Tier 3: Port Colborne Truck Driver Orientation

1. Port Colborne Refinery

1.1 Port Colborne Refinery

1.2 Introduction

1.3 Purpose

Purpose

Welcome to the Vale Port Colborne Refinery. We hope that your stay here will be a safe and productive one.

The purpose of this truck driver's orientation is to help ensure you understand our safety rules, policies and procedures to get you **Home Safe**.

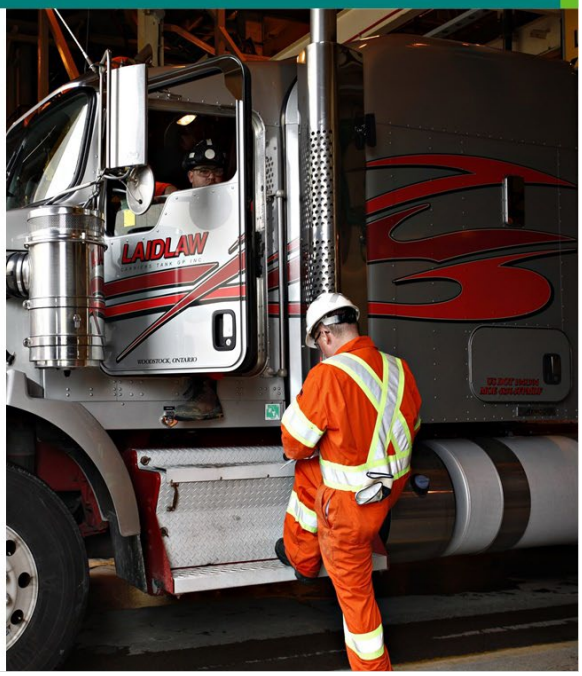
Remember: At Vale we believe Life Matters Most and that no job is worth doing if it cannot be done safely.

1.4 Contractor Plant Safety Orientation Booklet

Objectives

Upon completion of this module as a worker you will be able to:

- Understand Surface Layout & Boundaries
- Identify key Access Points and Entry Requirements
- Understand high level general hazards and controls with regards to:
  - Traffic Management
  - Loading/Unloading
  - Process Hazards / Upsets
  - Emergency Preparedness



1.5 What to Expect

Course Objectives

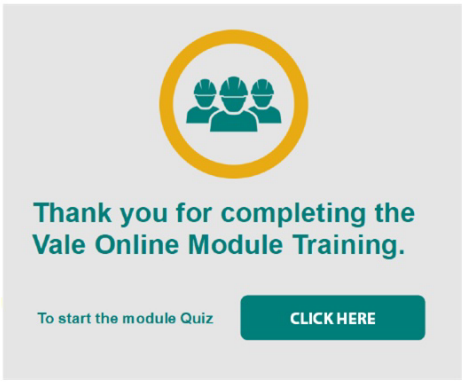
What to Expect

At the end of each section you will be asked to complete a series of questions that will help reinforce your learning in the related section, you will be shown whether you answered the questions correctly.

If you answer incorrectly on your first try, you will be able to try again until you find the correct response.

Upon completion of this module you will answer questions in a Final Quiz. Corrections to the Final Quiz questions cannot be made once this section is completed. You must review any incorrect questions if you score 80% or more.

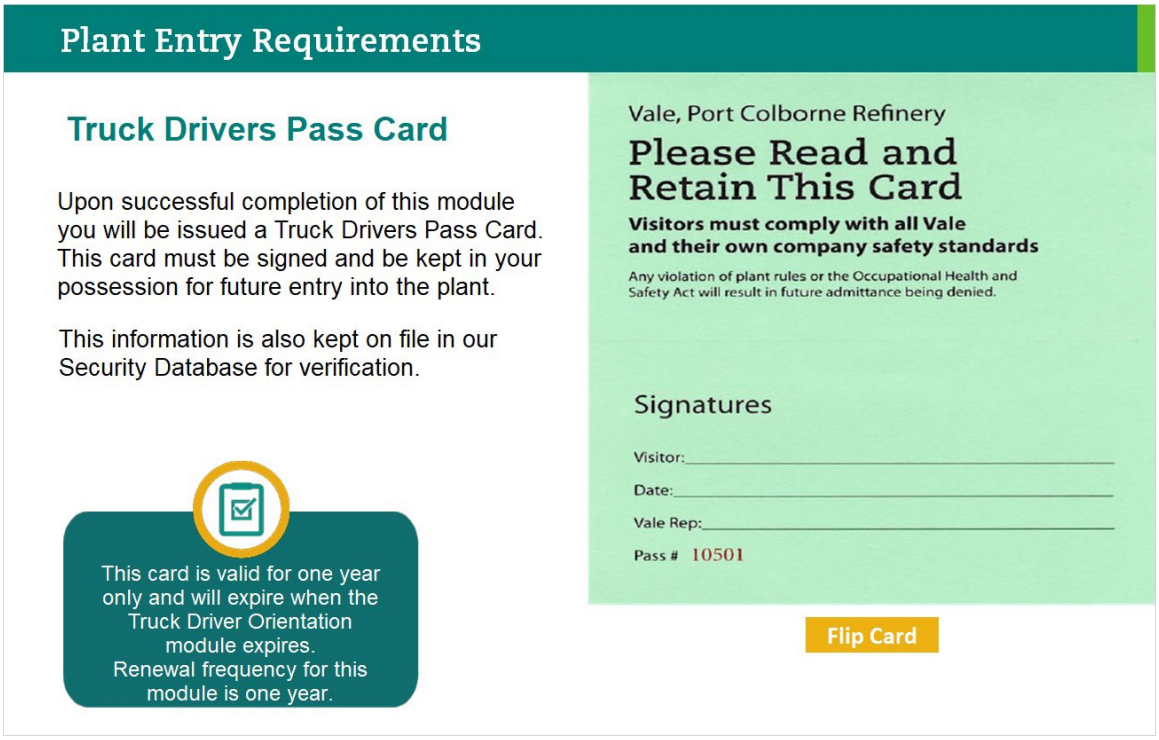
If you score less than 80% you will have to repeat this orientation module.



