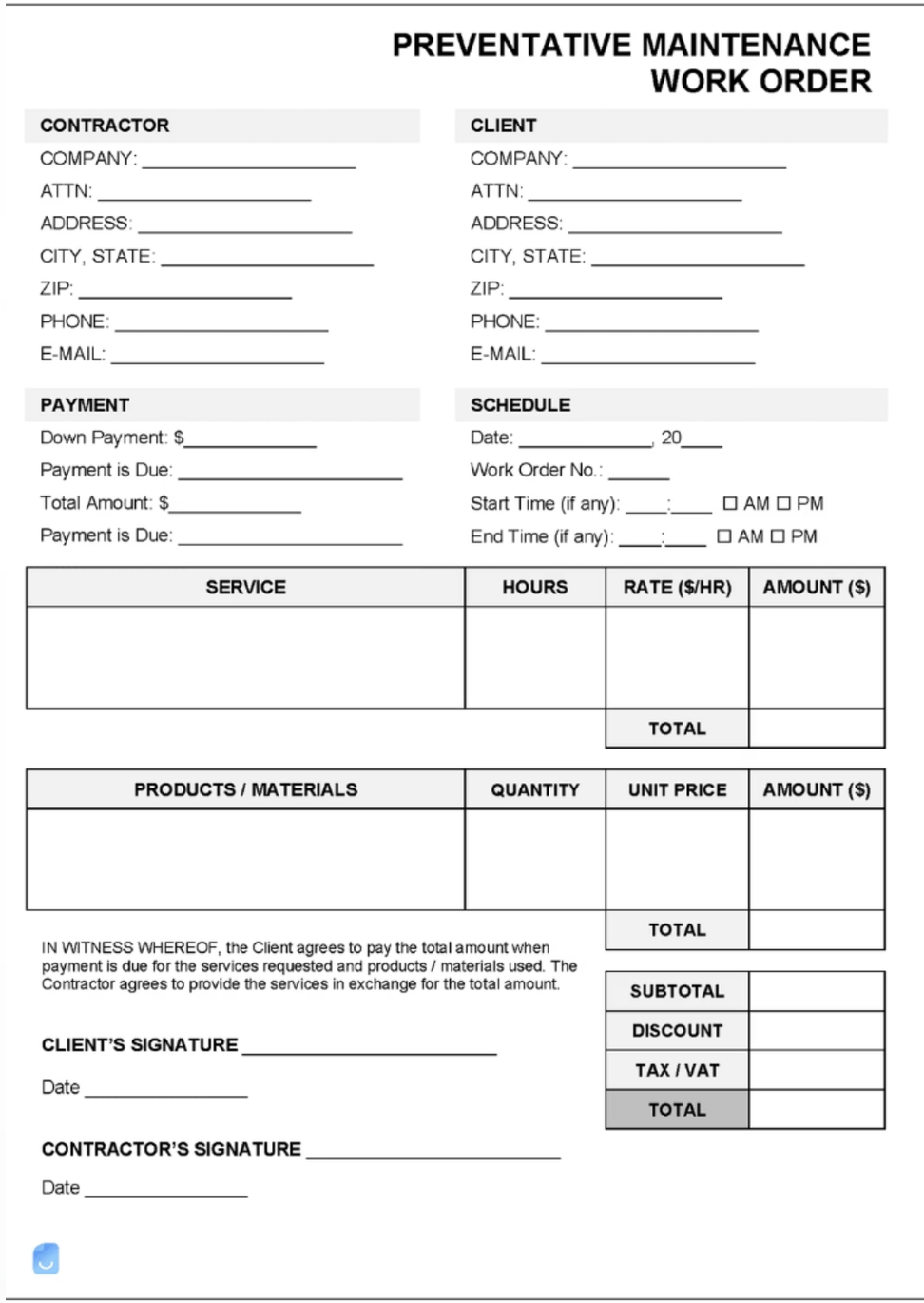
A safety order may be issued to a specific person or to an entire class of persons (such as all gas technicians or all contractors).

Content

Safety orders may require specific actions regarding equipment or procedures, including shutting down equipment, restricting its use, or prohibiting its use entirely.

Format

Safety orders may be issued orally or in writing, and may be issued without prior notice or a hearing in urgent situations.



PREVENTATIVE MAINTENANCE WORK ORDER

CONTRACTOR

COMPANY: _____
ATTN: _____
ADDRESS: _____
CITY, STATE: _____
ZIP: _____
PHONE: _____
E-MAIL: _____

CLIENT

COMPANY: _____
ATTN: _____
ADDRESS: _____
CITY, STATE: _____
ZIP: _____
PHONE: _____
E-MAIL: _____

PAYMENT

Down Payment: $_____
Payment is Due: _____
Total Amount: $_____
Payment is Due: _____

SCHEDULE

Date: _____, 20____
Work Order No.: _____
Start Time (if any): ____:____ ☐ AM ☐ PM
End Time (if any): ____:____ ☐ AM ☐ PM

SERVICE	HOURS	RATE ($/HR)	AMOUNT ($)
		TOTAL	

PRODUCTS / MATERIALS	QUANTITY	UNIT PRICE	AMOUNT ($)
		TOTAL	

IN WITNESS WHEREOF, the Client agrees to pay the total amount when payment is due for the services requested and products / materials used. The Contractor agrees to provide the services in exchange for the total amount.

SUBTOTAL	
DISCOUNT	
TAX / VAT	
TOTAL	

CLIENT'S SIGNATURE _____

Date _____

CONTRACTOR'S SIGNATURE _____

Date _____

Compliance with Safety Orders

Notification

When a general safety order is issued, all affected certificate holders and registered contractors will receive notification.

Review

Carefully review the safety order to understand its requirements and any deadlines for compliance.

3 Implementation

Take all necessary steps to comply with the safety order within the specified timeframe.

Documentation

Maintain records of your compliance activities in case verification is requested.

Court-Issued Compliance Orders

Purpose

In cases of persistent non-compliance, the director may apply to the Superior Court of Ontario for a compliance order. This represents an escalation of enforcement beyond the director's direct authority.

Significance

Court-issued compliance orders have a higher status in law and therefore higher penalties and powers of enforcement than those normally available to the director.

The court functions independently of TSSA, but if it agrees with the director's request, the court reinforces the requirement to comply by using the full weight of the law.

Continuous Offences

Definition

The Act specifies that where a person contravenes any provisions of the Act, regulations, a Minister's order, or any notice or order made under them on more than one day, the continuance of the contravention on each day shall be deemed to constitute a separate offence.

Implications

This means that penalties can accumulate for each day that a violation continues. For example:

- If an individual continues a violation for 10 days, they could potentially face up to $500,000 in fines ($50,000 × 10 days)
- If a corporation continues a violation for 10 days, they could potentially face up to $10,000,000 in fines ($1,000,000 × 10 days)

This provision creates a strong incentive for prompt compliance with orders and requirements.

Discovery-Based Time Limit

1

Installation

Work is performed, potentially with code violations

Discovery

Violation is discovered, starting the two-year time limit

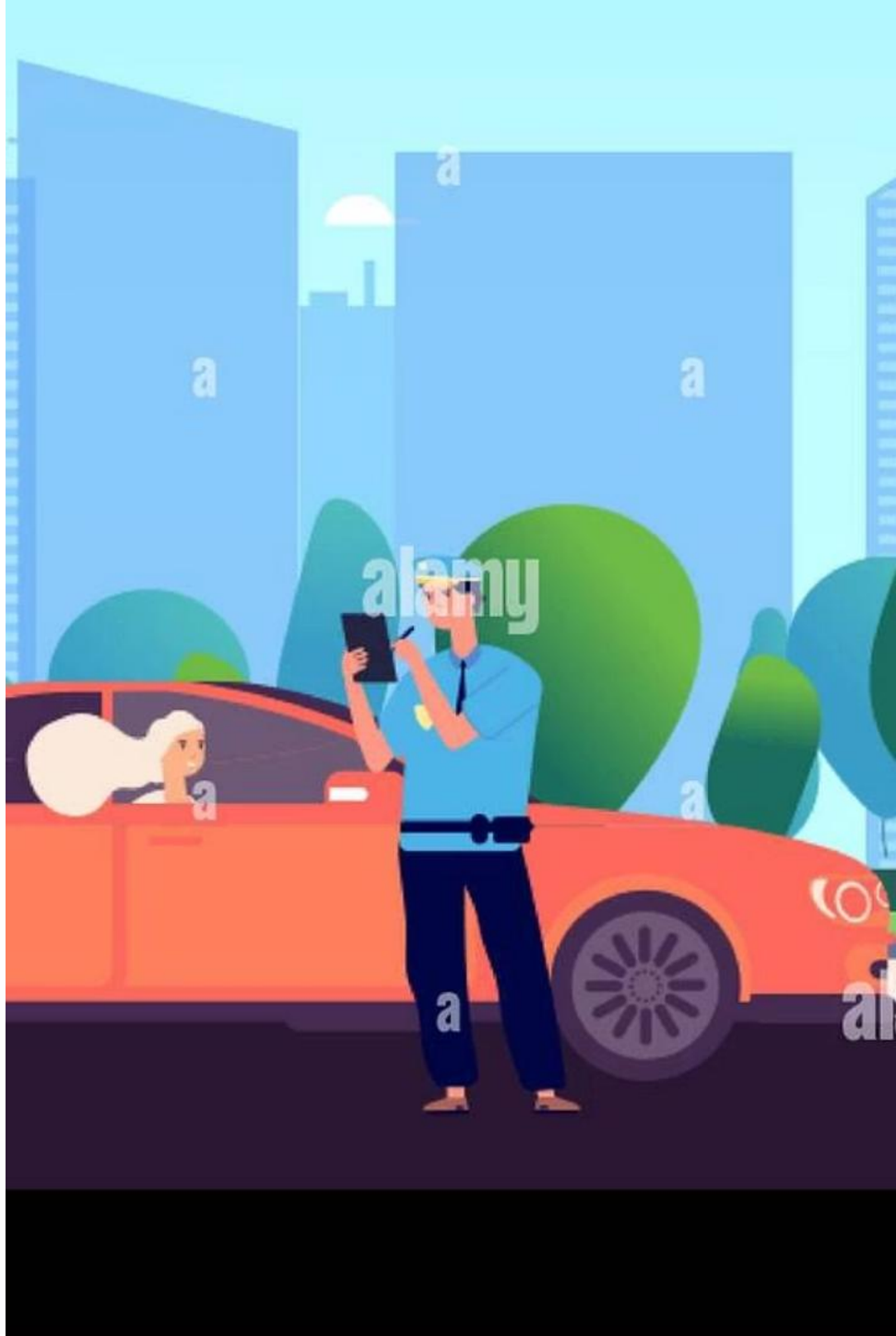
Prosecution Window

TSSA has two years from discovery to commence proceedings

Expiration

After two years from discovery, proceedings cannot be commenced

The Act specifies that the two-year time limit for commencing proceedings begins when the facts giving rise to the alleged offence are discovered, not when the offence was committed. This means that violations can be prosecuted years after they occurred if they were only recently discovered.



Reasonable Precautions for Employers

Training Programs

Implement comprehensive training programs for all employees on relevant regulations and safety procedures.

Documentation Systems

Maintain thorough records of employee certifications, training, and work activities.

Regular Audits

Conduct periodic internal audits to verify compliance with all applicable requirements.

Clear Policies

Establish and communicate clear policies regarding compliance expectations.

Taking "reasonable precautions" as required by the Act means implementing systems and processes that demonstrate a genuine commitment to ensuring compliance. These measures not only help prevent violations but also provide evidence of due diligence if issues do arise.

Due Diligence Defense

Definition

Due diligence refers to taking all reasonable steps to prevent an offence from occurring. It can serve as a defense in cases where a violation has occurred despite best efforts to comply.

Elements of Due Diligence

1. Knowledge of legal requirements
2. Establishment of proper systems and procedures
3. Effective implementation of those systems
4. Regular monitoring and verification
5. Prompt response to identified issues
6. Documentation of all compliance efforts

While the Act imposes strict requirements, it also recognizes that reasonable efforts to comply are important. Section 21(5) specifically states that a person who complies with an order or has made all reasonable efforts to comply is not guilty of an offence in respect of the contravention that formed the basis of the order.

Maintaining Your Authorization

Timely Renewal

Submit renewal applications and fees before expiration

Continuing Education

Complete any required training or professional development

3

Ongoing Compliance

Adhere to all applicable codes and regulations

Record Keeping

Maintain documentation of your work and compliance activities

Maintaining your authorization (certificate or registration) is essential for legally working in the gas industry. The most common reason for suspension is default on payment of fees, so be sure to keep track of renewal deadlines and submit payments promptly.

Key Takeaways About the Act

Legal Foundation

The Technical Standards and Safety Act, 2000 provides the legal foundation for all regulations governing the gas industry in Ontario.

Authority Structure

The Act establishes a clear hierarchy of authority from the Minister to the TSSA to directors and inspectors.

Authorization Requirements

The Act requires proper authorization (certification or registration) for individuals and companies working in the gas industry.

Enforcement Mechanisms

The Act provides various enforcement tools including orders, seals, administrative penalties, and legal charges.

Shared Responsibility

The Act places responsibility on individuals, employers, and contractors to ensure compliance with all requirements.

Chapter Summary

Key Points Covered

- The Technical Standards and Safety Act, 2000 is the primary legislation governing safety standards in the gas industry in Ontario
- Key terminology defined in the Act includes authorization, administrative authority, director, inspector, minister, person, and seal
- The Act establishes the appointment process for directors and inspectors
- Authorization requirements for individuals working in the gas industry are specified
- Various orders and powers are outlined, including safety orders and compliance orders
- Offences, fines, and penalties for violations are clearly defined
- Duties of employers and contractors are established, including taking reasonable precautions to ensure compliance

Importance for Gas Technicians

Understanding the Technical Standards and Safety Act, 2000 is essential for anyone working in the gas industry in Ontario. The Act establishes the legal framework that governs all aspects of the industry and defines the responsibilities of all participants.

By familiarizing yourself with the Act, you can ensure that you understand your legal obligations and the potential consequences of non-compliance. This knowledge is fundamental to working safely and legally in the gas industry.

CSA Unit 4a

Chapter 3
Gas Technician Regulations and Certification

This presentation covers the regulations that fall under the Technical Standards and Safety Act, 2000, focusing on those that gas technicians need to be familiar with, including the Fuel Industry Certificates Regulation, Gaseous Fuels Regulation, and Propane Storage and Handling Regulation. We'll explore the definitions, certification requirements, duties and responsibilities of gas technicians, and approved gas appliances.

Regulations Overview

Fuel Industry Certificates Regulation, 215/01

Covers certification requirements for gas technicians and other fuel industry professionals

Gaseous Fuels Regulation, 212/01

Addresses requirements for gas equipment, installation, and maintenance

Propane Storage and Handling Regulation, 211/01

Covers requirements specific to propane storage and handling

Learning Objectives

Identify regulations and their scopes

Understand the three main regulations and their respective areas of application

Locate and understand definitions

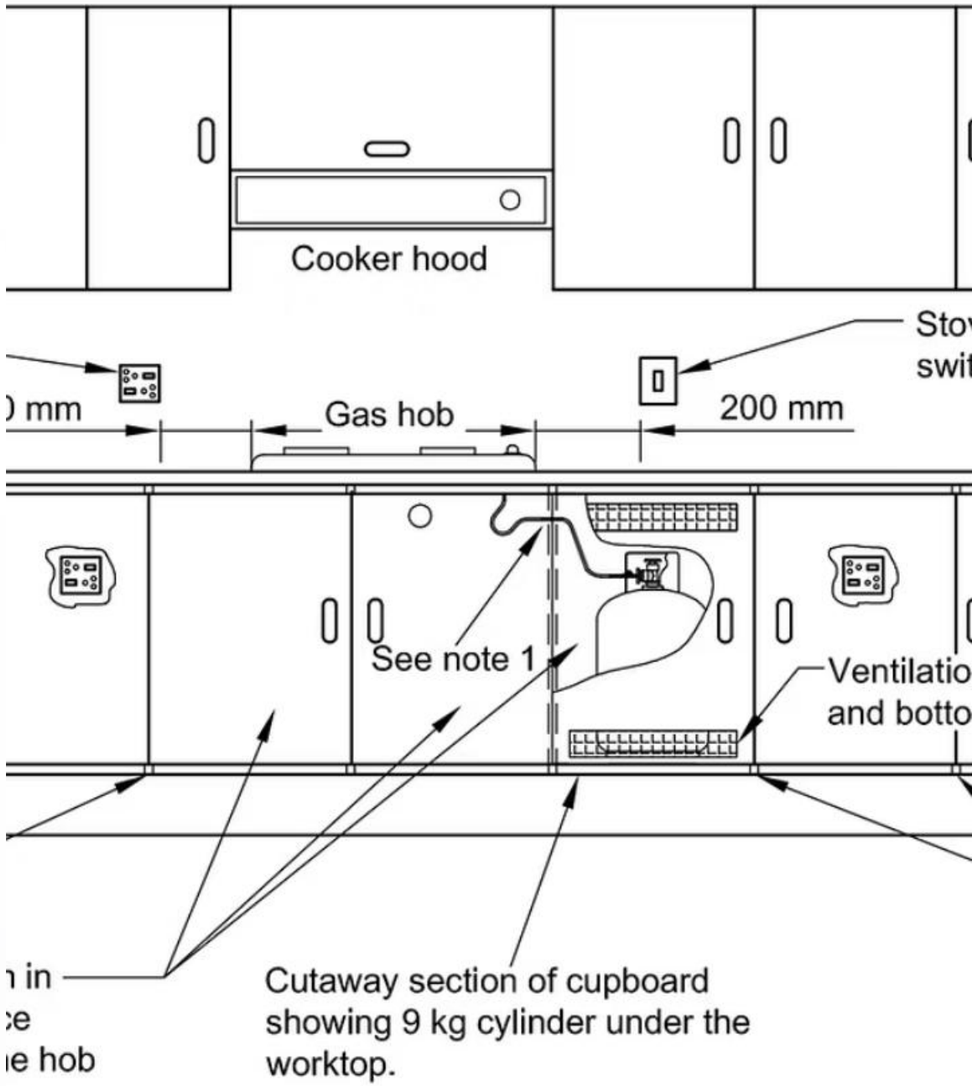
Find definitions in each regulation and identify their significance

Identify qualified personnel

Determine who can work on gas equipment and what certificates are required

Understand duties and responsibilities

Identify the duties of technicians, employees, distributors, contractors, and property owners



es not pass through the solid partition or divider between the cu
hosetail (see figure 5) on each side passes through and is fixe
is attached to the hosetail in the cupboard in which the cylind
d to the hosetail in the cupboard space under the hob.

More Learning Objectives

Accident Response

Describe the actions a gas technician must take following an accident or occurrence

Appliance Approval

Identify gas appliances that have received proper approval

Key Terminology

Term	Abbreviation	Definition
Appliance		A device that consumes or is intended to consume a gas and includes all valves, fittings, controls, and components attached or to be attached to it
Code adoption document		The "Gaseous Fuels Code Adoption Document" adopted as part of this Regulation under Ontario Regulation 223/01
Contractor		A person who carries on, in whole or in part, the business of installing, removing, repairing, altering, or servicing appliances

More Key Terminology

Term	Abbreviation	Definition
Direct supervision		The supervision by a supervising certificate holder who is on site near a trainee and is available to assist and supervise the trainee
Distributor		A person who supplies gas to an end user
General supervision		The supervision by a supervising certificate holder who may or may not be on site but who is readily available to assist a trainee

Final Key Terminology

Term	Abbreviation	Definition
Multi-Endorsement Certificate Holder	MECH	A designation for a person who holds one or more of the listed certificates
Record of training	ROT	An approved training provider-issued record that indicates training of a person
Supervising certificate holder		A person who holds a certificate under this Regulation and provides supervision to a trainee

Fuel Industry Certificates Regulation 215/01

Purpose of Certification

The fuel industry certificate is proof of having achieved a recognized level of skills and knowledge that permits the holder to carry out certain tasks it authorizes.

A certificate is not proof of expertise but rather proof of having met a minimum standard of qualification to conduct certain work.

Importance of Understanding

It is important to understand the rights, duties, and responsibilities that come with a certificate, as well as the allowable scope of work for the certificate holder and those of his or her co-workers or employees.

Definitions in Regulations

Purpose of Definitions

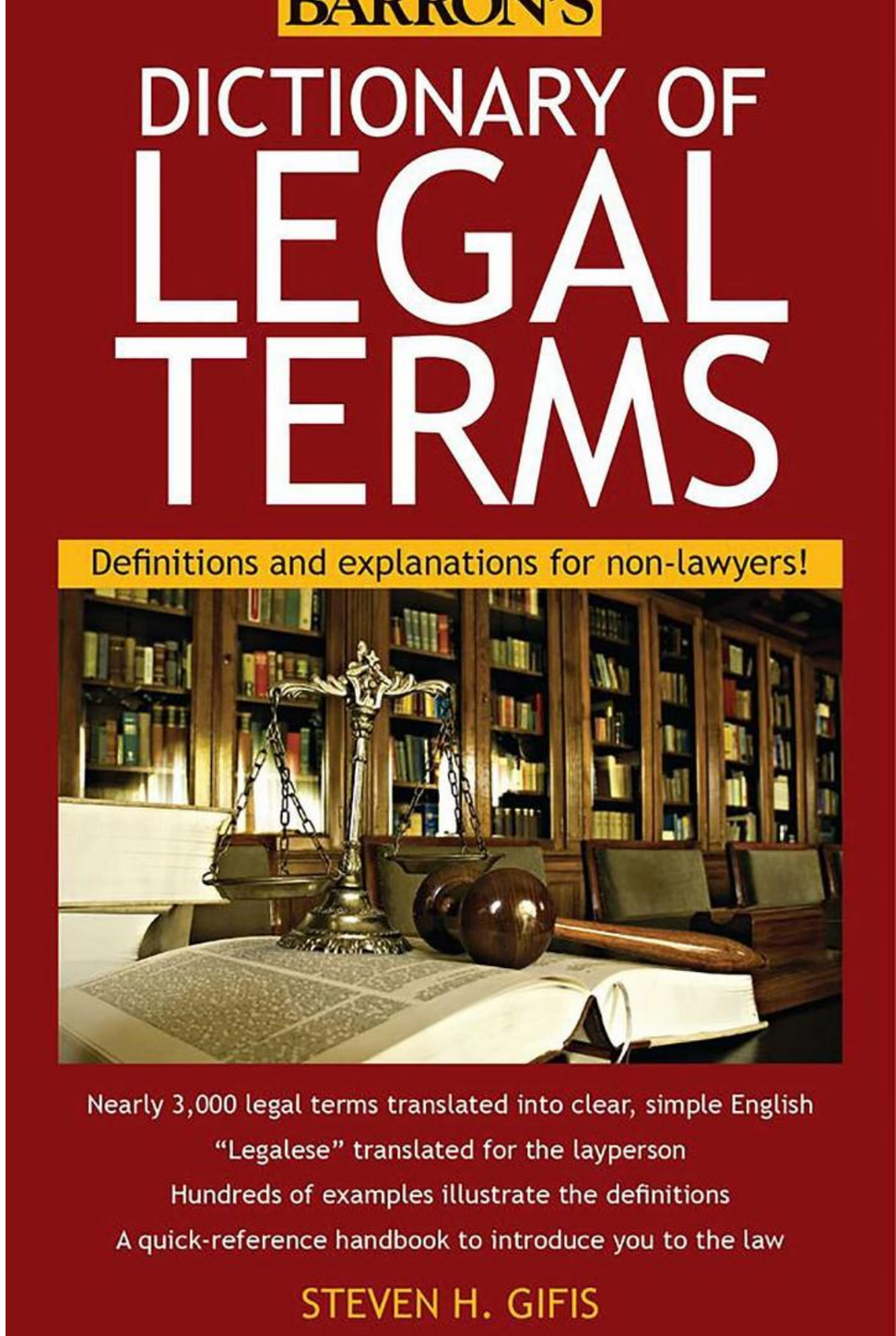
The beginning of the regulation defines some important words to clarify their intent and application for all documents to which this regulation applies.