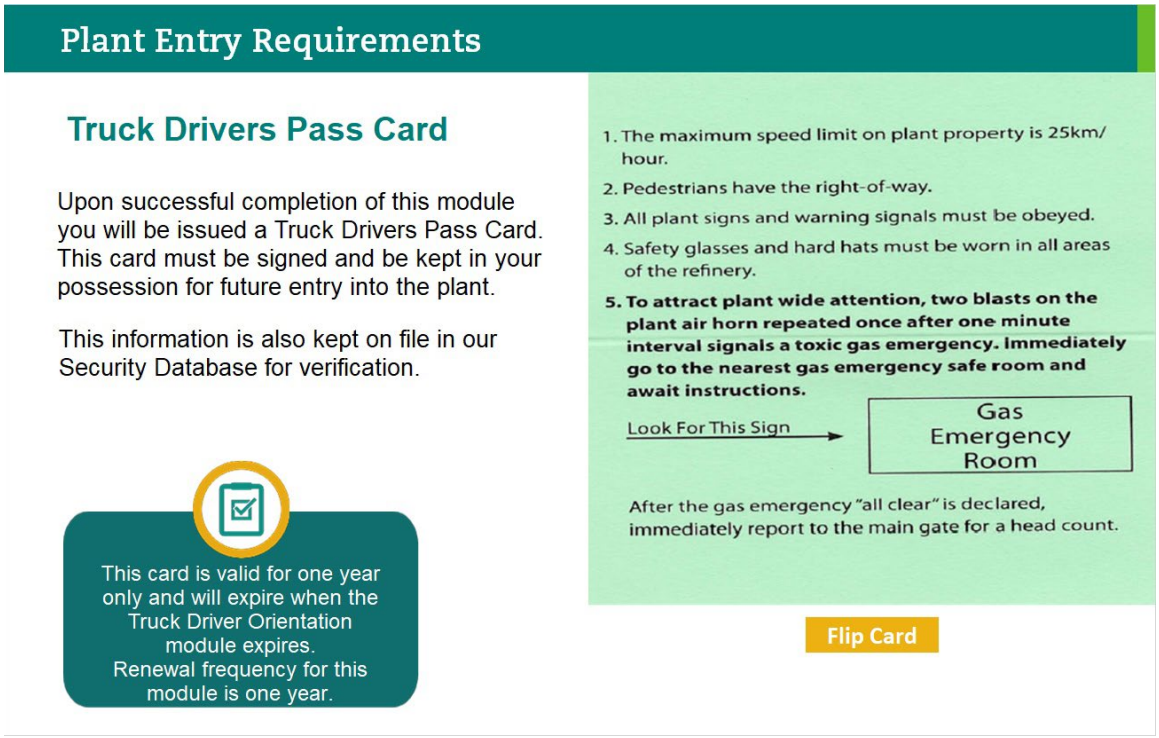
2. Plant Entry

2.1 Driving in, Walking in

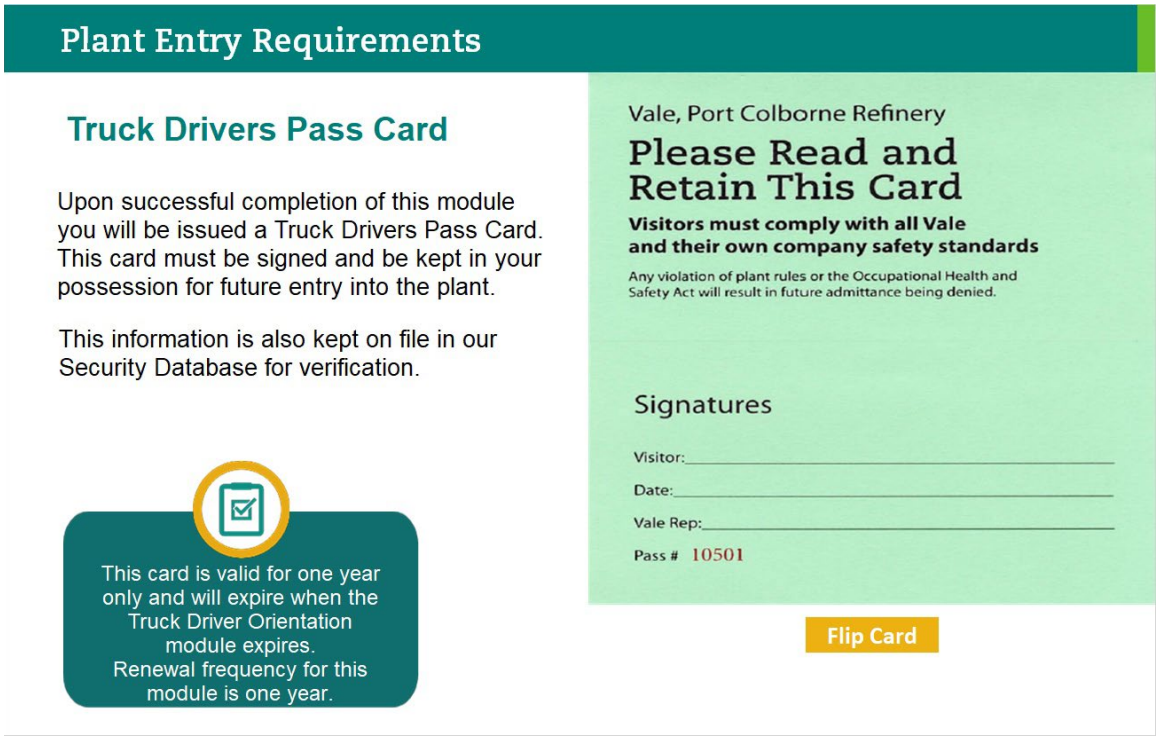
2.2 Security


Plant Entry Requirements
Truck Drivers Pass Card
Upon successful completion of this module you will be issued a Truck Drivers Pass Card. This card must be signed and be kept in your possession for future entry into the plant.
This information is also kept on file in our Security Database for verification.
This card is valid for one year only and will expire when the Truck Driver Orientation module expires. Renewal frequency for this module is one year.
Vale, Port Colborne Refinery
Please Read and Retain This Card
Visitors must comply with all Vale and their own company safety standards
Any violation of plant rules or the Occupational Health and Safety Act will result in future admittance being denied.
Signatures
Visitor:
Date:
Vale Rep:
Pass # 10501
Flip Card

Back (Slide Layer)



Front (Slide Layer)



2.3 Personal Protective Equipment

Plant Entry Requirements

Personal Protective Equipment

There is a minimum level of Personal Protective Equipment that Truck Drivers need to wear to perform work at the PCR.

Hard hats, steel toe boots, safety glasses, hearing protection in the buildings and Hi Visibility clothing, MUST BE WORN AT ALL TIMES (No Shorts Allowed).

For truck drivers a class II Hi Vis vest is a minimum requirement.

Drivers making deliveries at night are required to wear High Visibility Clothing Class 3, with Level II striping.

2.4 Alcohol and other Drugs

2.5 Alcohol and other Drugs

Plant Entry Requirements

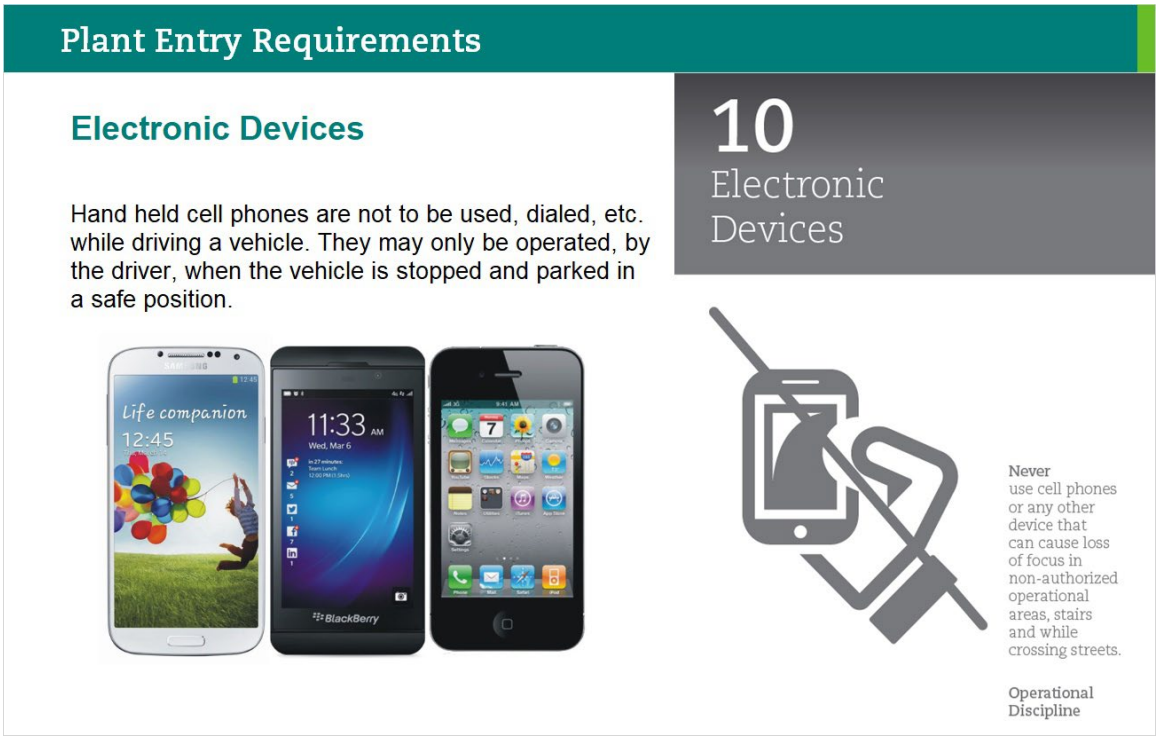
Alcohol and other Drugs

In addition, workers cannot:

- Report for work or remain at work under the influence of alcohol from any source;
- Consume any product containing alcohol (including beverage alcohol) when on duty including during meals or breaks;
- Return to work or report for work after consuming alcohol at a social event;
- Have a positive test as determined through the testing program;
- Use alcohol after an incident until tested or advised testing is not required.




2.6 Plant Vehicle Traffic



2.7 Ontario Operations – No Smoking Policy

Policies and Permits

Ontario Operations – No Smoking Policy

Vale's Ontario Operations is committed to providing a safe, healthy and productive work environment for all employees.

No smoking is permitted in all Vale 'enclosed workplaces' as defined by the Provincial Act:

- in any surface facility,
- within nine meters of building entrances, windows and ventilation intakes,
- in any company vehicle, including rentals used for company business.

This 'No Smoking Policy' applies to all employees, clients, contractors and visitors to any Vale site.

Disposable lighters are not permitted.

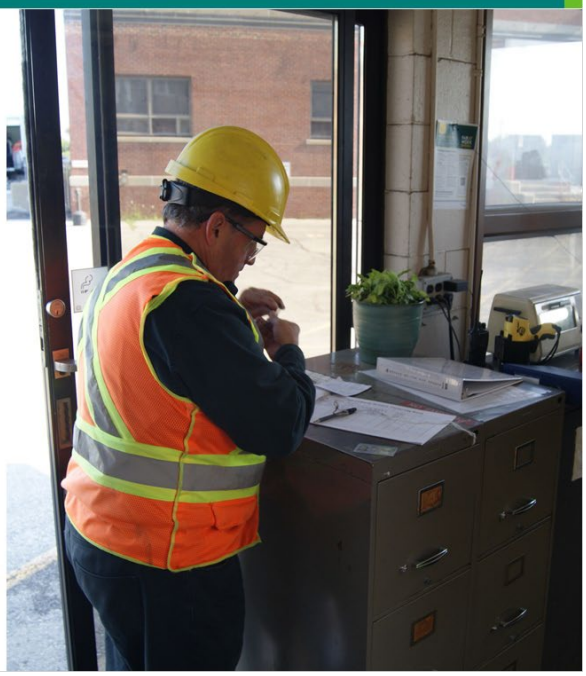
2.8 Visitor Sign-in Procedure

Plant Entry Requirements

Visitor Sign-in Procedure

Every time you enter or leave the plant you will be required to come into the main security building to sign in and out of the Visitor Sign In Book.

In the event of a major incident (e.g. gas emergency) that could occur in the plant we will need to be able to account for who is on the property at the time of this incident.



2.9 Security

Plant Entry Requirements

Security

The PCR is secured by fence and gates and our plant security personnel. All entry and exit is completed through our security officers. This orientation program must be viewed and understood to allow you access to the plant property.

A proper pickup number is required for picking up product. Delivered items must have paperwork as well and security will check for this before allowing entry.

2.10 Security

Plant Entry Requirements

Security

Security personnel are available at the main gate on weekdays from 7 a m to 6 p m. Outside of these times the gates are closed.

If a delivery is required outside of these times, then a phone call to our internal security group will be required to identify yourself and reasons for the visit. The phone is located to the right of the main gate.

2.11 Security

Plant Entry Requirements

Security

Barricade arms are located inside the plant main gate. These arms are to control the traffic coming into and out of the plant. Security will raise the arm once they are satisfied of the reason for the visit and that you meet our requirements for entry and exit.

The arms lower after each vehicle has passed, do not move forward until it has been lifted.

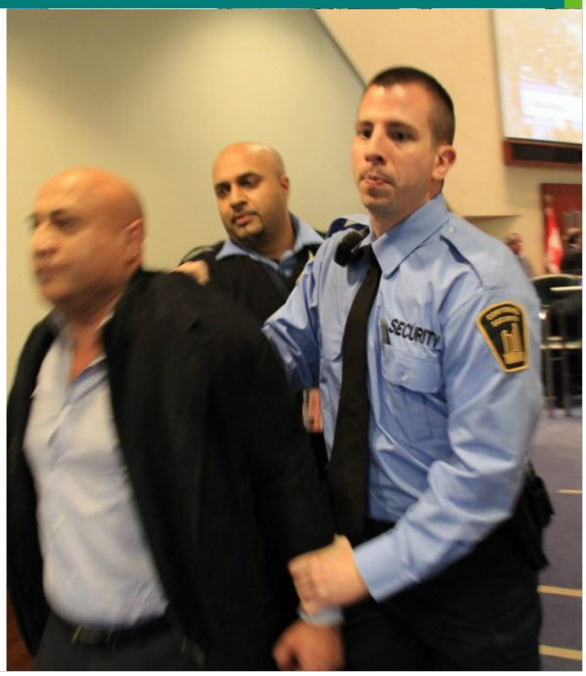
2.12 Security

Plant Entry Requirements

Security

All loads are subject to Security Checks. Security will verify that loads have been completely dropped off or pickups are made and proper paperwork is completed before allowing your departure.

Any violation of Vale rules, policies and procedures may cause your access to be denied and sudden removal from the plant property.



3. Traffic Management

3.1 Traffic Management

3.2 Responsibilities

Traffic Management

Responsibilities

You are responsible for the safe operation of your vehicle. This includes maintaining your vehicle as required by law.

You are required to follow the Highway Traffic Act along with Vale policies, procedures, and our Traffic Plan including the various signage throughout the plant.

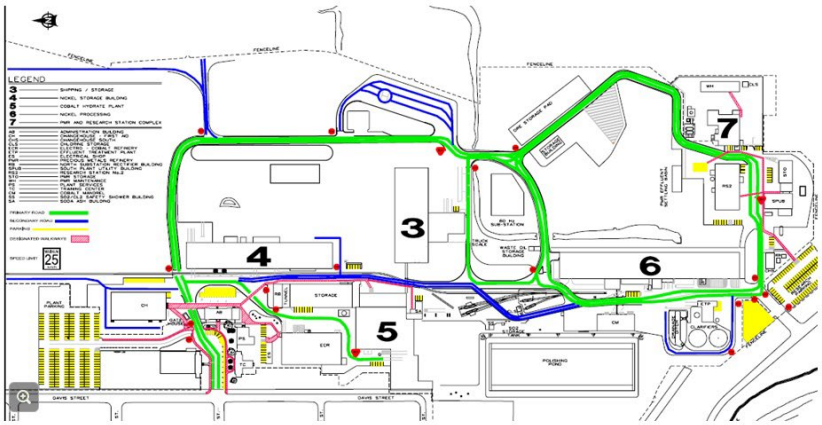
! **Drivers must keep trailer doors closed when driving throughout the plant.**

3.3 Traffic Plan

Traffic Management

Traffic Plan

There are many roadways within the PCR. Most deliveries and pickups are to follow the green roadways only, as identified in the diagram below.



Click to enlarge

3.4 Traffic Plan

Traffic Management

Traffic Plan

At the back of the plant outside of the truck scale, there is a marshalling area for trailers.