Application

A definition in the Fuel Industry Certificates Regulation applies to the other regulations and the codes unless those documents use the word with a new definition.

Best Practice

Continually refer to the definition section when reading and interpreting any regulation.



Supervision Definitions

Direct Supervision

"Direct supervision" means the supervision by a supervising certificate holder who is on site in close proximity to a trainee and is available to assist and supervise the trainee.

General Supervision

"General supervision" means the supervision by a supervising certificate holder who may or may not be on site but who is readily available to assist a trainee.

Supervising Certificate Holder

"Supervising certificate holder" means a person who holds a certificate under this Regulation and provides supervision to a trainee.

Purpose of Supervision

Safety

Ensuring public and worker safety

Skill Development

Allowing trainees to gain practical experience

Certification Pathway

Creating a path to higher level certification

The use of the word "supervision" has always been to regulate and control the type of work that an entry-level or lower-level certificate holder can do to gain work experience. The new certification regulation recognizes that trainees must have a means of learning the skills and knowledge of the higher level certificate categories while at the same time being of value to themselves and the company they work for while they are learning.

Supervision Principles

General Supervision

May be allowed for tasks that require only a minimum skill/knowledge level and pose only a minimal safety risk to the worker and the public.

Direct Supervision

May be allowed for tasks that are inherently more difficult and have a higher potential for problems. Close supervision is required in these cases.

Responsibility

The Act and the Regulations confer significant duties and responsibilities on both the supervisor and employer of trainees.

Record of Training (ROT)

Definition

"Record of training" means a record issued by an approved training provider that indicates training received by a person.

A record of training or ROT is different from a certificate. Where a specific task requires only a short training course (usually one to three days), the certification regulation may allow either a person holding a certificate or an ROT to complete the work.

Applications

ROTs apply mostly to propane transfers, cylinder inspection, and work on construction heaters or roofing equipment. Maintaining an ROT may require re-training at regular intervals.

A record of training card must be available to an inspector to prove compliance with an ROT requirement. The accredited training provider, not TSSA, is responsible for issuing the card.

Project Name	Construction Project
Project No.	CTR-98765
Date	May 8, 2050
Training Program Details	
Training Program Name	Construction Safety 101
Training Instructor	Frances Robbins
Training Duration	3 Days
Training Location	Construct Corp Training Center
Participant Information	
Participant Name	Jonathan Wilkins
Job Title	Construction Worker
ID Number	EMP-54321
Contact Information	222 555 7777
Training Topics	

ROT Card Example

The ROT card includes the training company name, logo, contact information, and details about the specific training received. This card serves as proof of specialized training for specific tasks that don't require full certification.

Application and Requirement to Comply

Applicable Regulations and Codes

The Fuel Industry Certificates Regulation is accepted by and applies to the Gaseous Fuels Regulation 212/01, Propane Storage and Handling Regulation 211/01, and CSA B149.1, CSA B149.2, and CSA B149.3.

Duty to Comply

Every person engaged in an activity, use of equipment, process or procedure to which the Act and this Regulation apply shall comply with the Act and this Regulation.

Scope of Application

The reference to an activity, use of equipment, process or procedure includes, but is not limited to, design, construction, creation, installation, maintenance, alteration, service, use or disposal.

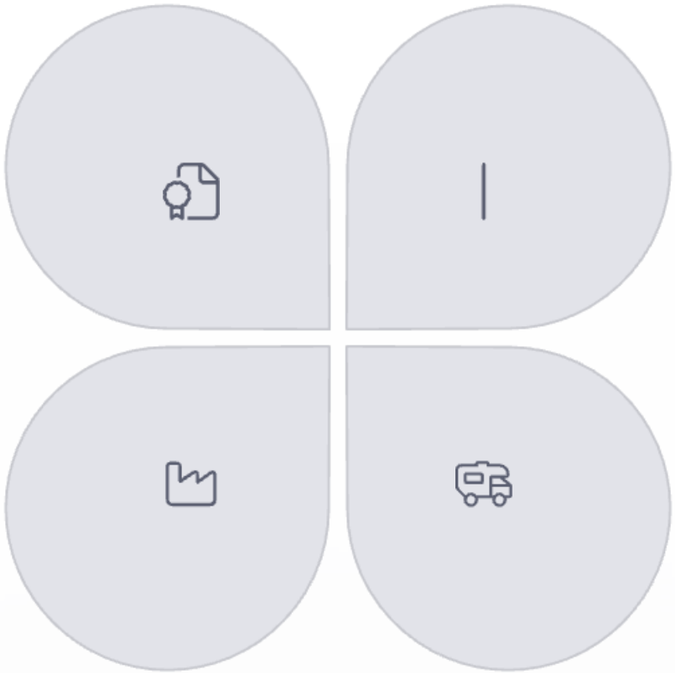
Certificate Types

Gas Technician Certificates

- Gas technician 1 (G.1)
- Gas technician 2 (G.2)
- Gas technician 3 (G.3)

Industrial Certificates

- Industrial maintenance technician (IMT)
- Refuelling station installer (RSI-NG)
- Refuelling station service technician (RST-NG)



Specialized Gas Certificates

- Gas piping fitter (GP)
- Liquid propane fitter (LP)
- Domestic appliance technician (DA)

Recreational Vehicle Certificates

- Recreational vehicles technician 1 (RV.1)
- Recreational vehicles technician 2 (RV.2)

More Certificate Types

Propane Plant Certificates

- Propane plant operator 1 (PPO-1)
- Propane plant operator 2 (PPO-2)
- Propane plant operator 3 (PPO-3)

Propane Handling Certificates

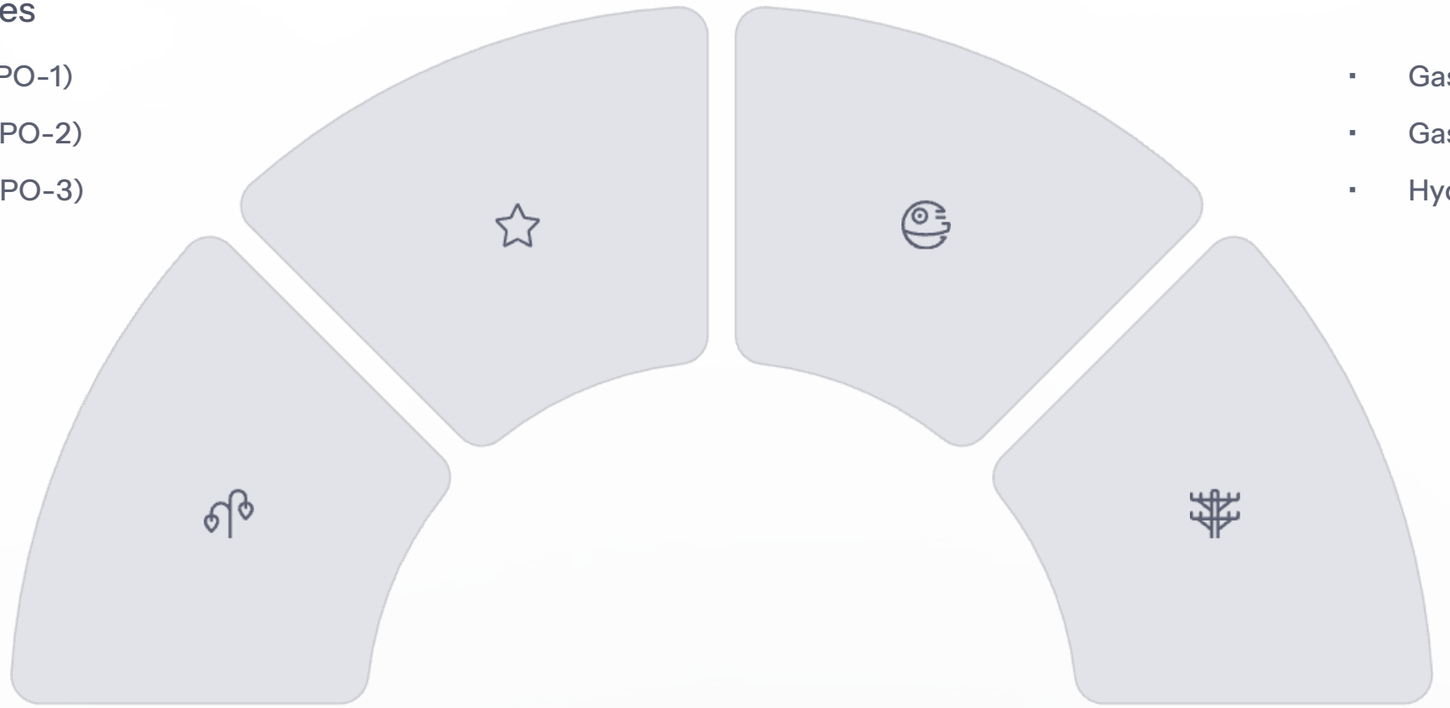
- Propane cylinder inspector (PCI-1)
- Propane truck operator (PTO-1)

Construction Certificates

- Crop dryer technician (CDT)
- Construction heater operator 1 & 2 (CH-01, CH-02)
- Construction heater service and maintenance technician 1 & 2 (CH-SM1, CH-SM2)
- Roofing equipment operator (RE-O)

Utility and Hydrogen Certificates

- Gas utility technician 1 (GUT-1)
- Gas utility technician 2 (GUT-2)
- Hydrogen technician (H2)



Multi-Endorsement Certificate Holder (MECH)

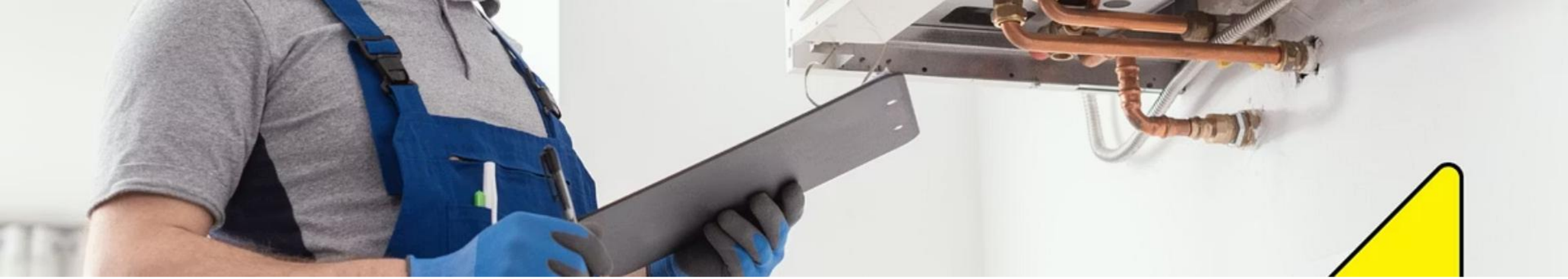
Definition

A person who holds one or more of the listed certificates receives one certificate (for the same fee) and has the designation MECH preceding the abbreviations for those certificates.

Meaning

MECH stands for Multi-Endorsement Certificate Holder.

The abbreviation of the certificate type appears on the wallet card of those who hold the certificate.



Certificate Renewals

Application Process

An application for a certificate or a renewal thereof shall be in the form published by the designated administrative authority and be accompanied by the fee set by the authority.

Renewal Timeframe

An application for renewal of a certificate may be made before the certificate expires or within one year after it has expired.

Upgrading Requirement

A person who applies for renewal of a certificate before the date of expiry or within one year after the date of expiry shall successfully complete an upgrading course by the date specified by the director.

Asset ID	Location	Type	Make	Model
539	Bathroom	Condensing Boiler	Main	Combi 24HE

Appliance Details																
Asset ID	Flue Type	Inlet Pressure mBar	Opr Press or Heat Input	Safety Device correct Operation	Ventilation Adequate	Flue Flow Test	Flue Spillage Test	Termination Satisfactory	Flue Visual Condition	CO/CO2 Hi Ratio Low Ratio	Serviced	Inspected	Safe to Use?	CO Alarm Fitted	CO Alarm in Date	Tested
539	RS	16.7	27.5	Yes	Yes	N/A	N/A	Yes	Pass	0.0005	Yes	Yes	Yes	Yes	11/05/2023	Yes
	Defects Identified						Remedial Action Taken						Warning Advisory Notice #			
539	No						No						No			

Certificate Characteristics

No Transfer

A certificate is not transferable.

Expiry

A certificate or renewal of a certificate expires on the date indicated on the certificate.

The addition of a designation to a certificate after the certificate is issued does not change the expiry date of the certificate.

Address Changes

A person who holds a certificate shall notify the director within 30 days after any change in his or her address.

The director is not responsible for misdirected notices or renewals resulting from the certificate holder's failure to comply with this requirement.

What are the responsibilities of the installer when converting? ✓✓Determine that it can accept gas and will operate satisfactory for a reasonable length of time.

Certificate Renewal Process

Renewal Notice

Certificate holder receives a renewal form at their last known address approximately 60 days before the expiry date.

Renewal Submission

Certificate holder submits renewal application and fee before expiry date.

Certificate Renewal

New certificate issued with updated expiry date.

Renewal Cycle

Holders renew their certificates every two years on their birthday at a minimal cost.

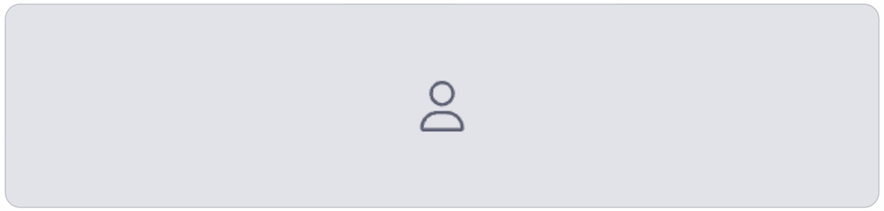
Consequences of Non-Renewal

Suspension

Failure to renew by expiry date results in suspension

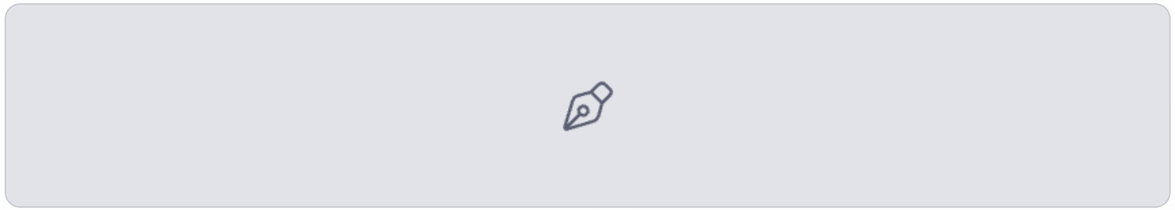
Suspension Notice

Notice sent one month after failure to renew



Revocation

Failure to renew within one year causes revocation



Re-activation

Requires new application and proof of competence

It is illegal to function as a certificate holder with a suspended certificate. Re-activation of a revoked certificate may require proof of recent successful completion of the required training course(s) or successful completion of a "challenge" exam and practical assessment conducted by a TSSA Training and Certification Advisor.

Qualifications and Prerequisites

Basic Requirements

The gas technician should read and become familiar with the basic qualifications necessary to hold a specific certificate as given in Clauses 5 through 16 of the Fuel Industry Certificates Regulation.

Prerequisites

In most cases where the certificate category consists of different levels (e.g., Gas Technician 1, 2, and 3), the lower level certificate is required as a prerequisite.

Training Program

To qualify for a certificate, an applicant must complete a training program with a series of examinations that are approved by the director and delivered by a training organization accredited for the purpose and registered with TSSA.

Examination Process

Exemptions

The director may give exemption from the requirement to complete a training program.

Exam Failures

If a person fails the exam for a certificate, he/she cannot re-take the exam until he/she submits a new application and fee and 30 days have passed.

Three consecutive examination failures will require the applicant to seek further training.

Scope of Certificates

Definition

Clauses 20 to 52 of the Fuel Industry Certificates Regulation specifies the type of work that each certificate category permits is specified as the scope of certificate.

Restrictions

Only a holder of a certificate can conduct any tasks that fall within the specified scope of that certificate, unless the regulation states that another category can conduct the work under the direct or general supervision of the applicable certificate holder.

Structure

The general lay-out of the "scope of certificates" section is to provide detailed information on the tasks allowed for the highest certificate in a category and then reference which aspects of the higher certificate can be completed under the lower certificate.

G.1 Certificate Scope

Highest Level

Gas Technician 1 certification is the highest level certificate in the gas industry.

Permitted Work

The work permitted includes that permitted of the following certificate types: G.2, G.3, DA, GP, IMT, RV.1/2, CDT, RE-O, and the construction heater group of certificates, except as they relate to fuel oil appliances.

Additional Requirements

G.1 certificate holders require further training and certification to conduct the work of the following certificates: LP, ICE, GPI, RSI/T-NG, PPO-1/-2/-3, PCI-1, PTO-1, and any of the certificates dealing with fuel oil equipment.

G.1 Certificate Core Functions

A person who is the holder of a G.1 certificate may install, inspect, alter, purge, activate, repair, service or remove a natural gas or propane appliance of any BTU input and the equipment and accessories essential to its operation.

Installation

Installing gas appliances of any size

Service

Servicing and repairing gas equipment

Inspection

Inspecting gas appliances for proper operation

G.1 Certificate Additional Functions

Piping Systems

Install, inspect, test, alter, purge, activate, repair, service or remove any piping or tubing, or component in a piping or tubing system, to an appliance downstream of the natural gas meter or propane vapour service valve.

Venting Systems

Install, inspect, alter, repair, service or remove any vent, vent connector, draft control device or other component in an appliance venting system.

Water Connections

Disconnect and reconnect water piping in order to exchange, service or install an approved appliance and carry out the replacement of water pipe necessary to complete the reconnection or installation of controls, control systems, components and accessories.

Components

Maintain, service or replace a mechanical or electrical component or accessory that forms part of an appliance or that is essential to the operation of the appliance.

G.1 Certificate Additional Functions (Continued)

Controls

Perform such tasks as are necessary to replace controls and components that form part of an appliance.

Refrigeration

Install, service, remove or replace components and accessories that form part of the gas-side of a refrigerating or air-conditioning unit.

Electrical

Install, repair, service and maintain electrical wiring from an existing branch circuit containing overcurrent protection to appliances.

Plenum

4

Install, repair, service, remove or replace the plenum connection or components forming part of the plenum connection.

G.1 Certificate Final Functions

Flue Service

Service a flue where an oil appliance is vented through the same flue as a gas appliance.

Fuel Oil Conversion

Remove a fuel oil appliance, and the equipment and accessories, but not the aboveground storage tanks associated with the fuel oil appliance during a conversion of the fuel oil appliance from fuel oil to natural gas or propane gas.

Electrical Work Limitations

Permitted Work

Install, repair, service and maintain electrical wiring from an existing branch circuit containing overcurrent protection to appliances in order to exchange, service, repair or install an approved appliance.

Permitted Work

Carry out the replacement of electrical wiring necessary to complete the reconnection or installation of controls, control systems, components and accessories that are essential to the operation of the appliance.

Prohibited Work

The person shall not run wiring back to the electrical supply panel or perform any additional wiring unless he or she is also the holder of a valid certificate of qualification as an electrician.

G.2 Certificate Scope

Core Functions

A person who is the holder of a G.2 certificate may install, inspect, alter, purge, activate, repair, service or remove a natural gas or propane appliance that has an input of 400,000 Btuh or less and the equipment and accessories essential to its operation.

Additional Functions

When performing these functions, the person may perform the functions described in paragraphs 1 to 10 of subsection 20.(2) that the holder of a G.1 certificate may perform.

Under the direct supervision of a person who is the holder of a G.1 certificate, perform all of the functions that fall within the scope of the supervising certificate holder's certificate.

G.3 Certificate Scope

Piping Work

Install, test, activate or purge gas piping or tubing that is less than 2.5 inches in diameter

Venting

Clean, remove or replace a vent connector, venting or a draft control device

Reactivation

Reactivate a previously installed or converted appliance

Cleaning

Clean and lubricate an appliance

A G.3 certificate holder may only perform these functions under the general supervision of a person who is the holder of a G.1, G.2 or DA certificate, but only if the person has demonstrated the essential skills required to perform such work and has had that experience documented and signed-off by the supervising certificate holder.

G.3 Certificate Limitations

Initial Activation Prohibition

A person who is the holder of a G.3 certificate shall not perform the initial activation of a new appliance or a newly converted appliance.

Direct Supervision Option

A person who is the holder of a G.3 certificate may, under the direct supervision of a person who is the holder of a G.1, G.2 or DA certificate, carry out any of the functions that fall within the scope of the supervising certificate holder's certificate.

ine Item	Details
roduct name:	Your Product Name
elease No:	1.0.0
esting started on:	01-04-2020 (dd-mm-yyyy)
esting completed on:	31-08-2020 (dd-mm-yyyy)
ech Lead :	Full-name
usiness Analyst:	Full-name
uality Analyst:	Full-name
evelopers:	Full-name, Full-name, Full-name
esting performed:	Functional, UI, Regression, Responsive, Cross Browser, Performance, Automation & Security Testing.
rowsers tested:	Chrome (Version 48.0.2564.103 - Windows 8.1), Firefox (Version 44.0 - Windows 8.1) , IE (11 - Windows 10), Safari (Version 9.0.2 - Mac 10.11.2).
evices tested:	iPhone 8 (iOS - 13.5.1), iPad (iOS - 9.2.1).
nstances tested:	Dev Instance: https://abc.dev-sample.io/ Stage Instance: https://abc.stage-sample.io/ Production Instance: https://abc-sample.io/
est cases:	Just upload the test cases report on google drive and add the link.
est coverage:	Just upload the test coverage report on google drive and add the link.
ew features:	Feature 1, Feature 2, Feature 3, etc
nown critical issues:	List some of the known critical issues which you want to highlight
ist of all issues	Link of Jira or any other tools with filtered list of all the logged issues
A comment:	Taking into consideration that there are 5 known issues and no major, critical or blocker issues present, the application is stable as per the scope of release 1.0.0

G.3 Certificate Critical Points

1

Skills Sign-off

Only G.1, G.2, or DA certificate holders can determine whether a G.3 certificate holder has demonstrated the essential skills to work under general supervision

2

General Supervision Limits

General supervision is only permitted for specific tasks and only by G.1, G.2, or DA certificate holders

3

Supervisor Responsibility

The supervising certificate holder is responsible for any work carried out by a G.3 certificate holder under their supervision

Supervising Certificate Holder Responsibility

Legal Responsibility

A supervising certificate holder providing direct supervision to a person is responsible for the work of the supervised person.

Supervision Level

The degree of supervision depends on the skills and knowledge of the trainee assessed against the task to be performed. Riskier tasks would require closer supervision.

Contact Requirement

At all times, a G.3 must be able to contact his or her supervising certificate holder who assumes responsibility for the trainee's work.

Gas Piping Fitter (GP) Certificate Scope

Certificate Level

The Gas Piping Fitter certificate falls between the G.3 and G.2 certificates in breadth of scope. It is a certificate for those involved only in the installation of pipe and tubing systems (not appliances).