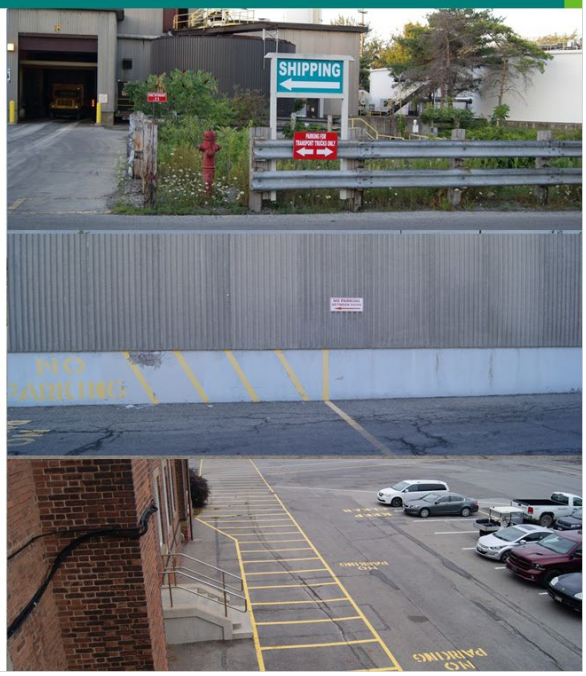
This is to assist in dropping of trailers and picking up of trailers and tying down and tarping of flat bed loads.

This is not a lay over area. No sleeping is allowed inside the plant.

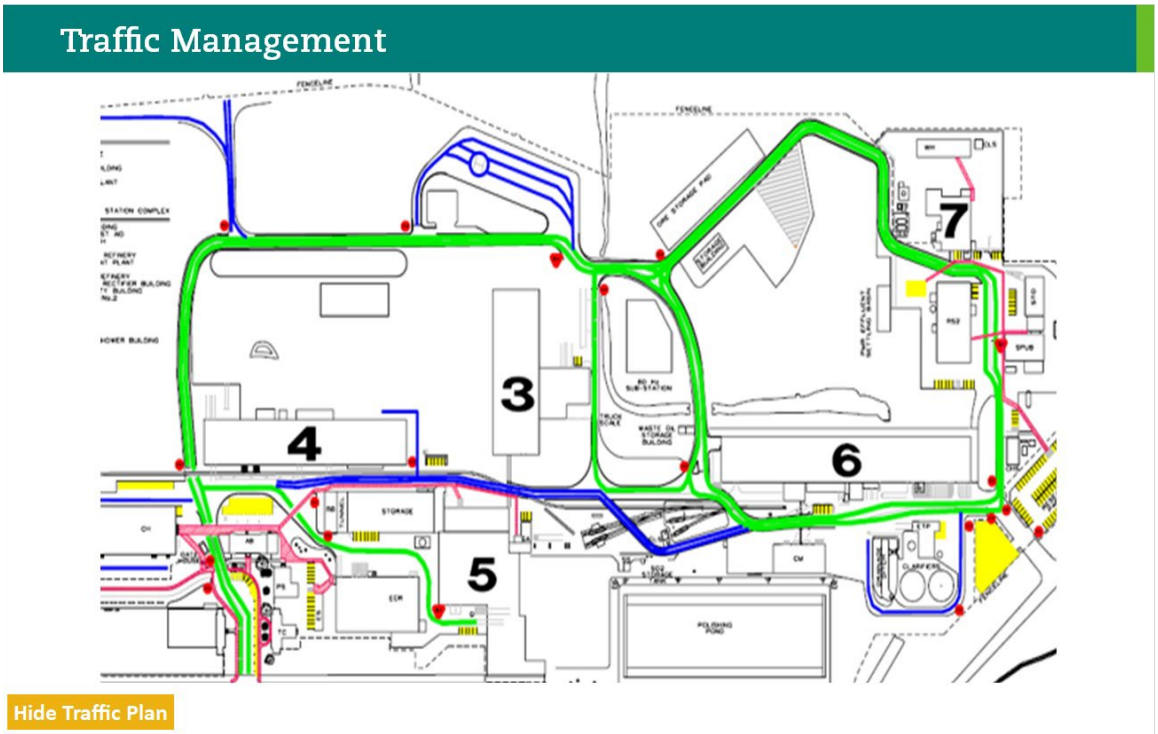
In the plant there are very specific truck parking and no parking areas. Obey the signage in these locations.

If parking in the North parking Lot (north of the change house), ensure that you park on the east side of the parking lot with the nose of the truck pointing east, facing away from the Community.

Show Traffic Plan



Traffic plan (Slide Layer)



3.5 Traffic Plan

Traffic Management

Barricaded Areas

Drivers may encounter barricaded areas in the plant. These areas are marked by a variety of items including Jersey barriers, barricade/caution tape, barricade chains, or fencing.

These areas are not to be entered at all. If access is needed they must contact their Vale representative or management.

3.6 Plant Vehicle Traffic

Plant Entry Requirements

Plant Vehicle Traffic

Every person who operates a motor vehicle or is a passenger in a motor vehicle in which a seatbelt assembly is provided, shall wear the complete seatbelt assembly in a properly adjusted and securely fastened manner.

No vehicle, any part of its load, or any material is to be left within 2.5 meters of any railroad track.

All vehicle operators are responsible to ensure that all loads are adequately secured.

Obey all traffic signs, stop lights, low clearance signage as well. Lights on building doorways must be green before entering.

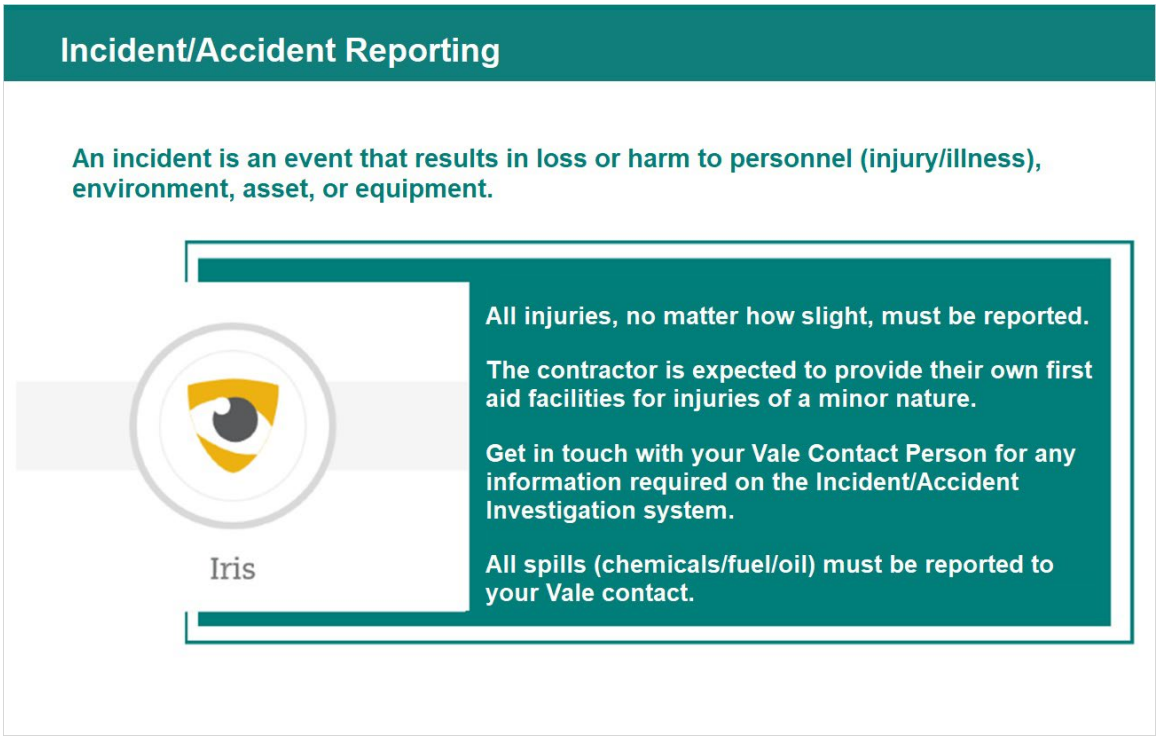
Pedestrians always have the right of way.

Maximum speed limit on Company property is 25 km/h.

4. Incident/Accident Reporting

4.1 Divider

4.2 Introduction



4.3 Telephone System

Incident/Accident Reporting

Telephone System

All employees must familiarize themselves with the telephone system and the number to call in the event of injury, fire or other emergency.

The plant wide emergency number is - 6211.

Precious Metals Refinery (PMR) Security personnel are at this number 24 hours a day and have been trained in the correct emergency response.

4.4 Reports By Phone

Incident/Accident Reporting

Reports By Phone

Trained Vale First Aid attendants and a First Aid Room, located at the PMR Security Office are available 24 hours a day for emergency situations.

At all other times Security at Extension 6300 is to be contacted, where trained Vale first aid attendants are available.

The contractor must ensure that the accident report is delivered to the Vale Representative, or their designate before leaving the plant for the day.

This also applies to incident reports.

4.5 Reports By Phone

Incident/Accident Reporting

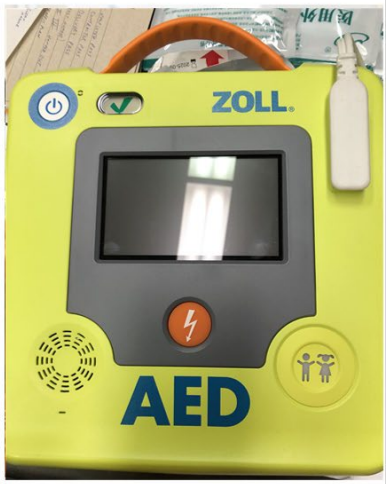
Reports By Phone

When reporting a serious injury by telephone to Security, a full account of the accident must be given, including the exact location, nature of the injury, whether a doctor or ambulance is required, name of the injured worker, and whether assistance is required at the accident scene.

An Automatic External Defibrillator (AED) is available through security.

Public Announcements

Public announcements to the news media concerning incident or accident investigations on Company property must only be made by the Vale Public Affairs Department.



There are (4) AED's on site.Located in every production department as well as the changehouse.

5. Site Specific Hazards and Controls

5.1 Plant Hazards

5.2 Site Specific Hazards

Site Specific Hazards

The nature of our business requires constant attention to health and safety issues and "life matters most" is a non-negotiable value for us.

Ensure you apply the necessary operation controls to mitigate risk associated with the identified hazards.

Be Aware
Be aware of your surroundings and the risks around you.

Follow Policies & Procedures
Our internal policies and procedures guide us in doing our work in a manner that reduces risk.

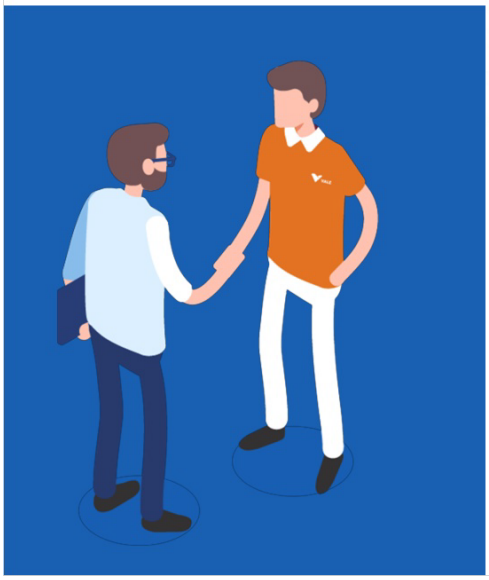
The following section lists identified hazards that may be encountered in the work you're doing Knowing if these hazards apply to your work can be found through your Vale Contact Person.

HOME SAFE

5.3 Introduction

Site Specific Hazards

Introduction

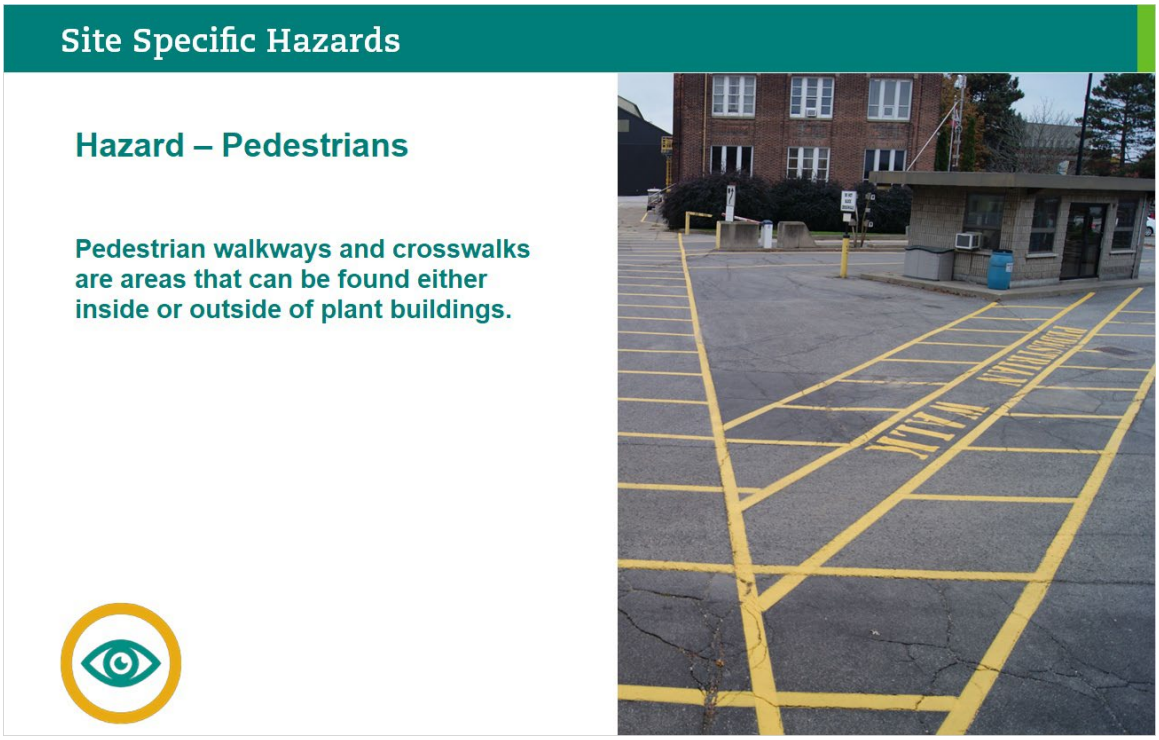


Truck Drivers at the Port Colborne Refinery need to be aware of site specific hazards and their related controls.