Limitations

Although the appliance input does not limit the GP certificate, the holder cannot activate an appliance for the first time or perform any service, maintenance, or repair on appliances.

A GP is only permitted to provide direct supervision of a G.3 certificate holder, not general supervision.

Domestic Appliance (DA) Certificate Scope

Certificate Level

The Domestic Appliance certificate also falls between the G.3 and G.2 certificates.

Permitted Work

A DA can activate, service, and install natural gas and vapour propane appliances.

Limitations

- The maximum input of a single appliance is 100,000 Btuh
- The appliances must be unvented or a vented refrigerator
- Construction heaters are excluded from the scope

A DA certificate holder is only permitted to supervise a G.3 in relation to work that is within the above scope.

Industrial Maintenance Technician (IMT) Certificate Scope

Purpose

The scope of the Industrial Maintenance Technician (IMT) certificate is primarily limited to work that a worker can do on specific equipment.

This certificate is pertinent and available to workers and employers who have defined needs that the regular Gas Technician certificates cannot meet.

Applications

The IMT certificate often better serves the specific needs and abilities of the industrial and institutional workers, as well as appliance manufacturers' employees who work on the owner's appliance outside of the manufacturing facility.

An IMT certificate holder may only provide direct supervision of a G.3, not general supervision.

Liquid Propane (LP) Certificate Scope

Prerequisites

A G.1, G.2, GP, or IMT may hold a Liquid Propane certificate only as an endorsement to the existing certification.

This prerequisite ensures that persons authorized to work on liquid propane systems already have strong skills and knowledge that apply to vapour piping and appliance installations.

Scope

The LP certificate allows work on liquid propane systems, which requires specialized knowledge beyond standard gas technician training.

Gas Utility Technician (GUT) Certificate Scope

Purpose

This scope is specifically appropriate for a gas distribution company, as it serves a distributor's customer base for inspections and meter turn-ons.

Requirements

The Gas Utility Technician certificate holder must be an employee of a gas utility, and the certificate is effective only during those hours of employment serving the distributor's customers.

Scope

The GUT-1 certificate holder may inspect, test, adjust, purge, or activate natural gas or propane appliances as a gas company employee, but is not allowed to service or install equipment.

The GUT-2 certification is limited to equipment under 400,000 Btuh input.

Other Certificates

Certificate	Title	Regulation
RSI-NG and RST-NG	Refuelling station installer and refuelling station service technician	Clauses 24 and 25
RV.1 and RV.2	Recreational vehicles	Clauses 32 and 33
PPO-1, PPO-2, PPO-3	Propane plant operator	Clauses 34, 35, and 36
PCI-1	Propane cylinder inspector	Clause 37

More Specialized Certificates

Certificate	Title	Regulation
PTO-1	Propane truck operator	Clause 38
CDT	Crop dryer technician	Clause 52
CH-O1, CH-O2, CH-SM1, and CH-SM2	Construction heater operator and construction heater service and maintenance technician	Clauses 47 to 50
RE-O	Roofing equipment operator	Clause 51
H2	Hydrogen technician	Clause 52.1

Record of Training Renewal

A person holding a record of training is required to undergo either full retraining or skills retesting at three year intervals or, if the competence of the person is in question, at such shorter intervals as set by the director.

Retraining

Full course to renew ROT

Skills Retesting

Demonstration of maintained competence

ROT Renewal

Updated card with new expiry date

Exemptions from Certification

Homeowners

Owners of single detached dwellings may work on their own home, but the installation must undergo completion to code standards, inspection by the distributor, and activation by a gas technician.

Manufacturers

Original equipment manufacturers may be exempt for certain activities.

Compliance Still Required

Although these exemptions from fuels certification exist for specialty cases, compliance with the applicable regulatory and code requirements is still a requirement for the exempted persons.

Gaseous Fuels Regulation 212/01

Purpose

The Gaseous Fuels Regulation specifies important duties and responsibilities for all parties involved in activities related to appliances, equipment, components, and accessories where gaseous fuels are used for fuel purposes.

Relevance

Since this regulation speaks directly to the gas technician's duties and responsibilities related to gas-fired appliances, keep the principle of due diligence in mind while reading, interpreting, and applying its requirements.

Definitions in Gaseous Fuels Regulation

Importance

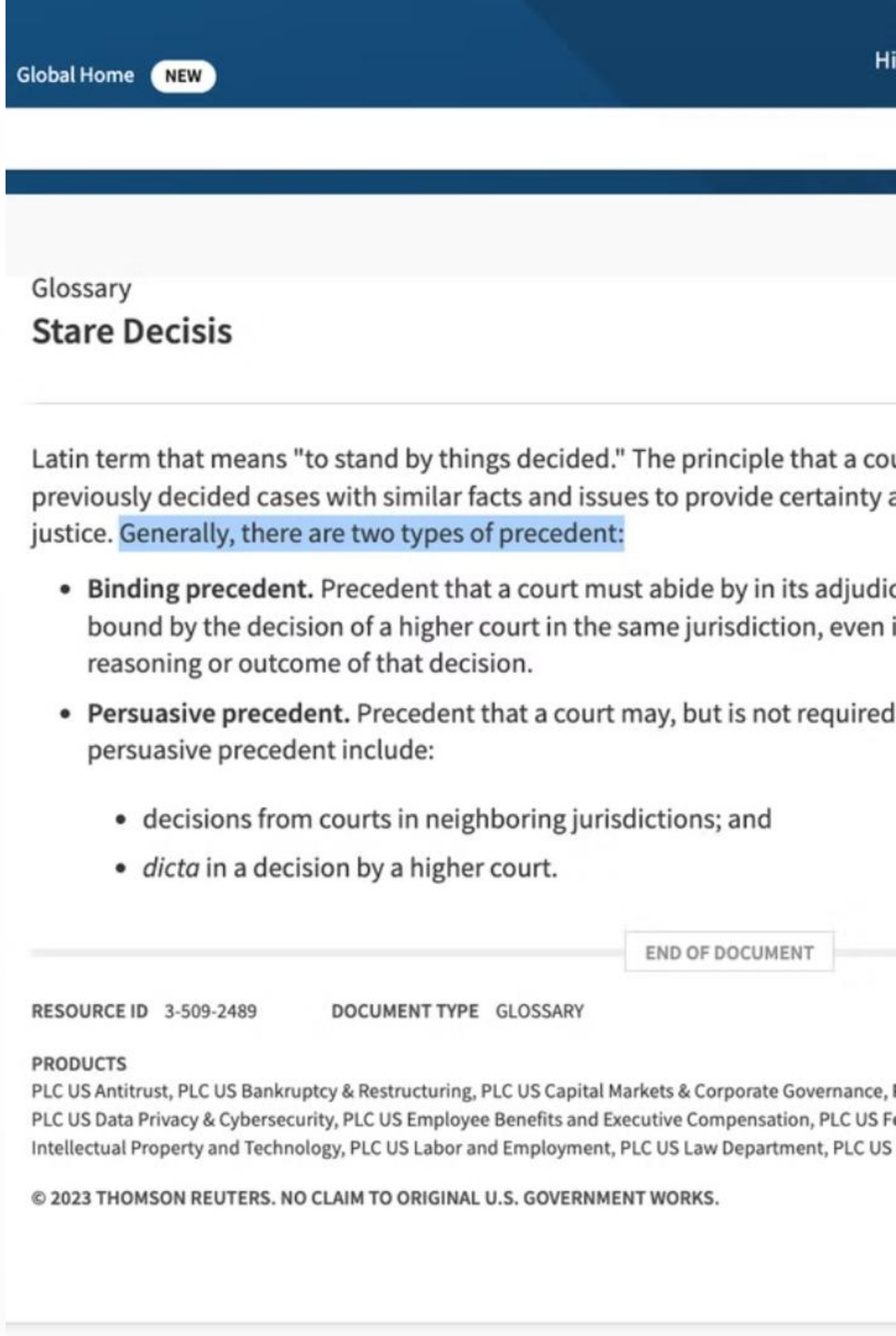
Important definitions are given at the beginning of a legal document to clarify the intent and application of terms used in the document.

Application

A definition in the Gaseous Fuels Regulation applies to the other regulations and the Codes unless the documents use the word with a new definition.

Interpretation

Proper understanding of these definitions is essential for correctly interpreting and applying the regulations.



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Glossary

Stare Decisis

Latin term that means "to stand by things decided." The principle that a cou
previously decided cases with similar facts and issues to provide certainty a
justice. Generally, there are two types of precedent:

- **Binding precedent.** Precedent that a court must abide by in its adjudic
bound by the decision of a higher court in the same jurisdiction, even i
reasoning or outcome of that decision.
- **Persuasive precedent.** Precedent that a court may, but is not required
persuasive precedent include:
  - decisions from courts in neighboring jurisdictions; and
  - *dicta* in a decision by a higher court.

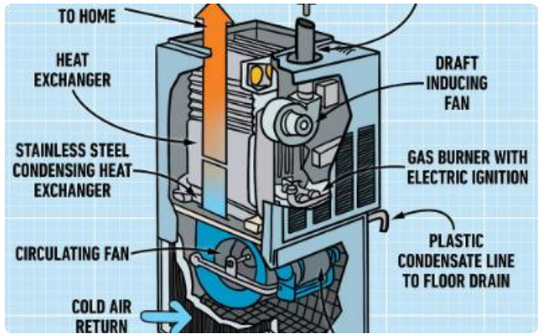
END OF DOCUMENT

RESOURCE ID 3-509-2489 DOCUMENT TYPE GLOSSARY

PRODUCTS
PLC US Antitrust, PLC US Bankruptcy & Restructuring, PLC US Capital Markets & Corporate Governance,
PLC US Data Privacy & Cybersecurity, PLC US Employee Benefits and Executive Compensation, PLC US
Intellectual Property and Technology, PLC US Labor and Employment, PLC US Law Department, PLC US

Definition of "Appliance"

"Appliance" means a device that consumes or is intended to consume a gas and includes all valves, fittings, controls, and components attached or to be attached to it.



Furnace

Includes all attached components

Water Heater

Includes valves and controls

Stove

Includes fittings and components

This is an important definition to remember when considering the responsibilities concerning leaving an appliance in a safe working order. Proper interpretation requires reference to the definition of "gas" in this regulation and "equipment", "accessory", and "component" in CSA B149.1.

Definition of "Approved"

Standard or Laboratory Test Report

With respect to a standard or a laboratory test report, that it is listed in "Titles of Standards and Laboratory Test Reports Authorized in the Province of Ontario under the Ontario Gas Utilization Code" as published by the designated administrative authority from time to time.

Appliance, Equipment, Component or Accessory

With respect to an appliance, equipment, a component or an accessory, that it bears the label or symbol of a designated testing organization or a label or symbol authorized by the director certifying that it complies with an approved standard or a laboratory test report.

Installation or Work

With respect to an installation or work, that it complies with this Regulation.

Importance of "Approved" Definition

Regulatory Use

Regulation and codes use the word approved to qualify important requirements, such as restricting the use of appliances or designating duties and responsibilities.

Consistency

The definition has not changed substantially for decades.

Critical Understanding

You must clearly understand it to interpret regulations and codes.

Code Adoption Document

Definition

"Code adoption document" means the "Gaseous Fuels Code Adoption Document" adopted as part of this Regulation under Ontario Regulation 223/01.

Purpose

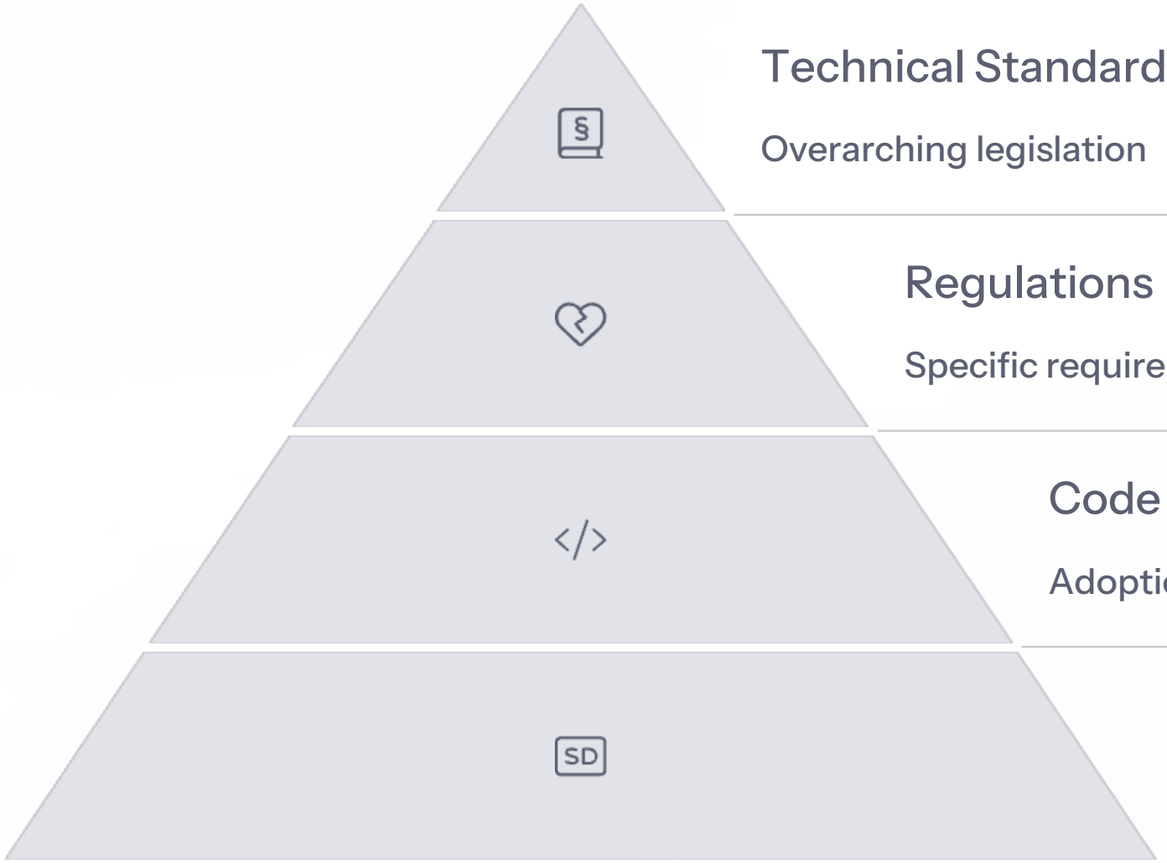
The code adoption documents allow for greater flexibility in adopting new codes and responding to technological changes.

Current Document

The Gaseous Fuels Code Adoption Document as amended by the Director's Order of Amendment (April 10, 2017) adopted and amended CSA B149.1, Natural gas and propane installation code.

The pink pages of the Ontario edition of CSA B149.1-15 contain this document.

Regulatory Pyramid



Technical Standards and Safety Act

Overarching legislation

Regulations

Specific requirements under the Act

Code Adoption Documents

Adoption of technical codes with Ontario amendments

Technical Standards

Detailed technical requirements (e.g., CSA B149.1)

As we continue down the pyramid of laws governing the gas industry, the legal requirements become more specific and easier to relate to day-to-day activities. The Gaseous Fuels Regulation specifies important duties and responsibilities for all parties involved in activities related to appliances, equipment, components, and accessories where gaseous fuels are used for fuel purposes.

Due Diligence in Gas Work

Definition

Due diligence refers to the level of judgment, care, prudence, determination, and activity that a person would reasonably be expected to do under particular circumstances.

Application

Gas technicians must apply due diligence in all aspects of their work to ensure safety and compliance with regulations.

Importance

Since the Gaseous Fuels Regulation speaks directly to the gas technician's duties and responsibilities related to gas-fired appliances, keep the principle of due diligence in mind while reading, interpreting, and applying its requirements.

Importance of Definitions

Clarification

Important definitions are given at the beginning of a legal document to clarify the intent and application of terms used in the document.

Consistency

A definition in the Gaseous Fuels Regulation applies to the other regulations and the Codes that will appear later in this Unit unless the documents use the word with a new definition.

Reference

Continually refer to the definition section when reading and interpreting any regulation.

Appliance Definition Implications

Comprehensive Definition

"Appliance" means a device that consumes or is intended to consume a gas and includes all valves, fittings, controls, and components attached or to be attached to it.

Safety Implications

This is an important definition to remember when considering the responsibilities concerning leaving an appliance in a safe working order.

Related Definitions

Proper interpretation requires reference to the definition of "gas" in this regulation and "equipment", "accessory", and "component" in CSA B149.1.

Approved Appliances and Components

Standards

With respect to a standard or a laboratory test report, that it is listed in "Titles of Standards and Laboratory Test Reports Authorized in the Province of Ontario under the Ontario Gas Utilization Code"

Certification

With respect to an appliance, equipment, a component or an accessory, that it bears the label or symbol of a designated testing organization or a label or symbol authorized by the director

Installation

With respect to an installation or work, that it complies with this Regulation

Understanding "Approved"

Critical Term

Regulation and codes use the word approved to qualify important requirements, such as restricting the use of appliances or designating duties and responsibilities.

Consistent Definition

The definition has not changed substantially for decades.

Interpretation

You must clearly understand it to interpret regulations and codes.

Code Adoption Document Purpose

Definition

"Code adoption document" means the "Gaseous Fuels Code Adoption Document" adopted as part of this Regulation under Ontario Regulation 223/01.

Flexibility

The code adoption documents allow for greater flexibility in adopting new codes and responding to technological changes.

Current Document

The Gaseous Fuels Code Adoption Document as amended by the Director's Order of Amendment (April 10, 2017) adopted and amended CSA B149.1, Natural gas and propane installation code.

The pink pages of the Ontario edition of CSA B149.1-15 contain this document.

Ontario Amendments to Codes

Purpose

Ontario amendments to national codes address specific provincial requirements or concerns.

Location

The pink pages of the Ontario edition of CSA B149.1-15 contain the Gaseous Fuels Code Adoption Document.

Importance

Gas technicians must be familiar with both the national code requirements and Ontario-specific amendments.

Summary of Regulatory Framework

Technical Standards and Safety Act, 2000

Provides the legal foundation for all regulations

Fuel Industry Certificates Regulation, 215/01

Establishes certification requirements for gas technicians

Gaseous Fuels Regulation, 212/01

Specifies requirements for gas equipment and installations

4 Propane Storage and Handling Regulation, 211/01

Addresses propane-specific requirements

Code Adoption Documents

Adopt technical codes with Ontario amendments

Chapter 3 cont...Understanding the Gaseous Fuels Regulation

These regulations establish important duties and responsibilities for contractors, distributors, certificate holders, and owners involved in the installation, maintenance, and operation of gas appliances and propane systems.

Definition of "Contractor"

Definition

"Contractor" means a person who carries on, in whole or in part, the business of installing, removing, repairing, altering or servicing appliances, and includes a person or an agent of the person who agrees to install, remove, and indudes a person or an agent of the person.

Importance

This regulation places significant duties and responsibilities on contractors, so it is important to decide if activities fall within the definition of a contractor.

Definition of "Distribution"

Definition

"Distribution" means a person who supplies gas to an end user, and "distribute" and "distribution" have corresponding meanings.

Clarification

The deregulation of the natural gas industry has created some confusion about who is a distributor. The above definition clearly refers to the supplier—the company that owns and controls the pipeline supply system in the case of natural gas. The company that sells the gas through the natural gas pipeline is not the distributor. For propant installations, the distributor owns and controls the propane supply system.

Definition of "Gas"

Regulation Definition

"Gas" means a gas as defined in the code adoption document.

CSA B149.1 Definition

The code adoption document actually accepts the definition of "gas" given in CSA B149.1, which states the following: Where the term "gas" is used, the requirements of this Code apply equally to, any of the following gases or mixtures of them: natural gas, manufactured gas, or mixtures of propane gas and air, propane, propylene, butanes (normal butane and isobutane), and bitylenes.

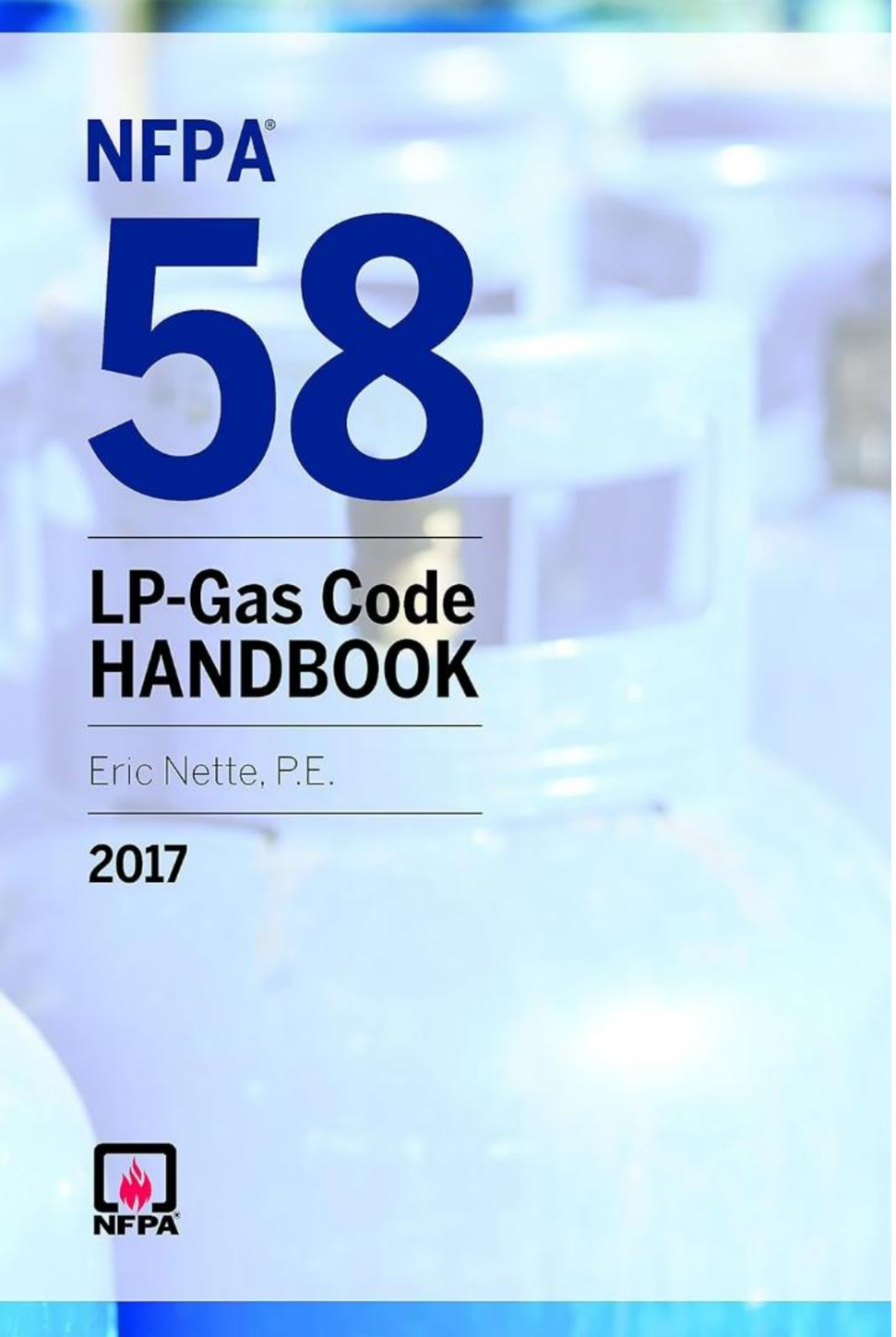
Definition of "Install"

Definition

"Install" includes placing an appliance in position for permanent or temporary use, venting it and connecting piping to it, and "installation" has a corresponding meaning.