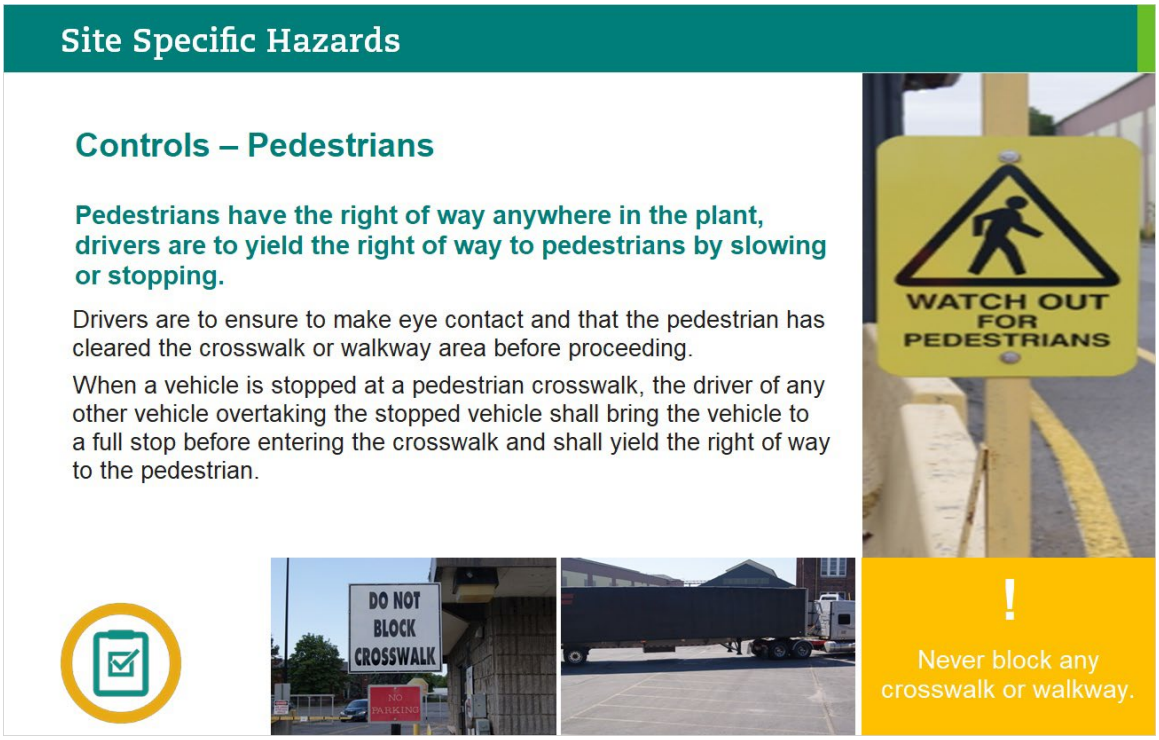
These include but are not limited to:

- Pedestrians
- Mobile Equipment
- Overhead Cranes
- Chlorine Gas
- Sulphur Dioxide Gas
- Corrosive Liquids (Caustics, acids, etc.)
- Emergency Signal Alarms

5.4 Hazard – Pedestrians



5.5 Controls – Pedestrians



5.6 Hazard – Mobile Equipment

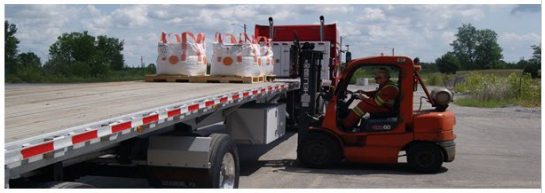
Site Specific Hazards

Hazard – Mobile Equipment

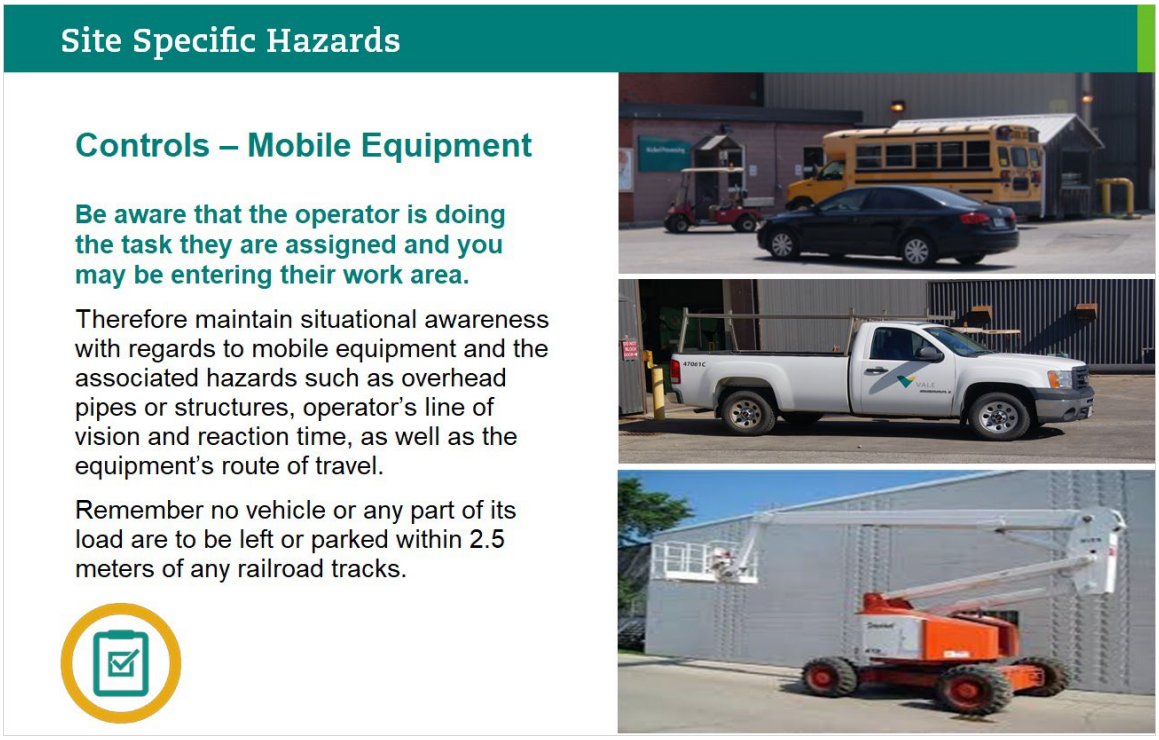
Extra caution is required in the plant as other types of mobile equipment can be present.

This includes but not limited to:

- Locomotive
- Loaders
- Snorkel lifts (MEWPs)
- Forklifts and Golf Carts, Pick-up Trucks and Buses.



5.7 Controls – Mobile Equipment



5.8 Controls – Mobile Equipment

5.9 Controls – Mobile Equipment

Site Specific Hazards

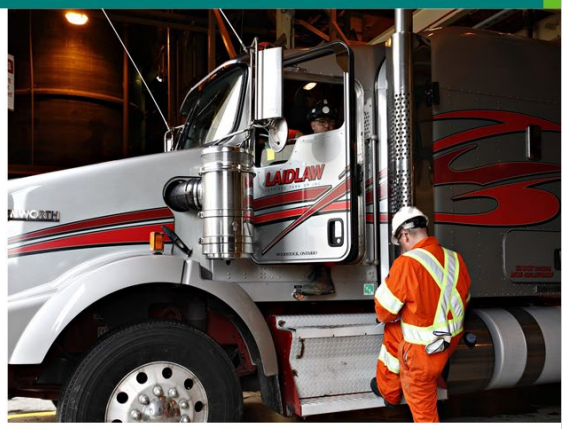
Controls – Mobile Equipment

Vehicles Equipped with Backup Warning Signals:

Driver shall proceed with caution after having determined it is safe to do so.

Vehicles not Equipped with Backup Warning Signals:

A person must be positioned to direct and warn the vehicle operator or any persons in the area of any hazard.



5.10 Hazard – Overhead Crane

Site Specific Hazards

Hazard – Overhead Crane

There are overhead cranes at PCR to facilitate the movement of materials throughout the plant.