Interpretation

Together with the definition of "installer" that the Code uses, consider this wide-ranging definition when interpreting the duties and responsibilities surrounding installation requirements.



Application of the Regulation

Importance of Determining Application

It is obviously important to determine whether the regulation applies to the type of installation or activity that you are working on. Read Clause 2. of this Regulation, which identifies what it does and does not apply to.

Exemptions

Installations that are exempt from this regulation are subject to requirements established in other legal documents. For example, appliance and piping installations on boats are subject to the federal Canada Shipping Act.

Prohibited Activities Without Approval

1

Prohibition

The Regulation prohibits activities conducted without approval. Read Clauses 4. (1) and (2).

2

Practical Approach

The regulation takes a practical and reasonable approach by allowing the usually prohibited activity if the appliance, equipment, or thing has received approval prior to use.

3

Testing Exception

As such, the unapproved appliance could undergo activation and testing before use for its intended purpose.

Certificates Required for Various Activities

1 Certification Requirement

The requirement to receive certification in accordance with the Fuel Industry Certificates Regulation is endorsed in this Regulation (see 6. (1), (2), and (3)).

2 Duct Cleaning Exemption

Both regulations provide a limited exemption for duct cleaning as long as "the person does not interfere with the appliance, equipment, or thing".

3 Supervision Exemption

Interpreting or using the exemption allowed in 6.(3) requires the application of due diligence. The exemption to proper certification for the task only applies to lower level certificate holders (e.g., G.3) working in the presence of the holder of the proper certificate.

Supervision Requirements

Uncertified Helpers

An uncertified helper must never conduct any of the activities listed in 6. (1).

Lower Certificate Holders

However, a certificate holder who lacks authorization to repair or service an appliance (such as a G.3 or GP) can conduct this work if an appropriate certificate holder (e.g., G.1, G.2, DA, IMT, LP) is immediately present and in full control of the activity that falls within the scope of the supervising certificate holder.

Regulation Interpretation

The Fuel Industry Certificates Regulation is referenced in the definition of "certificate" in the Gaseous Fuels Regulation. As such, the two documents support each other, and you must read them jointly when interpreting certification requirements.

Initial Putting Into Use

Regulation Clause 7.(1)

Where premises are connected to a supply of gas for the first time, no person shall put an appliance in the premises into use for the first time until the distributor has examined the installation of the appliance and is satisfied that the installation and use of the appliance are in compliance with this Regulation.

Examination Requirements 7.(2)

An examination under subsection (1) shall include an examination of all appliances intended to be installed at the time of occupation of the premises.

Implications

Initial activation of an installation supplied for the first time carries with it specific duties, responsibilities, and liabilities.

Distributor's Responsibilities for Initial Activation

Examination of All Appliances

Part 2 of the clause places a new condition on the distributor to ensure the examination of all the appliances intended for use. This prevents acceptance of an installation on the basis of examining a construction heater rather than the final installation and all appliances.

Prohibition on Non-Distributors

The above clause not only places significant duties and responsibilities on the distributor, but also prohibits a person who is not a representative of the distributor from initially activating an installation for the first time until the distributor has inspected and accepted the installation.

Limitation

This clause does not apply to the activation of an appliance on premises with an existing gas supply.

Duty of an Employer

Regulation Clauses

Employers are given significant duties and responsibilities to inform and monitor their employees concerning compliance with the Act and this regulation. See Clauses 11. (1) and (2).

Due Diligence

Due diligence suggests that the notification should be in writing rather than verbal and be based on proof that the employee understands what it means to comply with the Act and this regulation. Certification or training would constitute proof in this regard.

Reasonable Precautions

The phrase "every precaution reasonable in the circumstances" obviously speaks to the issue of due diligence. The actions that the employer takes to ensure employee compliance must include a procedure and recordkeeping process for reasonable monitoring of the employees' actions.

Accident or Occurrence Reporting

Reporting Requirements

Read Clauses 12. (1), (2), and (3), which detail a certificate holder's responsibilities in reporting an incident or accident and the responsibilities associated with not disturbing the scene.

Who Must Report

The requirement to notify an inspector in the event of an accident or occurrence suspected to result from the use, storage, or handling of gas applies to certificate holders, ROT holders, and contractors, as well as the distributor.

Director's Responsibility

The Act requires the director to "order such investigation as he or she considers necessary on being notified of an accident or incident" (see Clause 25 of the Act).

Importance of Accident Investigation

Safety Problem Identification

Accident investigation allows for the identification of safety problems, as well as the effective enforcement of the Act and regulations.

Lost Opportunity

Non-investigation of an incident due to lack of notification or unnecessary disturbance of the evidence is a lost opportunity to improve safety in the gas industry.

Serious Concerns

Failure to notify an inspector in these cases or interfering with an incident site raises serious concerns of obstruction and cover-up.

Due Diligence

The word "appears" used in the first line of the above clause is intentionally vague. The judgment must be based on due diligence—i.e., would any other reasonable person suspect that the use, storage, or handling of gas caused the incident?

Unacceptable Condition Definition

Regulation Definition

In this section and in section 14, "Unacceptable condition" means:

(a) Improper Use

With respect to an appliance, container or work, that it is being used for a purpose other than that for which it was approved;

(b) Alteration or Deterioration

With respect to an appliance, container or work, that any alteration to it or any deterioration of it, is likely to impair its safe operation; or

(c) Unsafe Conditions

With respect to an appliance or work, that the condition of piping, tubing or hoses, the venting of products of combustion, the supply of air for combustion or the clearance from adjacent combustible matter is likely to impair its safe operation or that the appliance or work does not meet the requirements of this Regulation or, where it was installed before this Regulation came into force, that it does not meet the requirements of the predecessor to this Regulation as it existed when the appliance or work was installed.

Duties Regarding Unacceptable Conditions

Certificate Holder's Role

This regulation directs the actions a Gas Technician certificate holder must take to make a situation safer. The public relies on the expertise of a knowledgeable certificate holder to make decisions and perform work that is in the best interest of public safety.

Legal Basis

These rights and responsibilities are listed to guide and support a gas technician's work in the field and provide the legal basis for taking action to correct a risky situation that may cause harm to occupants, the public, or oneself.

Examples of Immediate Hazards

Examples of "immediate hazards" might be an ineffective venting system, a cracked heat exchanger, or a supply line leak, to name just a few.

Distributor's Duties for Immediate Hazards

Shut Off Gas Supply

Immediately shut off the supply of gas to the appliance or work;

Notify User

Promptly notify the user in writing of the unacceptable condition, including a direction that the appliance or work not be used until the condition is corrected; and

Affix Notice

Affix a notice containing the information referred to in clause (d) to the appliance or work.

Certificate Holder's Duties for Immediate Hazards

Shut Off Gas

Immediately shut off the supply of gas to the appliance or work;

Notify Distributor

Promptly give oral notice of the shutting off of the gas to the distributor;

Notify User

Promptly give a written notice to the user, describing the condition that constitutes the immediate hazard, and directing that the appliance or work not be used until the condition is corrected;

Written Notice to Distributor

Within 14 days of finding the condition, give written notice of the condition to the distributor, including notice that the supply of gas has been shut off;

Affix Notice

Affix a notice containing the information required in clause (c) to the appliance or work.

Affixing Notice to Unsafe Appliances

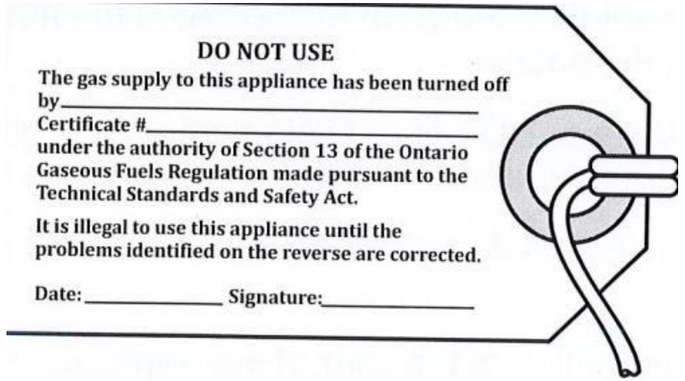
Methods of Satisfying Requirements

The means of satisfying Item (e) include:

- Affixing a copy of the written notice required by Item (c); or
- Affixing a tag designed specifically for the purpose.

Record Keeping

Records of notification are an essential aspect of compliance with these duties and responsibilities. Records of notification also reduce potential liability.



Tag example

Owner and User Responsibilities

Shared Responsibilities

Owners and users of the appliance or work share in the duties, responsibilities, and liabilities associated with the actions of a distributor or certificate holder. (See 13. (4) and (5).)

Notice Removal Restrictions

The notice affixed to the appliance or work entails certain restrictions and conditions for removal.

Certificate Holder Requirement

Where a notice is affixed to an appliance or work under clause (2) (c) or (3) (e), no person shall remove the notice unless the person holds a certificate for that purpose and on removing the notice the person shall endorse his or her certificate number, name and address on the notice and send it by prepaid registered mail or deliver it to the distributor.

Non-Immediate Hazards

Time Frame

Where a distributor or certificate holder finds an appliance or work in an unacceptable condition and it does not constitute an immediate hazard, shutoff of the gas does not have to be immediate.

14-Day Notification

He/she must also give the same written notice to the distributor within 14 days and affix a notice to the appliance or work.

Written Notice

Providing the owner with immediate written notice describing the condition and advising him/her of the sending of a notice to the distributor is still a requirement for the certificate holder.

Certificate Holder Responsibility

It is the responsibility of the certificate holder who finds the unacceptable condition to set the time period for correcting the unacceptable condition. The time period should be reasonable and cannot exceed 90 days.

Correction Time Period

Setting the Timeline

The certificate holder must include the required completion date in the notices that he/she provided the owner and the distributor with.

Owner Responsibilities

The owner and user are responsible for responding to the notice of an unacceptable condition.

Notice Removal

Only a certificate holder can remove the notice (affixed to the appliance or equipment). The notice of correction must be sent to the distributor.

Distributor's Duties for Non-Immediate Hazards

1

Notify User

Promptly notify the user, in writing, describing the condition and indicate in the notice that the distributor will shut off the supply of gas to the appliance or work if the contractor does not notify the distributor that the condition has been corrected within the period of time specified in the notice, which shall not be greater than 90 days;

2

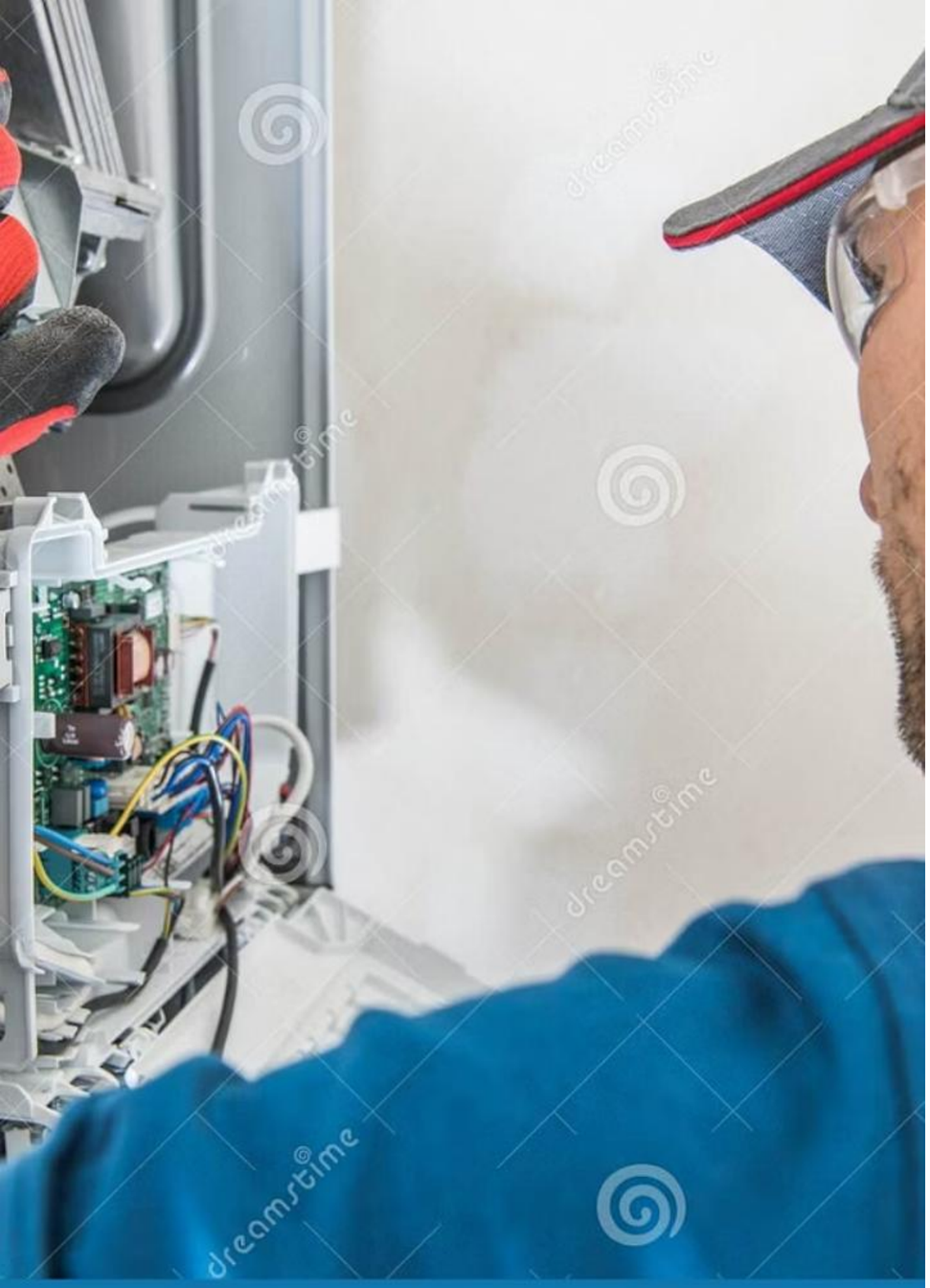
Affix Notice

Affix a notice containing the information required under clause (a) to the appliance or work.

3

Shut Off Gas

A distributor who gives a notice under subsection (1) shall shut off the supply of gas to the appliance or work if the unacceptable condition described in the notice is not corrected within the period of time specified in the notice.



Certificate Holder's Duties for Non-Immediate Hazards

Oral Notice to Distributor

Immediately give oral notice of the condition to the distributor who supplies gas to the appliance or work;

Written Notice to User

Immediately give written notice to the user of the appliance or work describing the condition and advising that notice of the condition has been given to the distributor;

Written Notice to Distributor

Give written notice of the condition to the distributor within 14 days of finding it; and

Affix Notice

Affix a notice containing the information required in clause (b) to the appliance or work.

Owner's Responsibilities for Non-Immediate Hazards

Regulation Clause 14.(4)

An owner or user of an appliance or work to whom notice has been given that there is an unacceptable condition the appliance or work, or cause or permit its use, after the expiry of time specified in the notice for correcting the condition until the condition has been corrected.

Notice Removal Restrictions 14.(5)

Where a notice is affixed to an appliance or work under clause (1) (b) or (3) (d), no person shall remove the notice unless the person holds a certificate for that purpose and on removing the notice the person shall endorse his or her certificate number, name and address on the notice and send it by prepaid registered mail or deliver it to the distributor.

Distributor's Duty 14.(6)

A distributor who is advised of an unacceptable condition in accordance with this section, shall if the condition is not corrected in the time provided, shut off gas to the appliance, equipment or work.

Maintenance Responsibilities

Leading Cause of Accidents

Failure to maintain appliances in a safe operating condition is the single largest cause of accidents. Past regulations recognize the owner's and user's responsibilities to maintain the equipment.

TSSA Safety Directive

TSSA has issued a safety directive over the past four heating seasons requiring gas technicians to ensure annual maintenance of domestic heating boilers and that carbon monoxide levels in the vent are below 100 pm (otherwise, they must shut the boiler down). This reflects TSSA safety data collection indicating the importance of annual maintenance, which is ultimately the responsibility of the appliance owner.

Regulation Clause 15

An owner or user of an appliance, equipment, a work or any other thing employed in the handling or use of gas shall ensure that the appliance, equipment, work or thing employed in the handling or use of gas is maintained in a safe operating condition.

Advising Customers of Their Responsibilities

Certificate Holder's Role

Certificate holders may wish to advise their customers of their legal responsibilities by referencing the above clause.

Ongoing Distributor Responsibilities

The distributor's duties and responsibilities do not end with the initial examination required under Clause 7 nor with the action required upon identifying an unacceptable condition. They are ongoing.

Distributor's Ongoing Inspection Requirements

Regulation Clause 16

No distributor shall supply gas to a premise unless the distributor is satisfied that the installation and use of the appliance or work comply with this Regulation and,

10-Year Inspection

Unless the distributor has inspected the appliance or work at least once within the previous 10 years; or

Quality Assurance Program

Unless the distributor has inspected the appliance or work in accordance with a quality assurance inspection program.

Program Definition

Reference to a quality assurance inspection program in Part (b) of the clause consists of a set of policies and procedures for auditing and responding to existing installation concerns. It must meet the approval of the director and is subject to audit by TSSA.

Approval of Appliances

Approval Requirements

For an appliance, equipment, component, or accessory to gain approval for sale, rent, or installation in Ontario, its construction must be according to the applicable recognized standard, and it must undergo testing by and receive labelling from a designated certification organization.

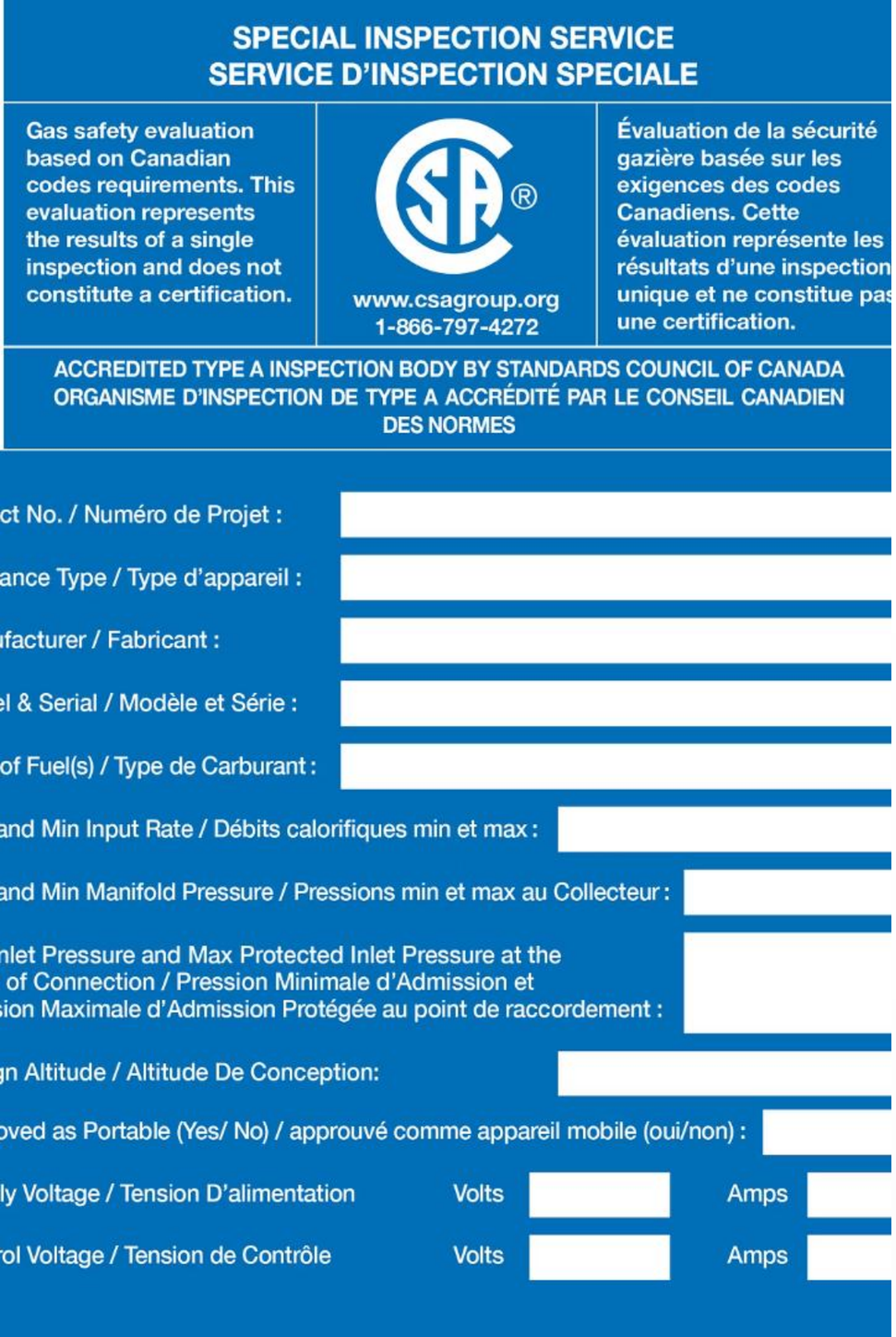
Approval Process Types

The approval process may happen:

- Off-site from where you will install the appliance, equipment, etc. (typically this is a certification process); or
- On-site (typically through field approval by TSSA)

Regulation References

Clause 18 of the Gaseous Fuels Regulation outlines the requirements for off-site testing and approval, while Clause 19 deals with on-site testing and approval.



Certification Verification

Check for Certification Marking

Gas technicians should look for a certification marking on an appliance rating plate, valve body, hose, manufacturer's instruction, etc., to ensure that the item is approved.

Verify Against Designated Organizations

They would then check the marking against the list of certification organizations provided in the natural gas or propane regulations to determine if it receives designation for the purpose in Ontario.

Regulation Clause 18.(3)

The organizations accredited by the Standards Council of Canada are designated as organizations to test appliances, equipment, components and accessories to the applicable approved standards or laboratory test reports for the purposes of this Regulation.