Cranes present the hazards of:

- Suspended loads
- Unstable loads
- Collisions and entanglements
- Contact with other equipment

5.11 Controls – Overhead Crane

5.12 Hazard – Chlorine Gas

Site Specific Hazards

Hazard – Chlorine Gas

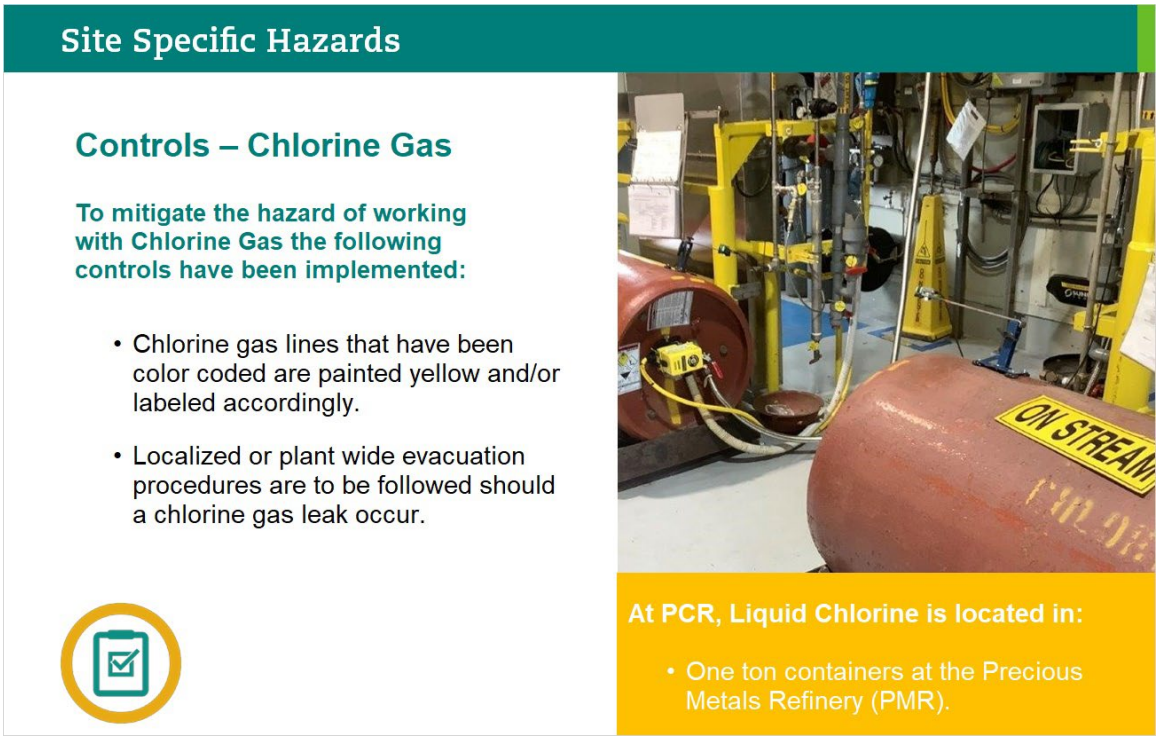
Chlorine is a greenish yellow gas that is received as a liquid in one ton cylinders.

In very dilute concentrations, chlorine gas is an irritant to the eyes, nose, throat and lungs; however in higher concentrations it is highly toxic and can be fatal.

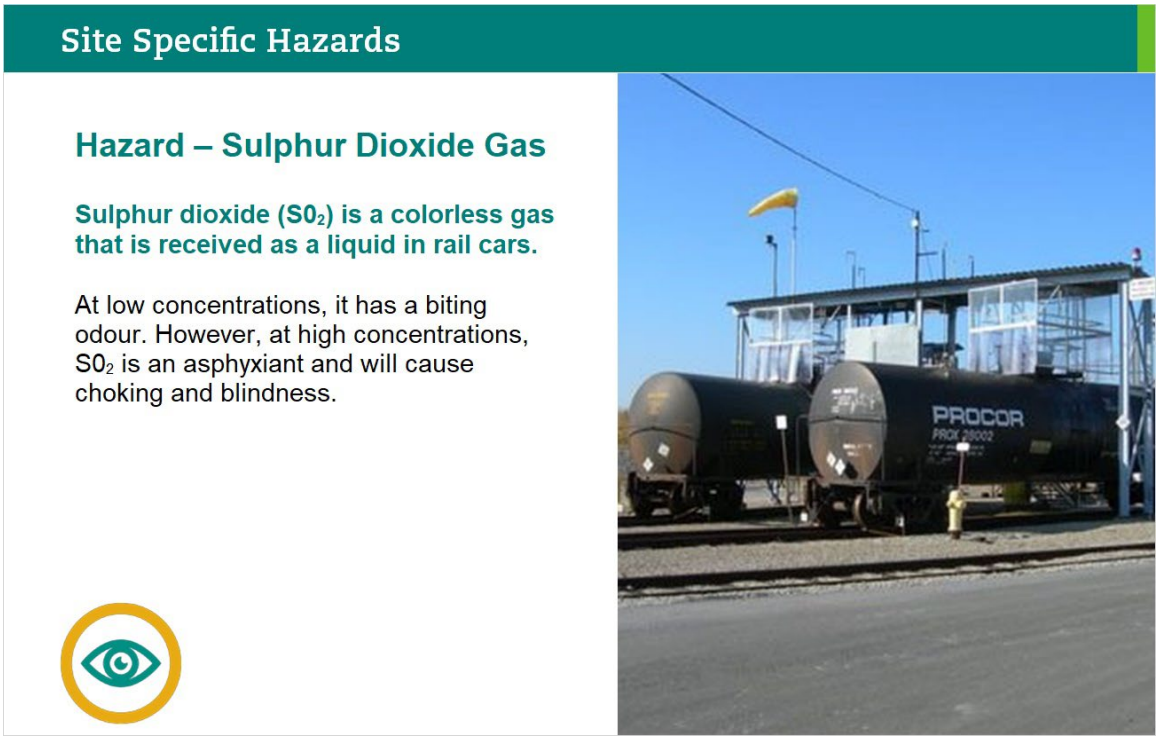
At PCR, Liquid Chlorine is located in:

- One ton containers at the Precious Metals Refinery (PMR).

5.13 Controls – Chlorine Gas



5.14 Hazard – Sulphur Dioxide Gas



5.15 Controls – Sulphur Dioxide Gas

Site Specific Hazards

Controls – Sulphur Dioxide Gas

To mitigate the hazard of working with Sulphur Dioxide Gas the following controls have been implemented:

- Sulphur dioxide gas lines that have been color coded are painted yellow with black banding and/or labeled accordingly.
- Localized or plant wide evacuation procedures are to be followed should a Sulphur dioxide gas leak occur.

5.16 Controls – Corrosive Liquids (Caustics, acids, etc.)

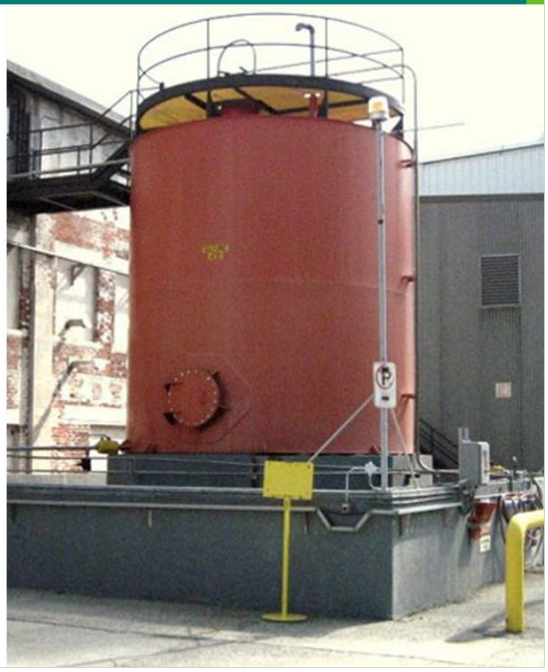
Site Specific Hazards

Hazard – Corrosive Liquids (Caustics, acids, etc.)