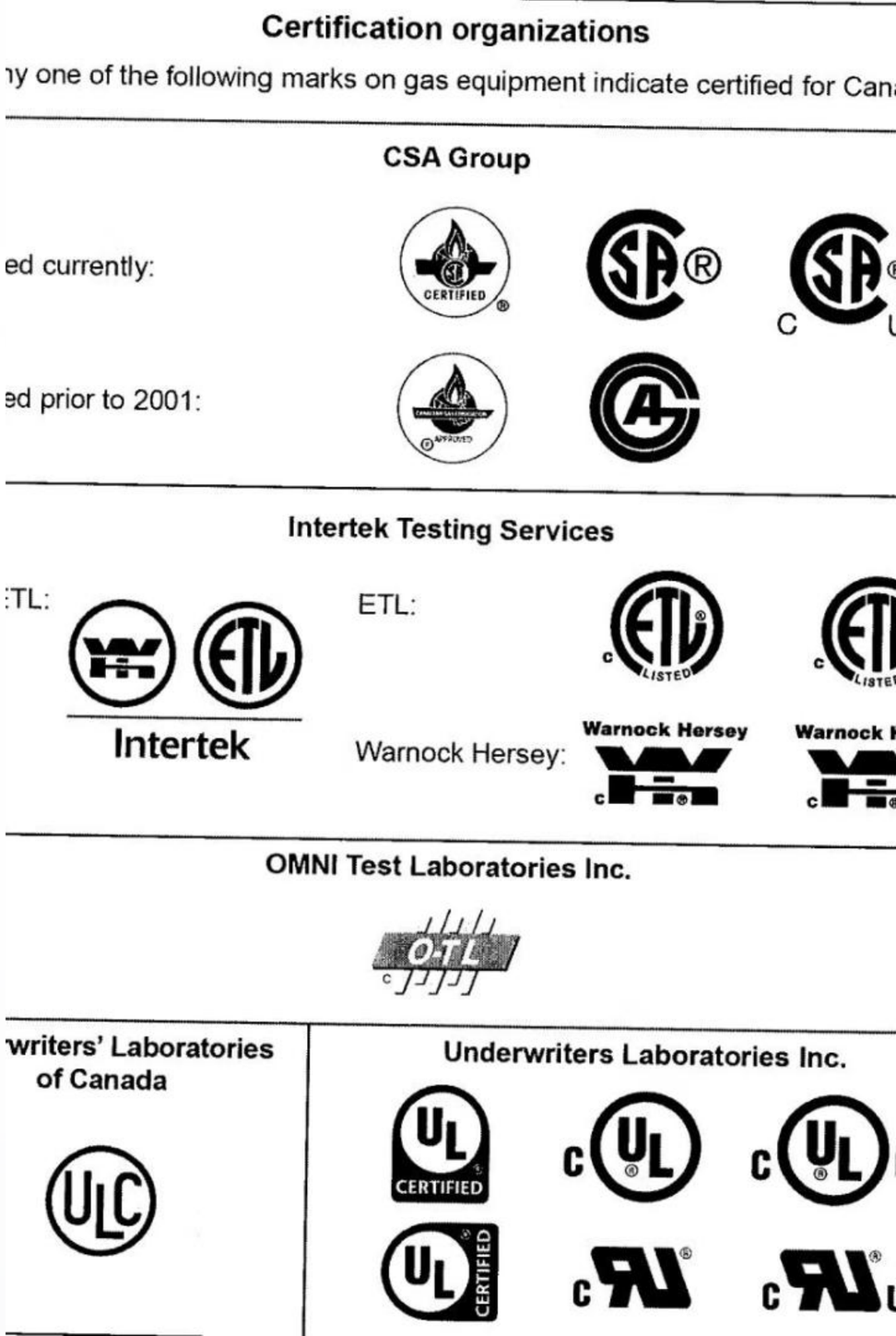
Certification Organizations

Designated Organizations

There are dozens of testing organizations, but the Standards Council of Canada designated only five certification organizations to certify gas appliances, equipment, components, and accessories.

Canadian Certification

Note that the ETL, Warnock Hersey, OTL, and UL Marks must have a letter "c" beside the label to designate that the gas equipment received certification for Canada. If the Warnock Hersey mark lacks a "c" and a "US", it has gained certification for Canada.



On-Site Testing and Approval

Common Applications

On-site testing of appliances, equipment, components, or accessories is more common in industrial installations. Certificate holders involved with industrial, custom, one-of-a-kind, or foreign appliances will want to review Clause 19 of the regulation.

TSSA field label example

TSSA Testing

TSSA conducts the testing and approval for these types of appliances, equipment, components, and accessories.

If its fuel features comply with the approved standard or laboratory test report or CSA B149.3-15 and this regulation, an inspector applies a TSSA field label. This approval is site-specific, so transfer of the appliance to another site requires re-approval.

Contractor Registration

Regulation Clause 21.(1)

No person shall act as a contractor unless the person is registered for the purpose.

Purpose of Registration

Most Acts or regulations employ registration of activities and equipment as a means of cataloguing and controlling the activity or equipment. For example, registering under the Business Services Act is a requirement for businesses and registering under the Highway Traffic Act for vehicles.

Benefits

The purpose in all cases is the same. Registration allows the authority having jurisdiction to know who has control and responsibility over the activity or equipment for notification purposes. Registration requirements also give the authority control over the activity or equipment in that it can refuse or revoke registration if a person does not meet the requirements.

Technical Standards and Safety Authority

Ontario Registration of a
Fuels Safety Contractor
Technical Standards and Safety Act

This Registration is issued to carry on business as a
Heating Fuels Contractor

Located at:
46 BURFIELD AVE
HAMILTON ON L8T 2J9
CANADA

Registration Number:
000391278

Expires on: July 05, 2023

BEYOND THE SITE INC.
46 BURFIELD AVE
HAMILTON ON L8T 2J9
CANADA

Issued by the Director

This Licence Is Not Transferable.

OPERATION OF THIS BUSINESS WITHOUT A VALID REGISTRATION IS AN OFFENCE UNDER THE ACT.

This registration, or a copy of the registration, shall be displayed in a conspicuous place at the business premises set out on the registration.

Issued under the ***Technical Standards and Safety Act, 2000,***
and the applicable regulation and subject to the limitations thereof.

For all enquiries or to update any of the information on this registration, please contact the Technical Standards and Safety Authority.

Telephone: 1.877.682.8772
E-mail: *customerservices@tssa.org*

BEYOND THE SITE INC.
46 BURFIELD AVE,
HAMILTON ON L8T 2J9
CANADA

Benefits of Contractor Registration

Tracking Compliance

Contractor registration allows TSSA to track compliance and contact those in the business of installing, removing, repairing, altering, or servicing appliances.

Customer Verification

It is also a means for customers of such businesses to determine whether the company is working in compliance with safety requirements.

Authorization Type

Contractor registration is a type of "authorization" as identified in the Act. It carries with it specific duties, responsibilities, and rights separate from certification, licenses, or other forms of registration.

Regulation Reference

Clause 21 deals with contractor registrations and should be read in entirety.

Registration Number Display

The requirement to clearly display the registration number on field vehicles will ensure higher compliance with the registration requirement, as well as customer recognition of your commitment to industry requirements. It is worth noting that separate registration numbers are a requirement for "subcontractors".

Propane Storage and Handling Regulation 211/01

Similarity to Gaseous Fuels Regulation

The Propane Storage and Handling Regulation is very similar to the Gaseous Fuels Regulation but applies to fewer technicians.

Activities Covered

It specifies important duties and responsibilities for technicians, contractors, distributors, owners, and users involved in specific propane-related activities.

Activities Covered by Propane Regulation

1 Storage and Handling

The storage, handling, transportation, and transfer of propane;

2 Vehicle and Mobile Installations

The installation of appliances, equipment, components, accessories, and containers on highway vehicles, recreational vehicles, mobile housing, outdoor food service Units, and wash-mobiles when technicians use propane for fuel purposes; and

3 Distribution Equipment

The installation of containers and equipment that technicians will use for propane in distribution locations and filling plants and on tank trucks, tank trailers, and cargo liners.

CERTIFIED EMPLOYEE TRAINING PROGRAM

1.0 Basic Principles and Practices of Propane

2019 Edition

PROPANE education & research COUNCIL

CERTIFIED EMPLOYEE TRAINING · PROPANE · TECHNICAL EXCELLENCE

Propane Regulation Definitions

Importance of Definitions

As noted in previous Sections, important definitions are given at the beginning of a legal document to clarify their intent and application for all documents. A definition in the Propane Storage and Handling Regulation applies to other regulations and codes unless those documents use the word with a new definition.

Reference Approach

Continually refer to the definition section when reading and interpreting any regulation.

Similar Definitions

Many definitions are similar to those covered within Definitions in the Gaseous Fuels Regulation 212/01 section and are not reproduced here. These include "appliance", "approved", and "contractor".

Code Adoption Document

Definition

"Code adoption document" means the "Propane Code Adoption Document" adopted as part of this Regulation under Ontario Regulation 223/01.

Purpose

The code adoption documents allow for greater flexibility in adopting new codes and responding to technological changes.

Current Document

The Propane Code Adoption Document as amended by the Director's Order of Amendment, July 1, 2017, adopted and amended CSA B149.2, Propane Storage and Handling Code. This Document is found in the salmon-coloured pages of the Ontario edition of CSA B149.2-15.

Definition of "Distributor" in Propane Regulation

Definition

"Distributor" means a person who conveys or supplies propane to an end user, but does not include a person who supplies propane to a vehicle or cylinder, and "distribute" and "distribution" have corresponding meanings.

Significance

The Act and this regulation place significant duties and responsibilities on distributors.

Important Distinction

It is important to note that this definition is different from that in the Gaseous Fuels Regulation (covered in Section 2). It specifically excludes persons who supply propane to vehicles or cylinders from being considered as distributors.

Equipment and Propane Definitions

Equipment Definition

"Equipment" means a device that is used in venting propane or in the handling of propane.

This definition should be read in conjunction with the definition of "handling" for full appreciation of its meaning when used in this regulation.

Propane Definition

"Propane" means propane as defined in the code adoption document.

The code adoption document actually accepts the definition of "propane" given in the CSA B149.2-15 Code, which states the following:

CSA B149.2-15 Definition

1.3 Where the term "propane" is used, the requirements of this Code include, and apply equally to, any material that is composed predominantly of any of the following hydrocarbons or mixtures of them: propane, propylene, butanes (normal and isobutane), and butylenes.

Application of Propane Regulation

Determining Application

It is obviously important to determine whether the regulation applies to the type of installation or activity that you are working on. Read Clause 2. of this regulation, which identifies what it does and does not apply to.

Exemptions

Installations that are exempt are subject to requirements established in other legal documents. For example, appliance installations on boats are subject to the federal Canada Shipping Act.

Risk and Safety Management Plans

2009 Amendments

Amendments to O. Reg 211/01 in 2009 now require propane filling plants and facilities to have a safety plan in effect to identify how a licensed operator would handle a hazardous event, such as a fire or explosion, in the interest of public safety.

Regulation Clause 3.1 (1)

A person who holds a license to operate a retail outlet, filling plant, cardlock/keylock, private outlet or container refill centre shall prepare a risk and safety management plan, which shall, at a minimum, address the following matters:

Hazard Analysis Requirements

A hazard analysis that identifies possible hazardous scenarios, the frequency of those scenarios and their consequences, and that takes into account, the most severe incident or situation that could occur at the referenced facility based on the total capacity of propane at the referenced facility, and any less severe incident or situation that could occur at the referenced facility.

Employer Duties in Propane Regulation

Similar to Gaseous Fuels Regulation

Clauses 5. (1) and (2) dealing with duties of an employer are similar to Clauses 11. (1) and (2) of the Gaseous Fuels Regulation 212/01 section.

Certification Requirements

This regulation endorses the requirement to receive certification in accordance with the Fuel Industry Certificates Regulation. Like the Gaseous Fuels Regulation, this regulation provides a limited exemption for lower-level certificate holders to conduct activities requiring higher-level certificate holders when working in the actual presence of the appropriate level certificate holder. See Clauses 8. (1) and (2) of the Regulation.

Initial Activation in Propane Regulation

Specific Duties

Initial activation of an installation supplied for the first time entails specific duties, responsibilities, and liabilities.

Regulation Clause 9.(1)

Where premises are connected to a supply of propane for the first time, no person shall put into use for the first time an appliance in the premises that is connected to a propane supply until the distributor has examined the installation of the appliance and is satisfied that the installation and use of the appliance are in compliance with this Regulation.

Examination Requirements 9.(2)

An examination under subsection (1) shall include the examination of all appliances to be installed at the time of occupation of the premises.

Practical Application of Initial Activation

Limited Application

Sub clause (2) places a new condition on the distributor to ensure the examination of all the appliances intended for use. The practical application of this clause is limited since this regulation only applies to appliance installations on highway vehicles, RVs, mobile homes, outdoor food service Units, and wash-mobiles.

Distributor Definition Impact

Furthermore, the definition of distributor effectively excludes these types of installations since a person supplying propane to a vehicle or cylinder is not a distributor.

Prohibited Activities Without Approval

Regulation Reference

Refer to Clause 12. (1) and (2) of the Propane Storage and Handling Regulation.

Similarity to Gaseous Fuels Regulation

Note that these clauses are similar to Clauses 4. (1) and (2) of the Gaseous Fuels Regulation 212/01 section.

Accident Reporting in Propane Regulation

Regulation Reference

Refer to Clauses 15. (1), (2), and (3) of the Propane Storage and Handling Regulation.

Similarity to Gaseous Fuels Regulation

Note that these clauses are similar to Clauses 12. (1), (2), and (3) of the Gaseous Fuels Regulation 212/01 section.

Safe Operation Responsibilities

Unique to Propane Regulation

This regulation has two important sections not found in the Gaseous Fuels Regulation.

Importance

The following clauses clearly speak about the responsibilities of all parties and, as such, deserve close review and consideration.

Compliance Requirements

Regulation Clause 16

No person shall knowingly supply propane to or use an appliance, a container, equipment, a propane vehicle, a work or other thing employed in the handling or use of propane that does not comply with this Regulation or, where it was installed before this Regulation came into force, that does not comply with the requirements of the predecessor to this Regulation as it existed when it was installed.

Regulation Clause 17.(1)

An owner and every person responsible for the operation of an appliance, a container, equipment, a work or any other thing employed in the handling or use of propane shall ensure that it is maintained in a safe operating condition.

Regulation Clause 17.(2)

No person shall operate or permit to be operated, an appliance or work unless it is maintained in a safe operating condition and it complies with this Regulation or, where it was installed before this Regulation came into force, that it complies with the requirements of the predecessor to this Regulation as it existed when it was installed.

Maintenance Responsibilities

Leading Cause of Accidents

Failure to maintain appliances in a safe operating condition is the single largest cause of accidents. Past regulations recognize the responsibility of owners and users to maintain the equipment.

Customer Advisement

Certificate holders may wish to advise their customers about their legal responsibilities by referencing Clause 17 above.

Distributor's Ongoing Responsibilities

Continuous Duties

The distributor's duties and responsibilities do not end with the initial examination required under Clause 9 nor with the action required when an unacceptable condition is identified (as discussed below). They are ongoing like the propane supply, transfer, or transportation operations.

Inspection Requirements

No distributor shall supply propane to premises where the propane is to be used in an appliance or work unless the distributor is satisfied that the installation and use of the appliance or work complies with the Act and this Regulation.

Inspection Requirements

10-Year Inspection

Unless the distributor has inspected the appliance or work at least once within the previous 10 years; or

2 Quality Assurance Program

Unless the distributor has inspected the appliance or work in accordance with a quality assurance inspection program.

Report Requirements

A distributor shall prepare a report of every inspection made under subsection (1) and shall retain the report until the next inspection and report are completed.

Qualified Inspector

An inspection shall only be carried out by a person who is the holder of a certificate for that purpose.

Exemptions and Quality Assurance Program

Exemptions

This section does not apply to propane vehicles, industrial vehicles or to appliances on highway vehicles or recreational vehicles.

Quality Assurance Program

Reference to a quality assurance program in Part 1 (b) consists of a set of policies and procedures for auditing and responding to existing installation concerns. It must meet the approval of the director and is subject to audit by TSSA.

Unacceptable Conditions in Propane Regulation

Similar to Gaseous Fuels Regulation

The duties and responsibilities of distributors, certificate holders, and owners concerning unacceptable conditions as outlined in Clause 19 of the Propane Storage and Handling Regulation are similar to those that Section 2 under Clause 13 of the Gaseous Fuels Regulation 212/01 section describes.

Regulation Reference

For clarification of this important set of requirements, read the entire Clause 20 of the Propane storage and handling regulation.

Approval of Propane Appliances and Equipment

Regulation Reference

Clauses 21 and 22 of the Propane Storage and Handling Regulation addresses approval of appliances in a manner similar to the Gaseous Fuels Regulation 212/01 section.

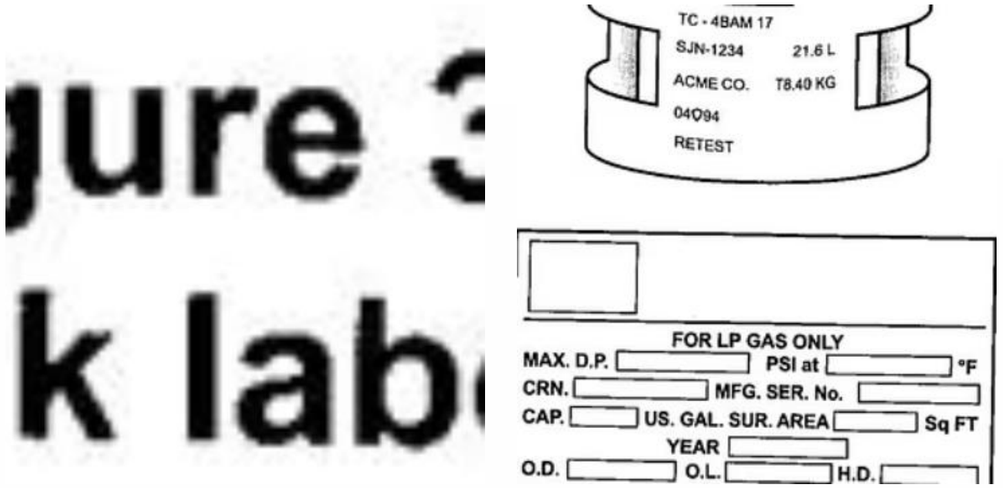
Cylinder Approval

Transport Canada (TC) is the organization designated to approve propane cylinders.

Tank Markings

Propane tanks must bear a marking of the Canadian Registration Number (CRN) or Ontario Identification Number (OIN) and the manufacturer's name before you can consider it approved.

Propane Tank Markings



These images show examples of proper markings on propane tanks that indicate they have been approved for use.

PROPANE SERVICES CORP. 800-392-0023

TEXAS SAFETY GAS CHECK

Residential Gas Appliance System Check

Company/Location _____

Call Date _____

Date GAS Check® Requested _____

Call-Taker's Name _____

Instructions _____

Account Number _____

Name _____

Address _____

City, State, Zip _____

Telephone: Office _____ Home _____

Appliance	Central Heating	Central Heating	Water Heater	Water Heater	Clothes Dryer	Range	Other
Manufacturer							
Model No.							
Serial No.							
Fuel							
BTU Rating							
Manual Shut-off (Installed/Existing)							
Pilot(s)/Pilot Safety System							
Take Out Of Service Or Operation							

TANK/CYLINDER (Additional Serial Numbers):

SIZE	SERIAL NUMBER	MFR.	MFR. DATE	LAST TEST DATE	LOCATION	CONDITION OF:					RELIEF VALVE			FITTINGS LEAK TEST
						TANK	PAINT	PIGTAIL	FITTINGS	GAUGE	COND.	DATE	CAP	

PIPING/REGULATOR OPERATION/CONDITION

		PIPING		REGULATOR MFR. DATE (CODE)	MFR.	REGULATOR CONDITION	MODEL	REG. VENT POSITION	HOW PROTECTED	FLOW PRESSURE	LOCK-UP PRESSURE
		MATERIAL	SIZE								
SINGLE STAGE										IN WC	IN WC
TWO STAGE	1st									PSIG	PSIG
	2nd									IN WC	IN WC

SYSTEM LEAK TEST

		START PRESSURE	END PRESSURE	TIME HELD	SYSTEM OK
SINGLE STAGE/ INTEGRAL/ SECOND STATE		(INCHES WC)	(INCHES WC)		
TWO STAGE	1st				
	2nd				

Comments _____

This inspection covers (propane/LP-gas) items and equipment visible and accessible to the service techninian and represents the conditions existing on the date of inspection. It does not cover latent or manufacturing defects, the internal working of sealed equipment, or structural components, and cannot be construed to cover future or unforeseen happenings.

I, _____ (Please print name)

- Know how to turn off the gas in case of emergency.
- Have smelled propane and can detect its odor.
- Have received the consumer safety information and material.
- Had gas system deficiencies and/or corrections, if any, clearly explained to me.
- Am satisfied with the service work performed.

_____ (Customer's Signature)

Reference Invoice No. _____ Date _____

I, _____ (please print name)

certify that I have completed the System Check as prescribed.

Performed Odor Test ☐ Yes

Performed Leak/Pressure Test ☐ Yes

Left Consumer Safety Information and Material ☐ Yes

_____ (Service Technician's Signature)

PSC 800-392-0023

Contractor Registration in Propane Regulation

Regulation Reference

Refer to Clause 23 of the Propane Storage and Handling Regulation for requirements dealing with contractors and vehicle conversion centre operation.

Similarity to Gaseous Fuels Regulation

Requirements are similar to Clause 21 of the Gaseous Fuels Regulation.

Other Sections of Propane Regulation

Additional Content

The remainder of the Propane Storage and Handling Regulation deals with issues related to distributor's facilities, filling plants, cylinder handling facilities, and retail outlets.

Recommendation

Those involved in the storage, handling, transportation, or transfer of propane should review the entire regulation.

Summary of Key Responsibilities

Certificate Holders

Maintain proper certification, identify and address unsafe conditions

Distributors

Inspect installations, shut off unsafe appliances, maintain records

Contractors

Maintain registration, employ certified technicians, follow regulations

Owners/Users

Maintain equipment in safe condition, respond to safety notices

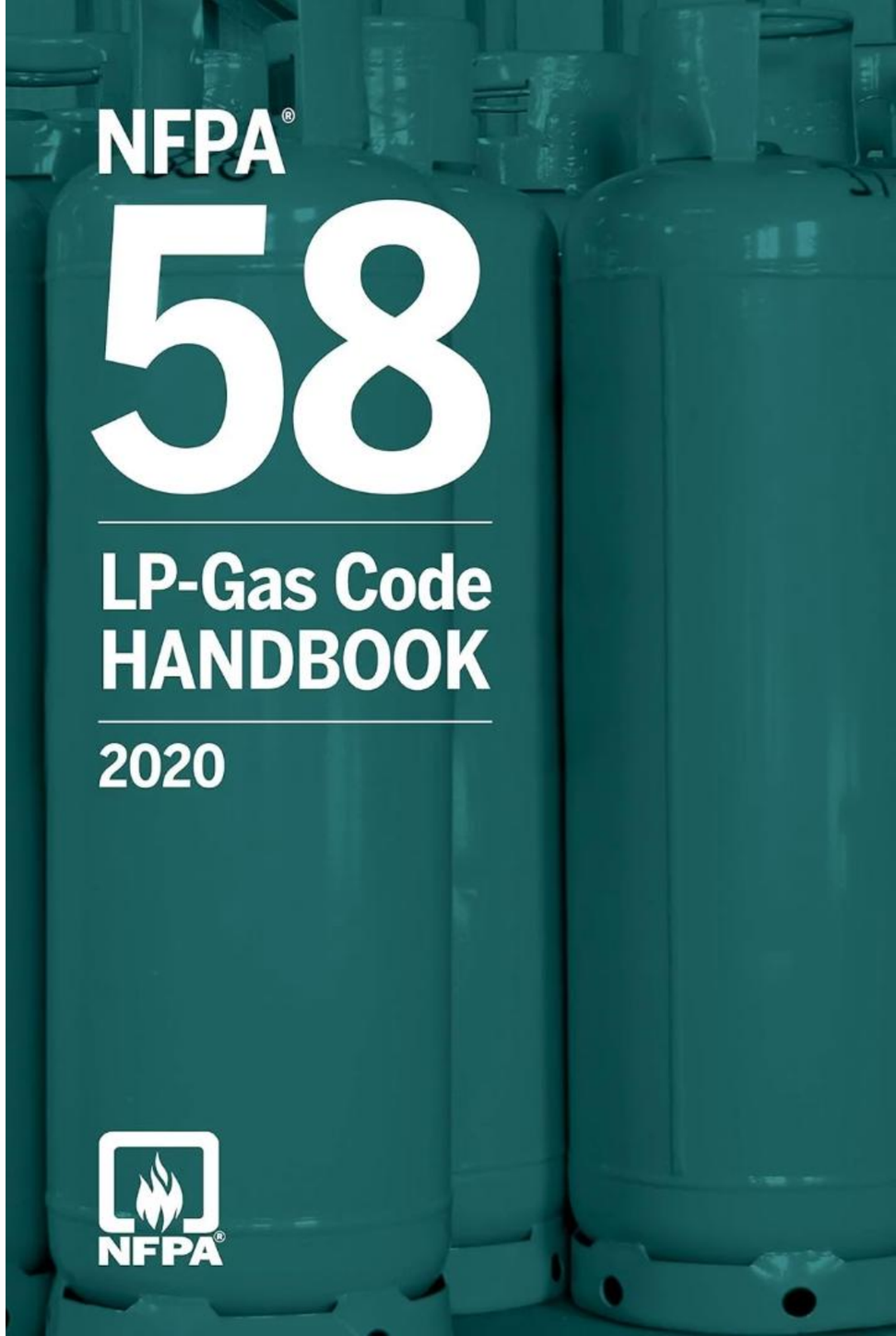
Regulations

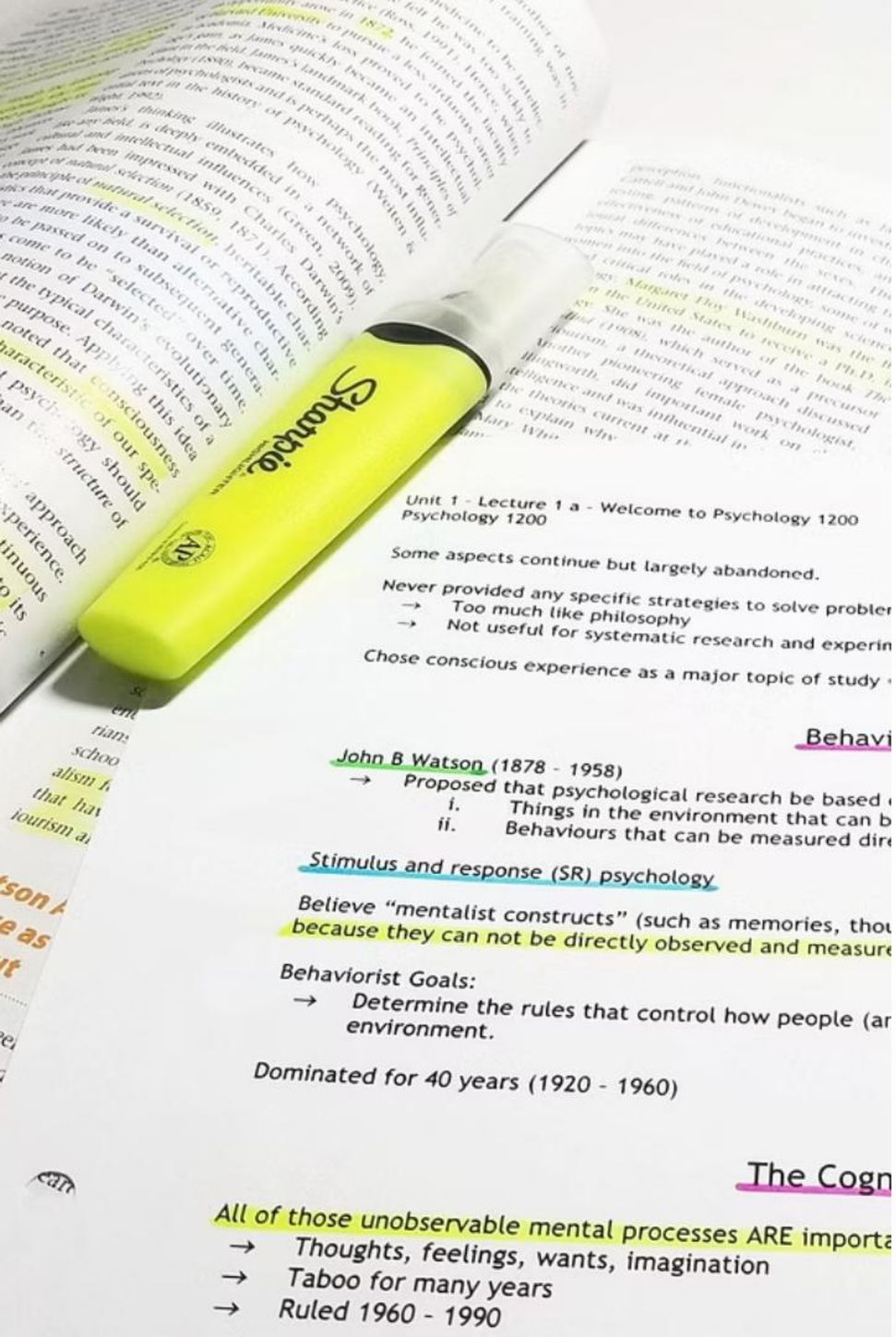
Gaseous Fuels Regulation 212/01 and Propane Storage and Handling Regulation 211/01

CSA Unit 4a

Chapter 4
Reading and Interpreting the Code

Researching a specific issue in the Codes can be a time-consuming and frustrating experience. Although many gas technicians are experienced with code use, some simple tricks or tips can make the exercise easier and more reliable for those less familiar with the Codes. This presentation focuses on using various navigational techniques to access information contained in the Codes.





Purpose and Objectives

Purpose

To provide guidance on efficiently researching and interpreting gas codes for technicians

Learning Objectives

By the end of this presentation, you will understand the CSA B149.1 Scope, terminology, organizational structure, navigational aids, and interpretation processes

Acetate (cellulose triacetate)—A slow-burning base material frequently used for motion picture films. Also, in sheet form, for overlay cels.

Action—The movement of the subject within the camera field of view. Also, such movement as represented on film.

Angle—With reference to the subject, the direction from which a picture is taken. The camera-subject relationship in terms of their immediate surroundings.

Animated Zoom—A zoom effect achieved by making progressive changes in the sizes of artwork, rather than by moving the camera toward or away from the subject, in contrast with a continuous movement of the camera or a zoom accomplished by the adjustment of a variable focal length lens.

Animation—The technique of synthesizing apparent mobility of inanimate objects or drawings through the medium of cinematography. The term is also used for the sequence of drawings made to create the movement, and for the movement itself when seen on the screen.

Animation Board—Adjustable drawing board adapted by the addition of registration pegs to the needs of artists and designers.

Animation Camera—A motion picture camera with special capability for animation work, which usually includes frame and footage counters, the ability to expose a single frame at a time, reverse-filming capability, and parallax-free viewing.

Animation Stand—A specially designed unit for holding and photographing artwork, in which the camera, lighting equipment, registration device, platen, and compound table are an integral part.

Answer Print—The first combined picture and sound print, in release form, offered by the laboratory to the producer for his acceptance. It is usually studied carefully to determine whether changes are required prior to release printing.

Aperture—(1) *Lens:* The orifice, usually an adjustable iris, which limits the amount of light passing through a lens. (2) *Camera:* In motion picture cameras, the mask opening that defines the area of each frame exposed. (3) *Projector:* In motion picture projectors, the mask opening that defines the area of each frame projected.

Background—(1) *Artwork:* The setting against (or over) which animation takes place. (2) *Live Action:* The character or objects appearing farthest from the camera.

Backlighting—Light transmitted from beneath drawing or a cel to produce a silhouette or to illum nate transparent colors applied to an acetate base.

Barn Doors—Opaque sheet-metal plates hinged to tl front of a light to permit control of the light.

Beat—The musical tempo (of the sound track) us for timing animation action.

Blank—A cel without a drawing, used in photograph to keep the number of cel levels constant throughо a scene to avoid changes of background color.

Blow Up (part of frame)—In transferring an ima by means of an optical printer, it is possible to e large a properly proportioned fraction of the origin image to full frame size in the copy.

Bumper Footage—Extra footage of the opening ar final scenes in an animated film, which is added standard procedure.

Burn In—The photographic double exposure of a tit or other subject matter over previously exposed fil

Burnish—To fix in position by friction that is pr duced by rubbing a surface with a tool having smooth, rounded end.

Cel—A transparent sheet of cellulose acetate or sim lar plastic serving as a support or overlay for dra ings, lettering, etc, in animation and title work. (T avoid possible confusion with biological "cells," tl preferred spelling is with one "l".) Cels are usual punched to fit pegs on the artist's easel and/or tl platen of the animation stand to help register su cessive cels during artwork and photography.

Cel Level—The number of separate cels placed or over the other (over a common background) and ph tographed at the same time.

Clean-Up—Making finished layout drawings fro roughs. Removing surplus ink, paint, fingerprint and dust from cels before photography.

Close-Up—A detail photographed with a long foc length lens, or from such a short distance that only small portion of the subject fills a frame of film.

Color Correction—Alteration of tonal values of colore objects or images by the use of light filters, eith with camera or printer.

Color Model—A specimen cel designed in conjunctio with the background of each subject, painted in co ors or tones as a guide to the painting of the who scene.

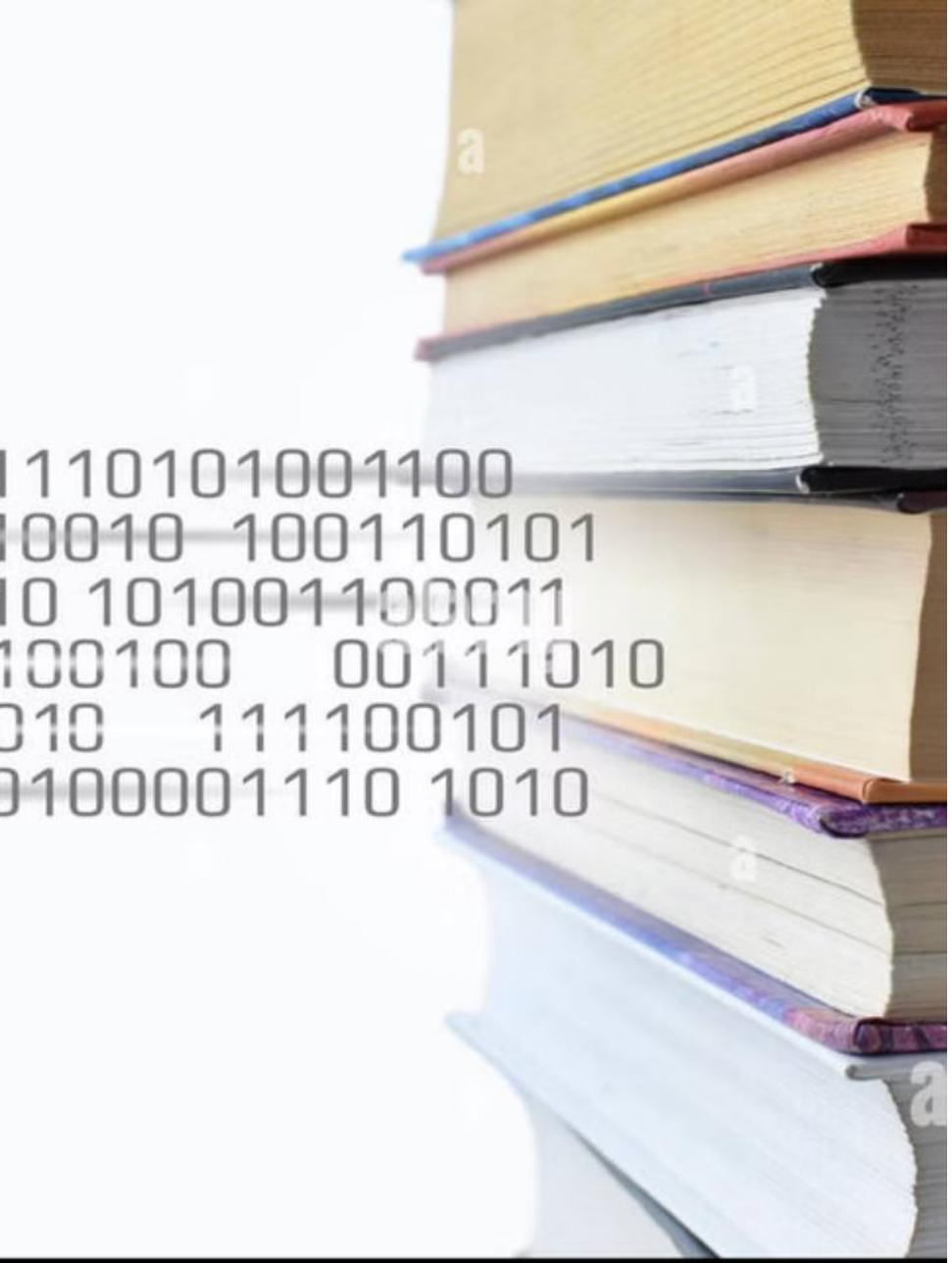
Key Terminology in the CSA B149 Code

Term	Definition
And	Indicates that you must meet all the requirements that a word links
May	Indicates an advisory or optional statement
Or	Indicates that you must meet only one of the requirements that a word links
Shall	Indicates a mandatory requirement
Should	Indicates a recommendation or that which is advised but not mandatory

Understanding "Shall" in the Code

> 1.6 In this Code, unless approved otherwise by the authority having jurisdiction, "shall" indicates a mandatory requirement; "should" indicates a recommendation or that which is advised but not mandatory; "may" indicates an advisory or optional statement.

!		?
Shall	**Should**	**May**
Mandatory requirement	Recommendation (not mandatory)	Advisory or optional



Scope of the CSA B149 Codes

CSA B149.1

Natural gas and propane installation code for buildings and residential installations

CSA B149.2

Propane storage and handling code, including recreational vehicles

CSA B149.3

Code for the field approval of fuel-related components on appliances and equipment

The first section of each Code outlines its scope — what it covers and does not cover. It's essential to determine which Code applies to your specific situation.

Multiple Code Applications

Residential

Typically requires only CSA B149.1

Recreational Vehicles

Requires CSA B149.2

Equipment Approval

May require CSA B149.3

Industrial

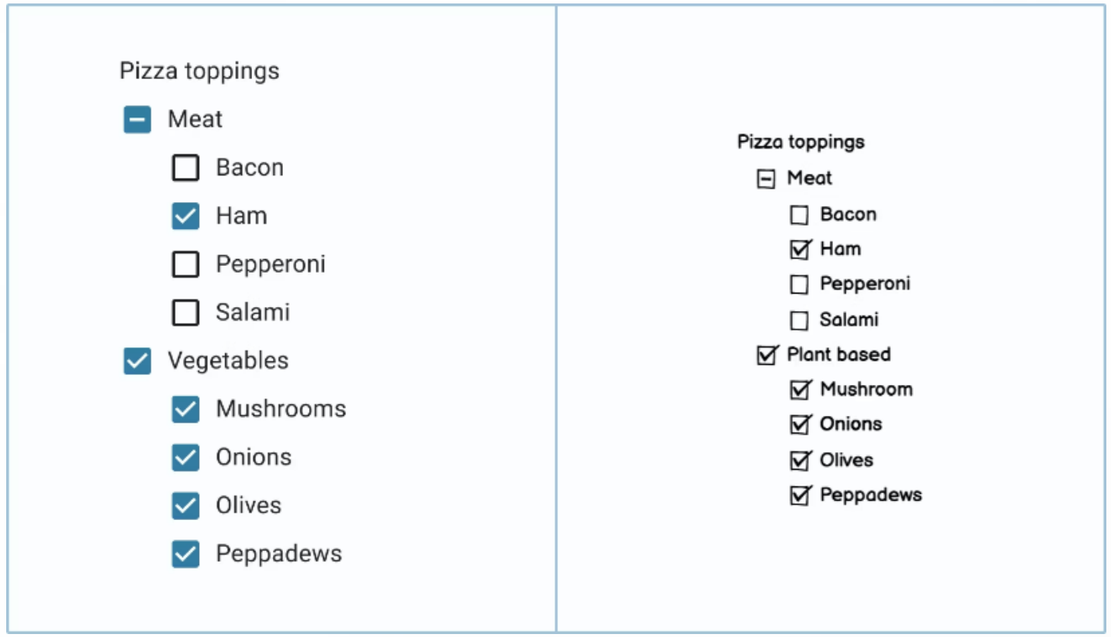
May require all three Codes

In some cases, more than one Code may apply. For example, industrial propane-fired process ovens may require compliance with all three Codes.

Understanding "And" vs "Or" in Requirements

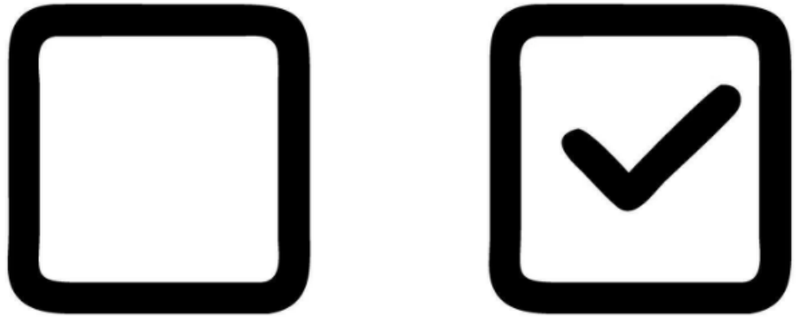
"And" in Requirements

The use of "and" indicates that you must meet **all** the requirements that the word links.



"Or" in Requirements

The use of "or" indicates that you must meet **only one** of the requirements that the word links.



Example of "And" vs "Or" in Clauses

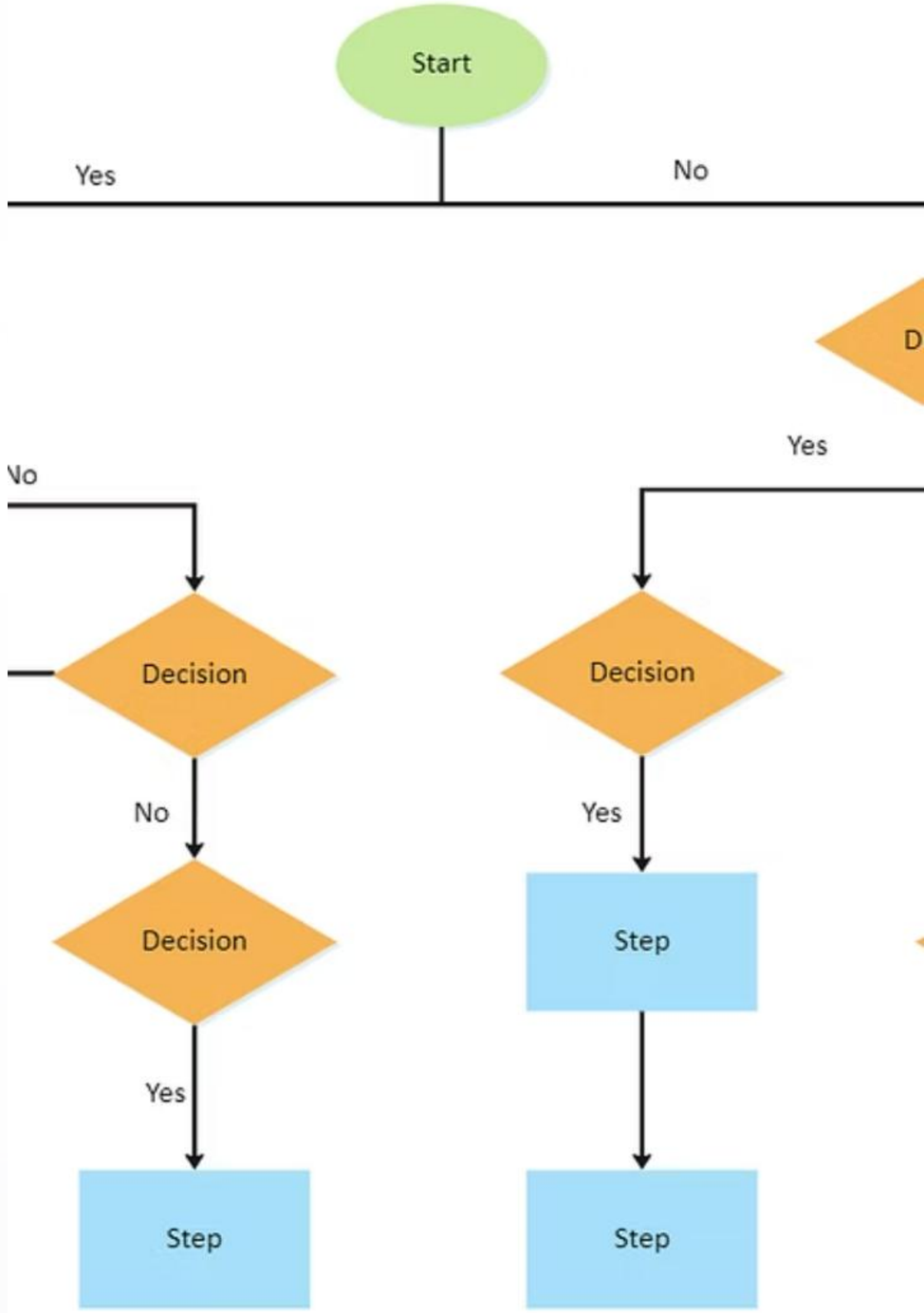
Clause with "And"

You must comply with both (a) AND (b) requirements

Clause with "Or"

Clause 6.4.2 gives you an option to use either (a) OR (b), but you shall use one of the two methods

Pay careful attention to these connecting words as they determine whether you need to meet all requirements or just one of several options.



Definitions and Abbreviations

Definitions

Words or terms appear in the definition pages of Section 3 of the Code. Both common and unusual terms have specific meanings necessary for interpreting and applying the Code as intended.

Abbreviations

The Codes use abbreviated names of organizations. Annex I of CSA B149.1 identifies each company or organization mentioned within the pages of the Code.

Reference Publications

Section 2 Listings

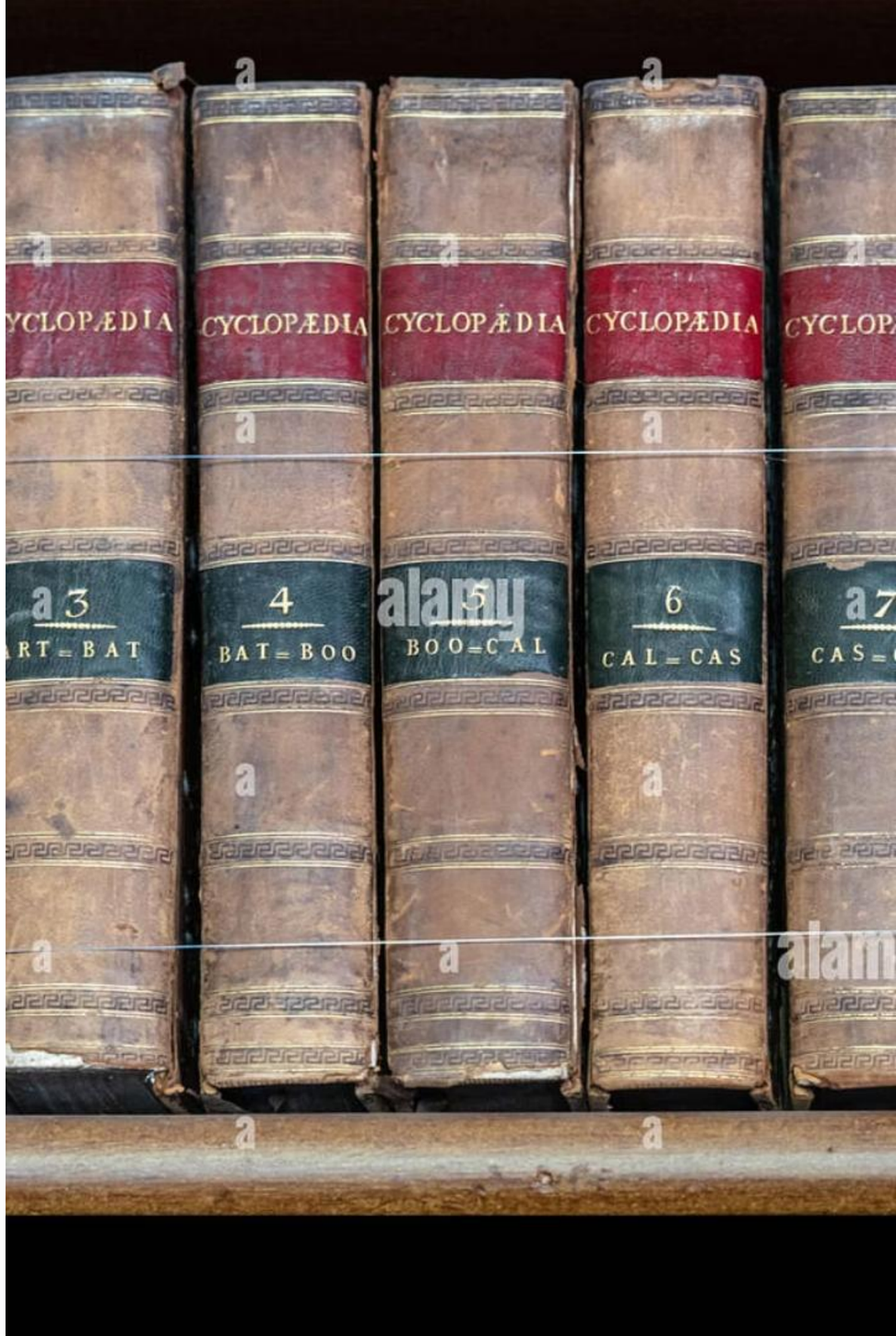
Section 2 lists all the reference material the Code uses

Ontario Standards

A complete listing of standards adopted in Ontario is available from TSSA in a document called "Titles of Standards and Laboratory Test Reports Authorized in the Province of Ontario"

Cross-Reference Necessity

It is sometimes necessary to refer to a standard or code referenced in CSA B149 to fully understand and comply with a requirement



Navigating the CSA B149.1 Code

Start with the Index

Located at the back of the Code, it lists subject areas alphabetically and gives the section or clause number, table, or annex that addresses those subjects

Check the Table of Contents

If you can't find the item in the index, try the table of contents at the front of the book

Look for Related Sections

Take care to check other sections that may apply to the issue at hand

Table of Contents Organization

Broad Section Headings

- Pressure controls
- Piping and tubing systems
- Hose and fittings
- Venting systems

Specific Subsections

More detailed topics are listed under each broad heading to help narrow your search

Remember that related requirements may appear in multiple sections

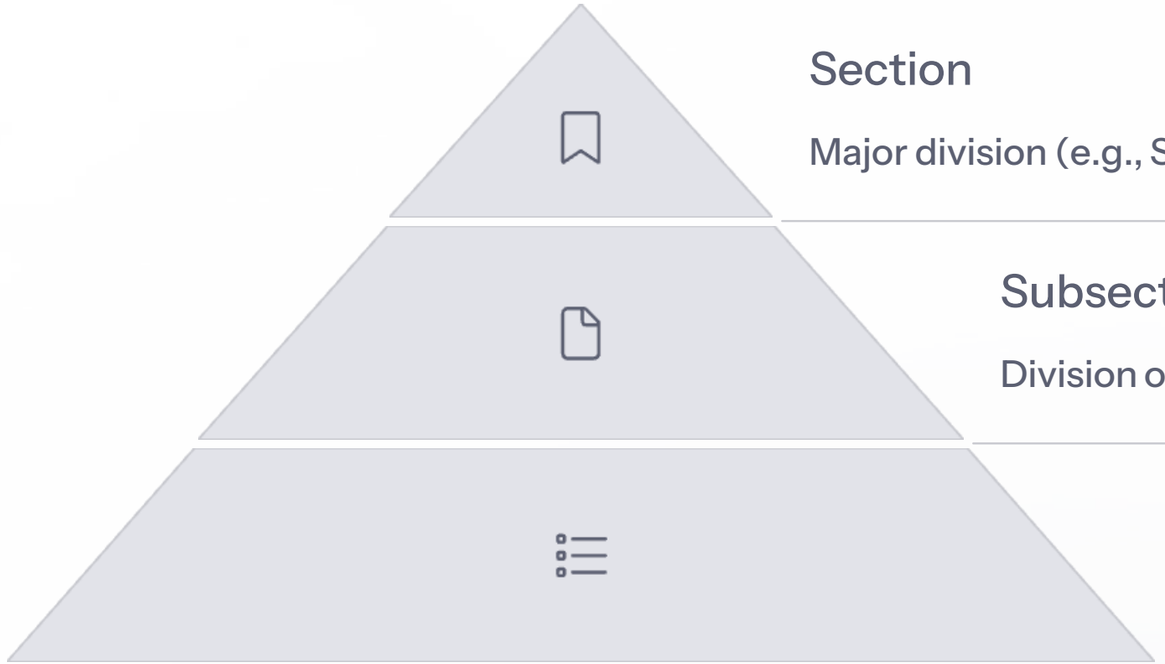
Hierarchy of Clauses

Section 4. General

→ *Subsection* 4.3 Responsibilities of the installer

→ *Clause* 4.3.5

→ *Subclause* 4.3.5 a)



Section

Major division (e.g., Section 6)

Subsection

Division of section (e.g., 6.4)

Clause

Specific requirement (e.g., 6.4.1)

Reading Clauses in Context

Section Level

Understand the broad topic area

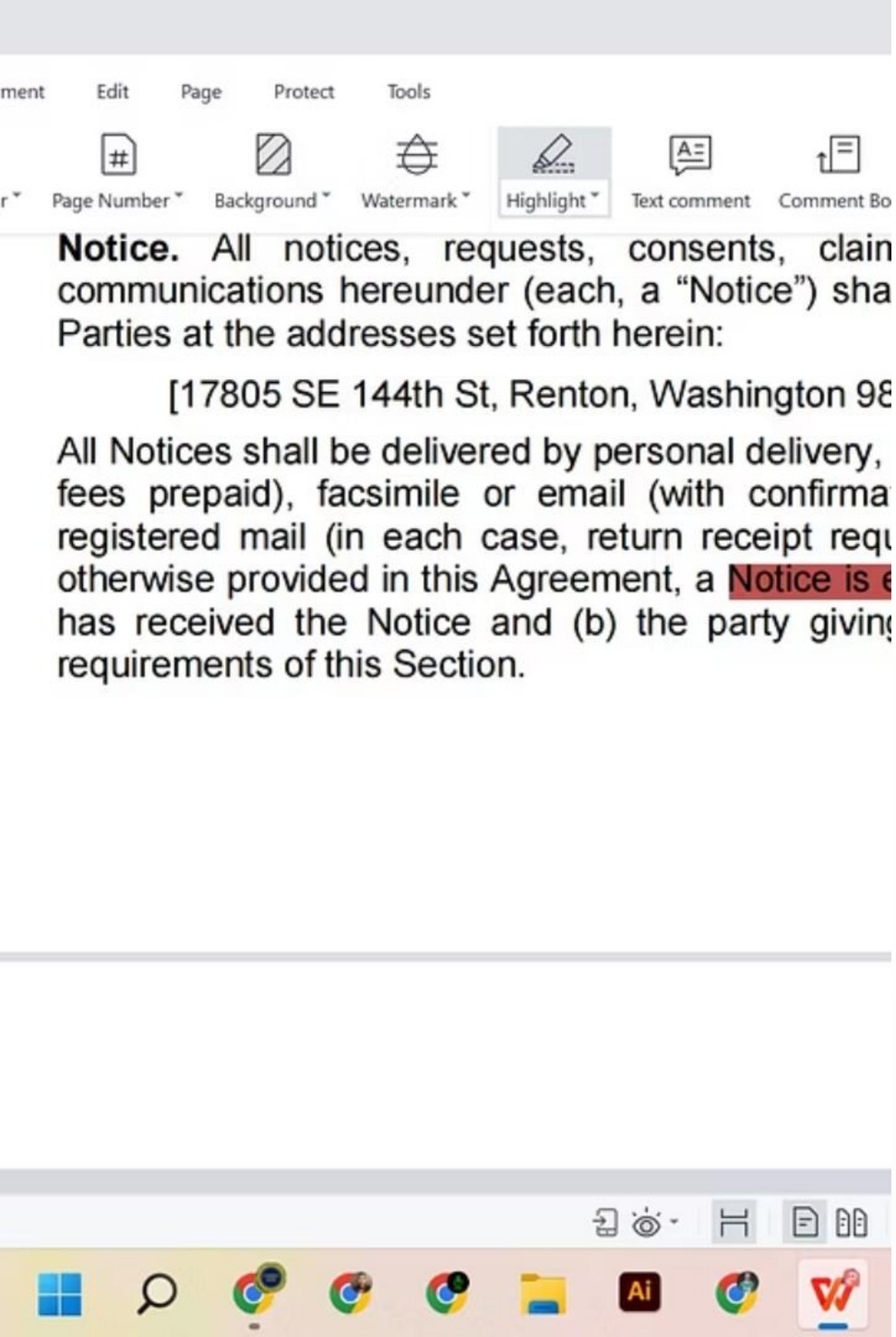
Subsection Level

Identify the specific subject matter

Clause Level

Read the specific requirement in context with higher levels

Always read a clause in context with the subject covered in the higher-level subsection and section to ensure proper interpretation.



Changes and Highlighting

Identifying Changes

Changes from a previous edition of the Code are not identified in the 2020 editions, and you may only find a change through careful comparison with the previous edition

Previous Editions

The 2015 edition of the CSA B149 series codes included a delta (Δ) in the margin to highlight changes

Best Practices

Mark sections you commonly reference with tabs and highlight important clauses relevant to your work

Practical Tips for Code Use

Keep Current

The current applicable Code should be readily available to every technician

Highlight Key Sections

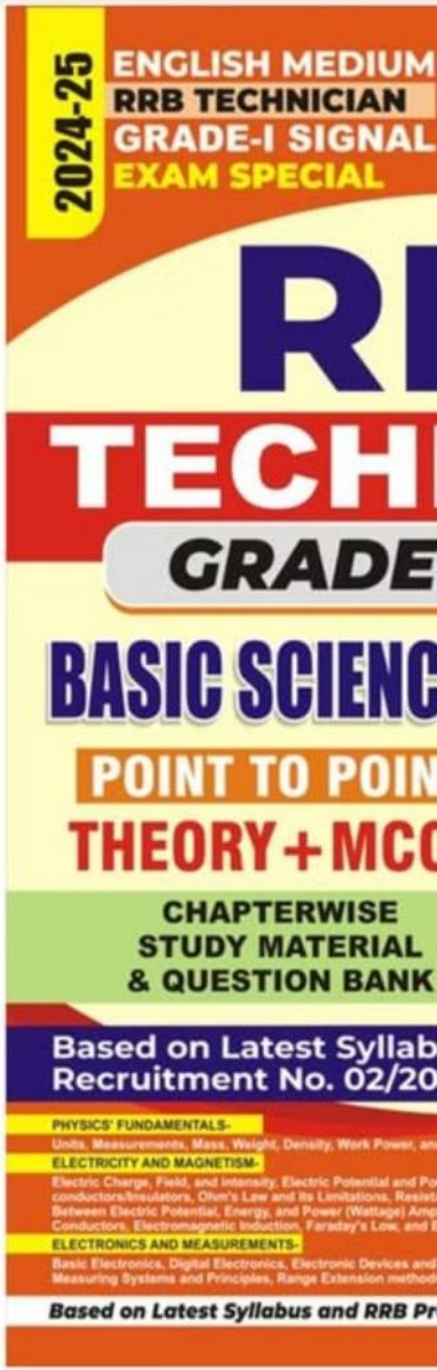
Identify commonly used sections with tabs and highlighting

Mark Sizing Tables

Clearly identify piping and tubing sizing tables to avoid mistakes between natural gas and propane tables

Compliance Expectation

A gas technician is expected to comply with all Code requirements



Understanding Annexes

What Are Annexes?

At the back of the Code, you will find a section entitled "Annexes." This section contains engineering tables, procedures, and information developed to assist you with:

- Sizing piping/tubing systems
- Sizing vents
- Procedures for purging
- Protection of piping, meters, or tanks
- Other technical information

Mandatory vs. Guideline

How a clause references an annex determines whether the annex information is a requirement or a guideline:

- If referenced as one means of compliance, it's a guideline
- If specifically required by a clause, it becomes mandatory

Example: Clause 6.23.7 specifically requires compliance with Annex H, making Annex H a requirement.

Example: Annex References

Guideline Example

Clause 6.3.2 of CSA B149.1 requires sizing of the piping/tubing system so that the pressure drop never exceeds 1 in w.c., when the supply pressure is between 7-14 in w.c. The Clause references the tables in the annexes only as one means of achieving this core requirement.

Mandatory Example

Clause 6.23.7 specifically requires compliance with Annex H, which makes Annex H a requirement.

Ontario Requirements

Code Adoption Document

Ontario amendments in the Code Adoption Document (available on coloured pages) have amended the national Code

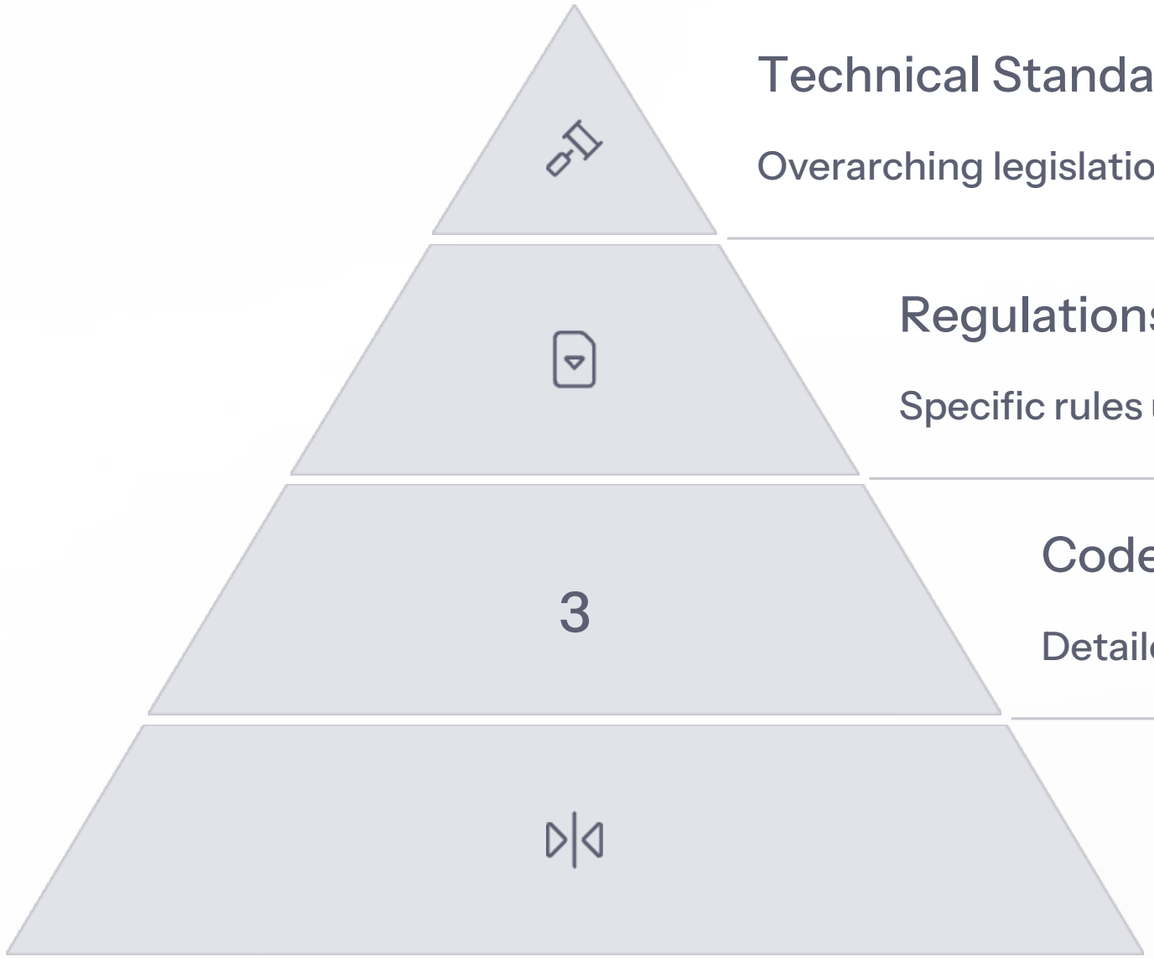
Best Practice

Cross out any amended sections in the Code and note the applicable page or change in the amendment section

Interrelated Requirements

Consider how all legal requirements are interrelated - don't view the Code in isolation from the Act, regulations, standards, and manufacturer's instructions

Legal Hierarchy of Requirements



Technical Standards and Safety Act

Overarching legislation

Regulations

Specific rules under the Act

Codes & Standards

Detailed technical requirements

Manufacturer's Instructions

Equipment-specific requirements

Application of Current Code to Existing Installations

Grandfathering Principle

Existing installations that were compliant when installed can generally remain in operation, even if they don't meet current Code requirements

Significant Changes

If the installation has a significant change or addition, the entire installation must be brought into compliance with current requirements

Due Diligence

Consider the reason or intent of code changes to ensure that older installations remain safe

Example: Chimney Liner Requirements

Pre-1978

CSA B149 Codes allowed venting of an appliance into an unlined chimney

2

1978 Code Change

New requirement for clay-tile liner or metal liner in a chimney

Existing Installations

Appliances installed before the code change could remain in operation

Modifications After 1978

If the pre-1978 appliance was replaced, moved, or if another appliance was added to the chimney, the entire installation would need to comply with current requirements

Conflicting Legal Requirements

Multiple Codes

Consider all applicable codes and standards

Conflict Resolution

Direct interpretations to the authorities having jurisdiction

Due Diligence

Apply the most stringent requirement when conflicts exist

Precedence

Technical Standards and Safety Act prevails over municipal by-laws

Electrical Requirements Example

> 4.7.1 Electrical connections between an appliance and building wiring shall comply with the local electrical code or, in the absence of such, with the Canadian Electrical Code, Part I.

Fuel Technician Scope

The Fuel Industry Certificate Regulation specifies the aspects of electrical work that require fuel technician certification

Electrician Requirements

The regulation also defines limits beyond which the technician must have a valid certificate of qualification as an electrician issued under the Trades Qualification and Apprenticeship Act

Hierarchy in Conflicts

Technical Standards and Safety Act

Prevails over municipal by-laws

2

Act, Regulations, Codes

Prevail over manufacturer's instructions

Most Stringent Requirement

Apply when municipal by-laws or manufacturer's instructions are more stringent

In no case must the end result be less than the code requires.

Interpreting the Code

Disputes and Grey Areas

Disputes and grey areas in interpreting the Codes are inevitable and actually positive

Code Evolution

Interpretation challenges lead to code development and the evolution of safety requirements

Input Opportunities

Technicians can provide input into code development and improvement

Requesting Code Interpretations

Define the Problem

Make reference to the specific clause, and, where appropriate, include an illustrative sketch

Explain Circumstances

Provide an explanation of circumstances surrounding the actual field condition

Phrase the Request Clearly

Where possible, phrase the request so that a specific "yes" or "no" answer will address the issue

To submit a request for interpretation, send the information to **inquiries@csagroup.org** and include "Request for interpretation" in the subject line.

Interpretation Process

CSA Interpretations

Committee interpretations are processed in accordance with the CSA Directives and guidelines governing standardization

Published in CSA's periodical Info Update, available on the CSA website: **www.csagroup.org**

Ontario Interpretations

A legal interpretation for Ontario requires a written request made to Fuels Safety, TSSA

This is the official channel for resolving code interpretation questions specific to Ontario regulations

Scope of CSA B149.1

Purpose

The first section of the Code outlines its scope — what it covers and does not cover

Location

Found in Section 1 of the Code

Importance

Essential to determine if CSA B149.1 is applicable to your specific installation

It would be useless to apply the CSA B149.1 requirements to a propane installation on a recreational vehicle since only the CSA B149.2 applies to those installations.

Definitions in CSA B149.1

Location

Words or terms appear in the definition pages of Section 3 of the Code

Importance

Both common and unusual terms have a specific meaning that is necessary for interpreting the Code Section and applying it as intended

Always check the definitions section when encountering terms that may have specific technical meanings within the context of the Code.

Notes in the Code

Text Notes

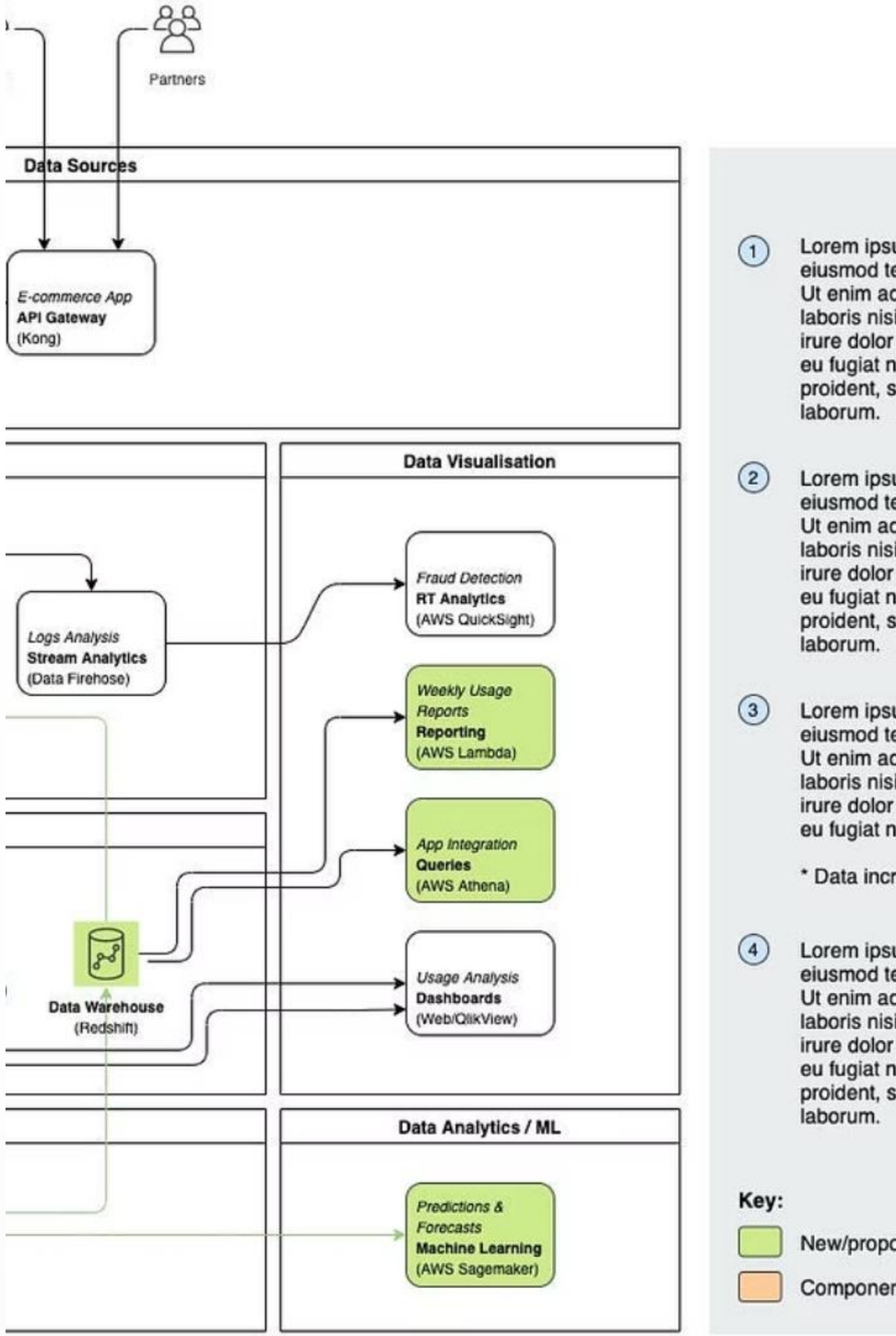
Notes to the text do not include mandatory or alternative requirements. The purpose of a note is to separate explanatory or informative material from the text.

Figure and Table Notes

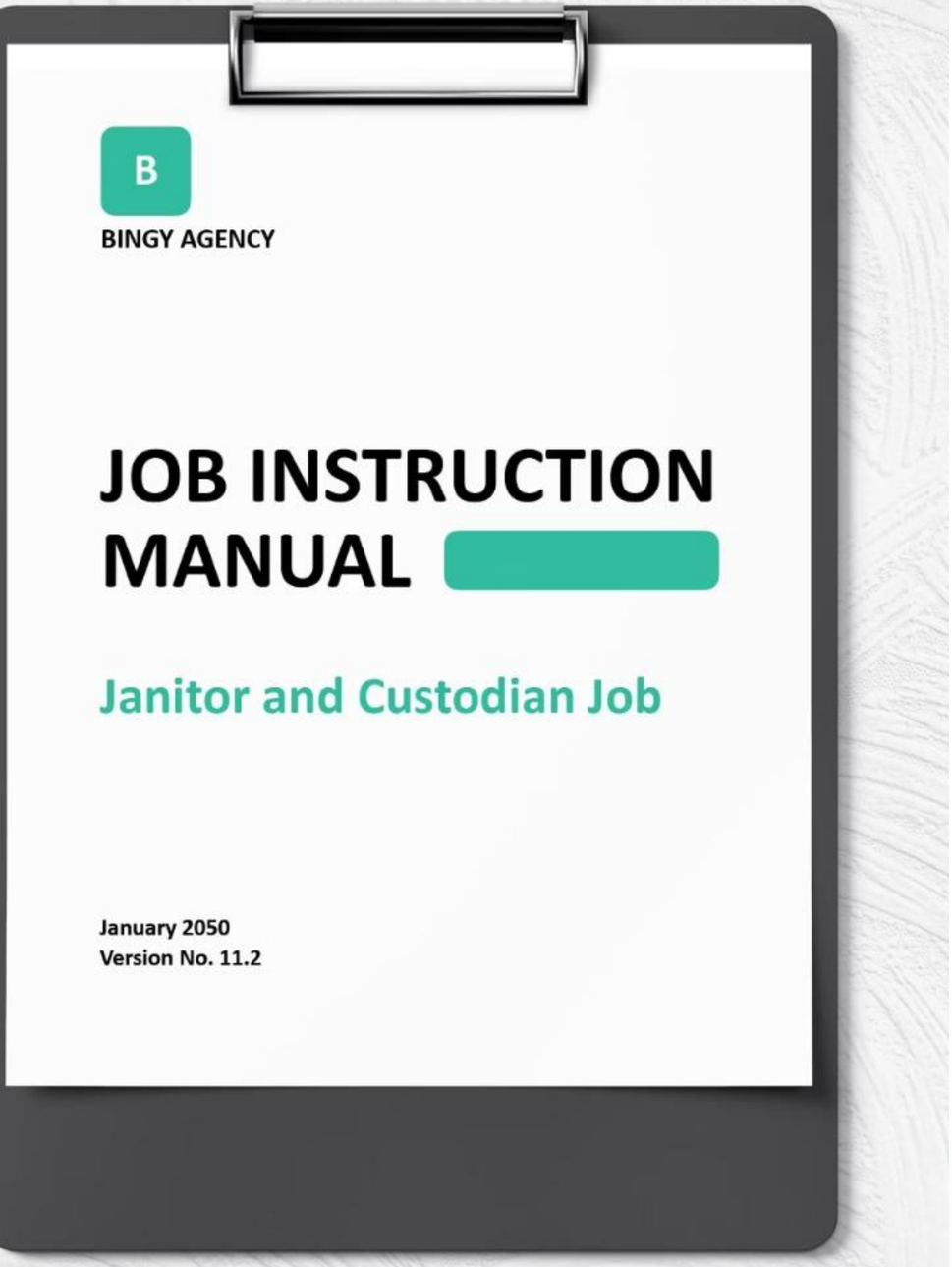
Notes to figures and tables are considered part of the figure or table and are written as mandatory requirements.

Figure Legends

Legends to figures are also written as mandatory requirements.



Organizational Structure of CSA B149.1



Navigational Aids in CSA B149.1

Index

Alphabetical listing of topics at the back of the Code

Table of Contents

Hierarchical listing of sections at the front

Section Headings

Clear titles for major divisions of content

Clause Numbering

Hierarchical numbering system for easy reference

Using the Index Effectively

Start with Specific Terms

Begin your search with the most specific term related to your question

Example: If looking for clearance requirements for a water heater, look under "water heater" first

Try Alternative Terms

If you don't find what you need, try related terms or more general categories

Example: If "water heater" doesn't yield results, try "appliances, clearances" or just "clearances"

Table of Contents

Using the Table of Contents

Broad Categories

Identify which major section might contain your topic

Drill Down

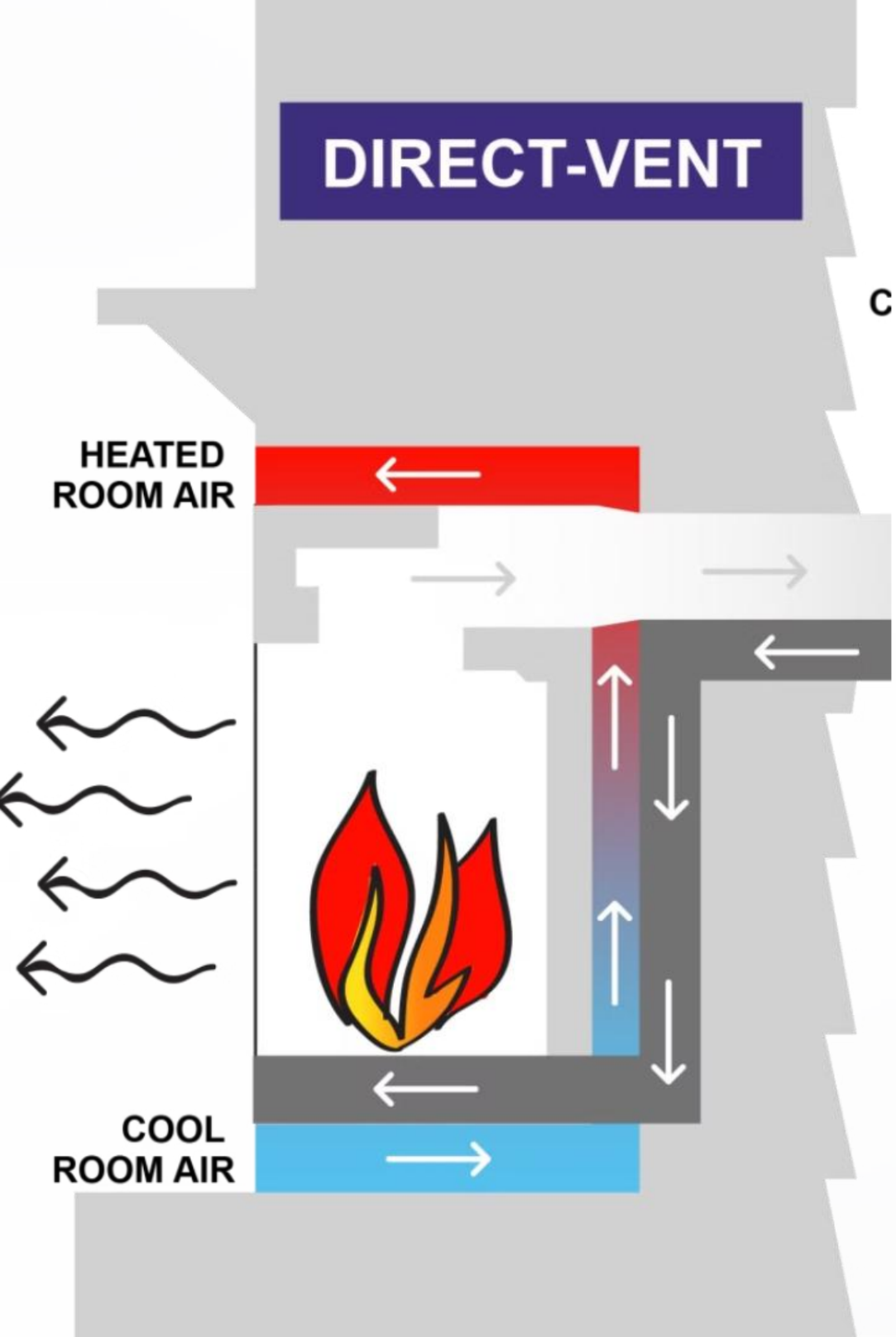
Look at subsections under the main heading

Check Multiple Sections

Remember that requirements on a topic may appear in multiple sections

Example

Pressure testing requirements appear in three different sections of CSA B149.1



Practical Example: Finding Venting Requirements

Check the Index

Look under "venting" or the specific appliance type

Review Table of Contents

Find the section on "Venting systems and air supply"

Identify Specific Subsections

Locate subsections on your specific venting question (e.g., "Venting systems for Category I appliances")

Practical Example: Pressure Testing

Multiple Locations

Pressure testing requirements appear in three different sections of CSA B149.1:

- Initial installation testing
- Testing after service work
- Annual inspection requirements

Finding All Requirements

To ensure complete compliance, you need to:

1. Check the index under "pressure testing"
2. Review all referenced sections
3. Consider which scenario applies to your situation

Ontario Code Adoption Document

Purpose

Contains Ontario-specific amendments to the national CSA B149 Codes

Format

Usually printed on colored pages for easy identification

Legal Status

These amendments have the same legal force as the Code itself

It is essential to check these amendments as they may significantly alter the requirements in the national Code.

Marking Up Your Code Book

Cross Out Amended Sections

Cross out any sections in the national Code that have been amended by Ontario

Note References

Add notes referring to the applicable page in the amendment section

Add Tabs

Mark frequently referenced sections with tabs for quick access

Highlight Key Requirements

Use highlighting for important clauses relevant to your daily work

Identifying Piping and Tubing Tables

Common Mistake

One common error is sizing natural gas systems using propane tables or vice versa

Best Practice

Clearly mark the different sizing tables with colored tabs or labels to prevent confusion

Always double-check which fuel type the table applies to before using it

Applying Code to Existing Installations

Original Installation

Compliant with code at time of installation

Code Changes

New requirements in updated codes

Modifications

Changes trigger compliance with current code

Continued Operation

Existing installations generally remain compliant

What Constitutes a "Significant Change"?

Appliance Replacement

Installing a new appliance in place of an old one

Relocation

Moving an existing appliance to a new location

System Expansion

Adding additional appliances to an existing system

Major Repairs

Substantial modifications to the original installation

Any of these changes would typically require bringing the entire installation into compliance with current code requirements.

Due Diligence with Older Installations

Assess Safety Impact

Consider why the code requirement changed

Evaluate Risk

Determine if the non-compliance presents a safety hazard

Inform Customer

Advise of any potential safety concerns, even if technically compliant with old code

Document Findings

Record your assessment and recommendations

Considering Other Legal Requirements

Electrical Code

Governs electrical connections and components

Building Code

Addresses structural and fire safety requirements

Municipal By-laws

May impose additional local requirements

Manufacturer's Instructions

Specific requirements for equipment installation

When applying the Codes, remember to also consider these other legal requirements to ensure your installation meets all applicable regulations.

Electrical Requirements for Gas Appliances

CSA B149.1 Requirement

> 4.7.1 Electrical connections between an appliance and building wiring shall comply with the local electrical code or, in the absence of such, with the Canadian Electrical Code, Part I.

Certificate Limitations

The Fuel Industry Certificate Regulation specifies:

- What electrical work gas technicians can perform
- When an electrician's certificate is required

Resolving Conflicts Between Requirements

Identify the Conflict

Determine exactly where requirements differ

2

Check Precedence

Review which requirement takes legal priority

Apply Most Stringent

When in doubt, follow the stricter requirement

Seek Interpretation

Contact authorities having jurisdiction if unclear

Legal Precedence in Conflicts

Act vs. Municipal By-law

In the event of a conflict between the Technical Standards and Safety Act, 2000 (including the regulations, codes, and standards) and a municipal by-law, the Act prevails.

Act vs. Manufacturer's Instructions

In the event of a conflict between the Act, regulations, or codes and a manufacturer's certified instructions, the Act, regulations, or codes prevail.

Due Diligence Principle

If municipal by-laws or manufacturer's instructions are more stringent than the code requirement, the most stringent clause must take effect.

Submitting a Request for Interpretation

Prepare Your Request

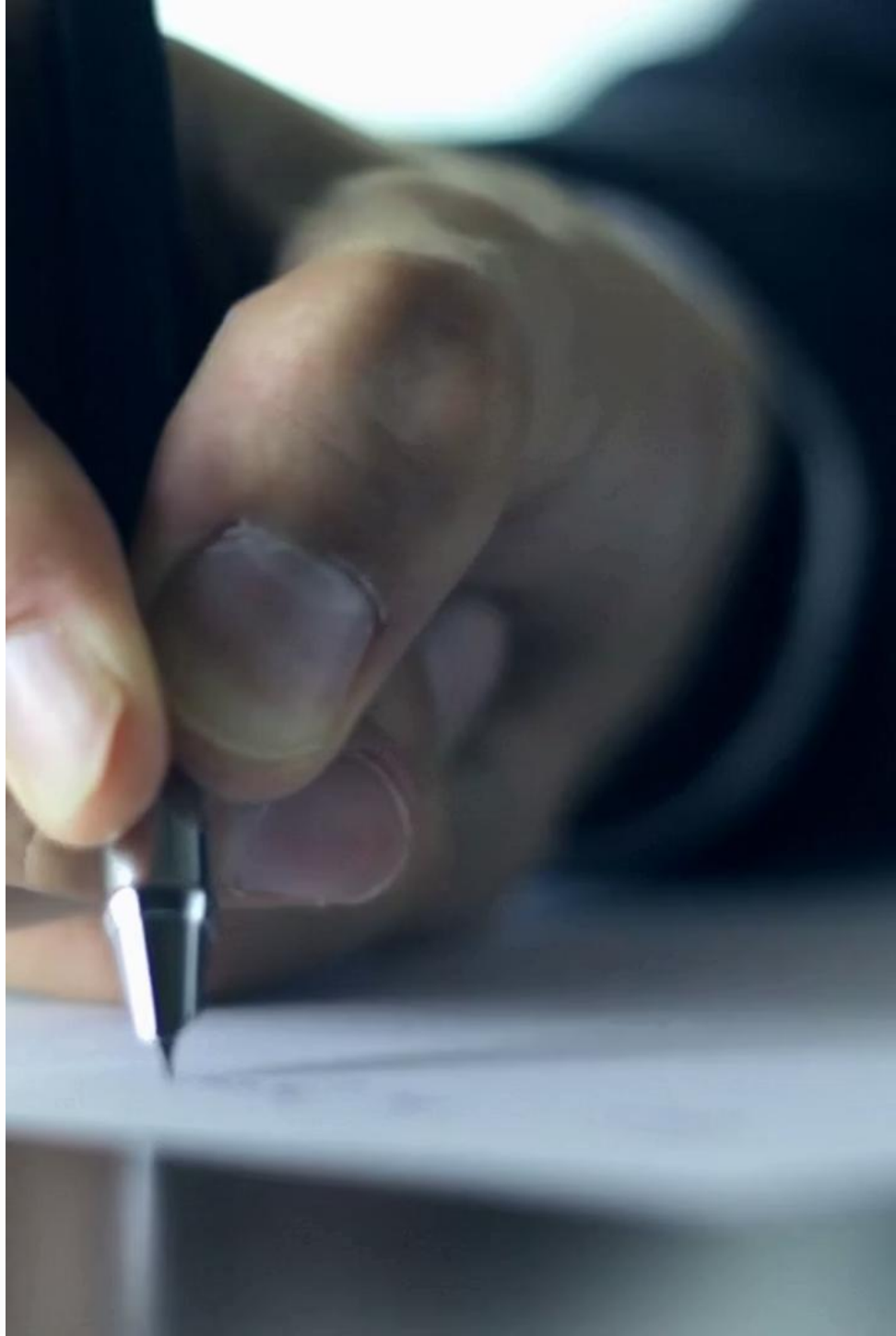
Include the specific clause, an illustrative sketch if appropriate, and explanation of the field condition

Submit to CSA

Email to inquiries@csagroup.org with "Request for interpretation" in the subject line

For Ontario-Specific Interpretations

Submit a written request to Fuels Safety, TSSA



Phrasing Interpretation Requests

Effective Request Format

Where possible, phrase the request in such a way that a specific "yes" or "no" answer will address the issue

This helps ensure you receive a clear, actionable response

Example

Instead of asking: "What are the requirements for venting a water heater near a window?"

Ask: "Does Clause X.X.X permit the installation of a water heater vent termination 10 inches horizontally from an openable window?"

CSA Interpretation Process

Submit Request

Send email with required information

Committee Review

Request processed according to CSA Directives

Official Response

Interpretation published in CSA's Info Update

Public Access

Available on CSA website (www.csagroup.org)

Ontario Interpretation Process

Written Request

Submit formal request to TSSA Fuels Safety

Technical Review

TSSA staff evaluates the question

Official Response

TSSA provides written interpretation

Legal Status

Interpretation has official standing in Ontario

Benefits of Code Interpretation Process

Clarity

Resolves ambiguities in code language

Consistency

Ensures uniform application across the industry

Safety

Promotes proper understanding of safety requirements

Evolution

Identifies areas for improvement in future code editions

Code Development Process

Industry Input

Stakeholders identify issues

Committee Review

Technical experts evaluate proposals

Draft Development

New requirements are written

Publication

New edition released

Public Comment

Industry feedback on proposed changes

Contributing to Code Development

Submit Proposals

Identify issues or improvements and submit them to CSA

Participate in Committees

Join technical committees if you have expertise to contribute

Provide Feedback

Respond to public comment requests on draft changes

Share Interpretations

Discuss official interpretations with colleagues to improve understanding

Summary: Navigating the Code

Determine Applicable Code

Check the scope to ensure you're using the right code for your situation

Use Navigation Tools

Utilize the index, table of contents, and section headings to find relevant requirements

Read in Context

Understand clauses within their hierarchical structure

Consider All Requirements

Check for Ontario amendments and other applicable codes or standards

Summary: Understanding Code Language

Shall

Mandatory requirement

Should

Recommendation (not mandatory)

May

Advisory or optional

And

All requirements must be met

Or

Only one requirement must be met

Summary: Applying to Existing Installations

Grandfathering Principle

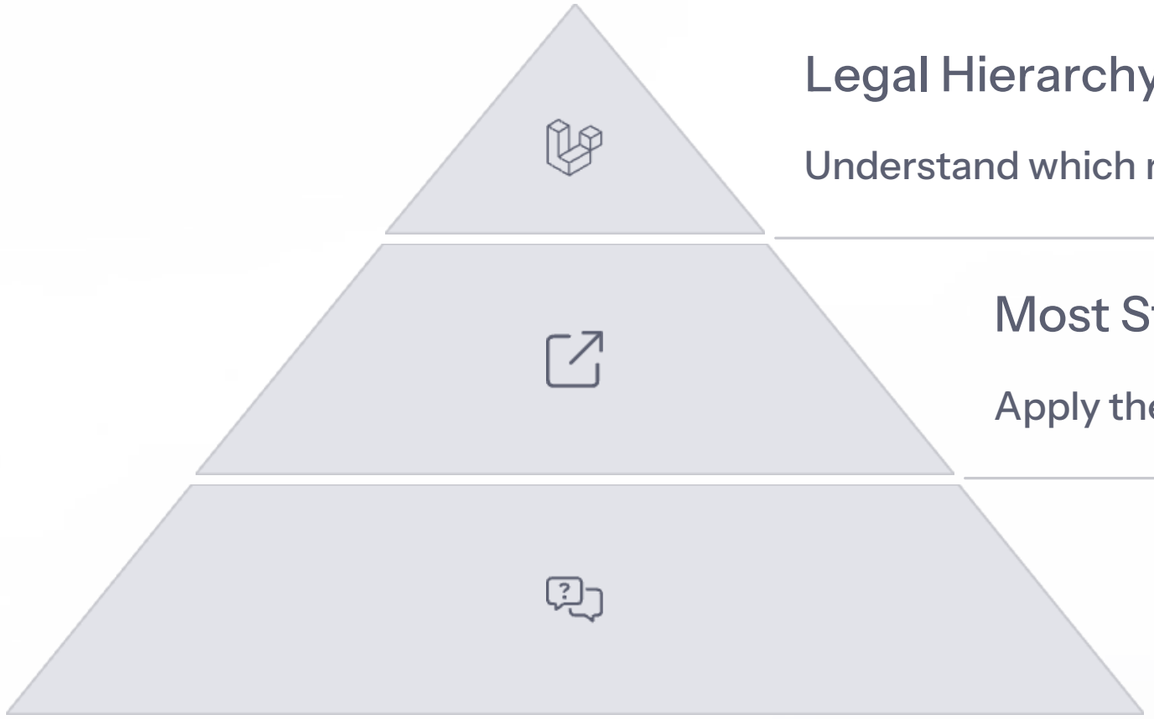
Existing installations that were compliant when installed can generally remain in operation

This applies even if they don't meet current Code requirements

Triggers for Current Code Compliance

- Appliance replacement
- Relocation of equipment
- System expansion
- Major modifications
- Specific requirements for retroactive compliance

Summary: Resolving Conflicts



Legal Hierarchy

Understand which requirements take precedence

Most Stringent Rule

Apply the stricter requirement when in doubt

Seek Interpretation

Contact authorities for official guidance

Remember that in the event of a conflict between the Technical Standards and Safety Act and a municipal by-law, the Act prevails. Similarly, the Act, regulations, and codes prevail over manufacturer's instructions in case of conflict.

Best Practices for Code Use

Keep Current

Maintain access to the latest applicable Code

Mark Important Sections

Use tabs and highlighting for frequently referenced parts

Read Thoroughly

Spend time reading through the Codes that apply to your work

Note Amendments

Cross-reference Ontario amendments with the national Code

Seek Clarification

Don't hesitate to request interpretations for unclear requirements

Conclusion

Safety First

The primary purpose of the Codes is to ensure safe installations

Professional Responsibility

Gas technicians are expected to comply with all Code requirements

Continuous Learning

Stay updated on Code changes and interpretations

Due Diligence

Apply professional judgment when interpreting and applying the Code

By understanding how to navigate and interpret the CSA B149 Codes effectively, you can ensure compliant installations and contribute to the ongoing development of safety standards in the industry.