Large quantities of sulphuric acid, caustic soda, hydrochloric acid and nitric acid, may be found in the Port Colborne Refinery.

Contact may cause severe destruction of skin and eye tissue. Inhaling fumes may irritate the nose, throat and lungs.

These materials may also ignite combustible materials such as wood, paper, oil or clothing on contact.



5.17 Controls – Corrosive Liquids (Caustics, acids, etc.)

Site Specific Hazards

Controls – Corrosive Liquids (Caustics, acids, etc.)

To mitigate the hazard of working with Corrosive Liquids (Caustics, acids, etc.) the following controls have been implemented:

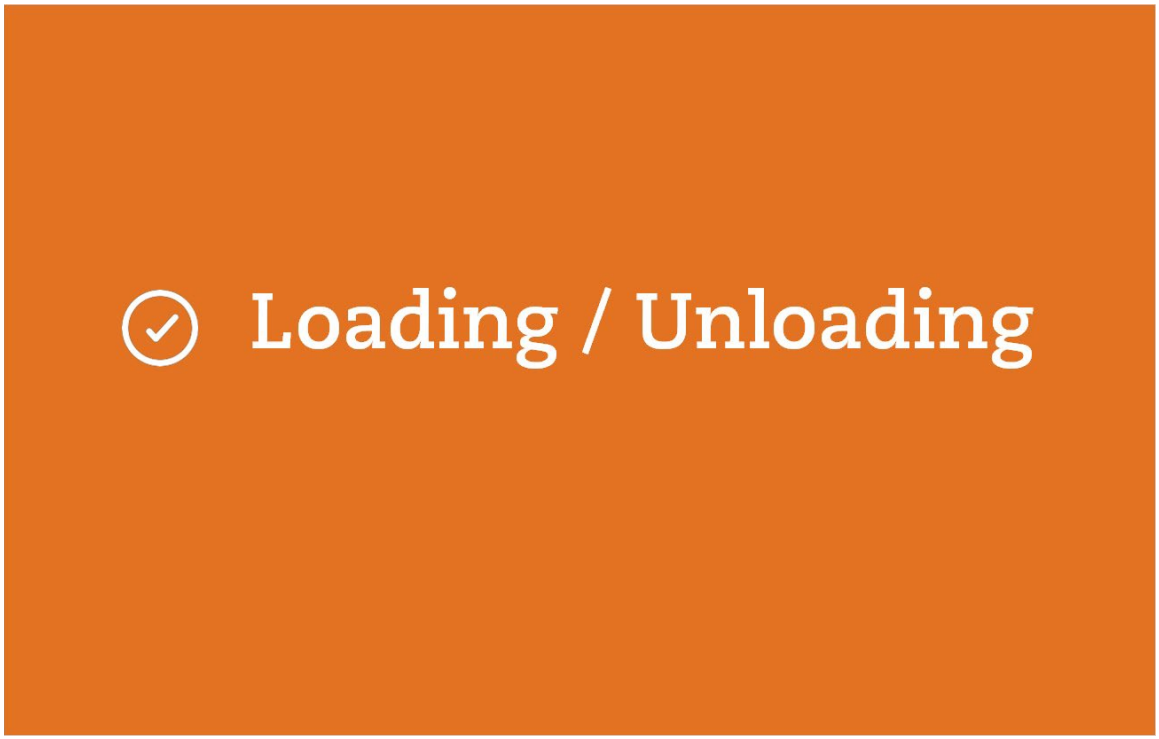
- Lines containing corrosive acids are painted orange and/or labeled accordingly.
- Caustic soda lines are painted yellow with red bands and/or labeled accordingly.

When working in close proximity to acids or caustic solutions take time to familiarize yourself with the location of nearby safety shower/eyewash stations.

Avoid skin and eye contact. Always wear all required PPE.

6. Loading / Unloading

6.1 Loading / Unloading



6.2 Scale Procedures

Loading / Unloading

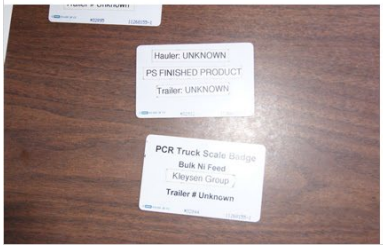
Scale Procedures

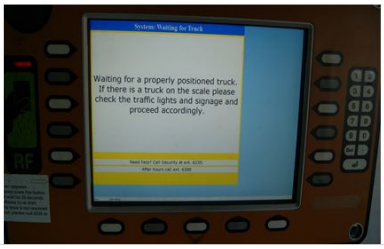
Truck Drivers must use the scale for pickups, process material and chemical deliveries.

Drivers must also ensure that trailer doors are kept closed while going over the scale or traveling throughout the plant.

Badges are needed to operate the scale. You will be given a badge from security when you are required to pick up product here at the plant.

To operate the scale, follow the “X” and press the on screen instructions.





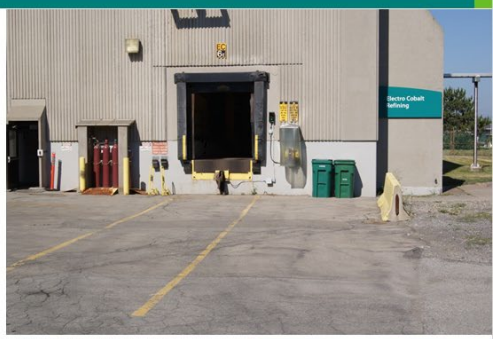
6.3 Loading Docks

Loading / Unloading

Loading Docks

There are numerous loading docks in the plant, most are equipped with dock locks.

Before loading or off-loading, drivers are required to ensure the dock locks are locked in place.



6.4 Loading Docks

Loading / Unloading

Loading Docks

Wheel Chocks are required even for those loading docks with dock locks.

It is important that the vehicle is not moved until all loading or offloading has been completed and communication has taken place with the Vale employee.

Flat bed truck drivers must chock their trailer tires for loading or offloading as well.

6.5 Loading Docks

Loading / Unloading

Loading Docks

Once backed into buildings or backed in at a loading dock and flat bed/side loads trailers, the engine must be shut off.

Your engine must also, be shut off when scaling in and out of the plant scales. No idling of vehicles allowed.

6.6 Securing Loads

Loading / Unloading

Securing Loads

Truck drivers are responsible for their loads. You are required to secure your loads and close doors before moving throughout the plant.

Flat bed loads are to be secured in the marshalling area after the trailer is loaded.

6.7 Securing Loads

Loading / Unloading

Securing Loads

Truck drivers must ensure that the loading or unloading of their vehicle has been completed. A visual inspection of your truck for it's integrity will take place by the forklift operator. Communication with the forklift operator is essential.

Truck drivers are responsible for the removal of the chocks. All dunnage must be put in proper containers. All paper work signed before the dock locks and wheel chocks can be removed and you are allowed to proceed.

Flat bed and/or side loaded/unloaded trucks must chock their wheels and ensure that the work is complete and secured before moving their vehicle. Chemical truck drivers are to ensure that the hoses are disconnected and stored properly.

6.8 Chemical Deliveries

Loading / Unloading

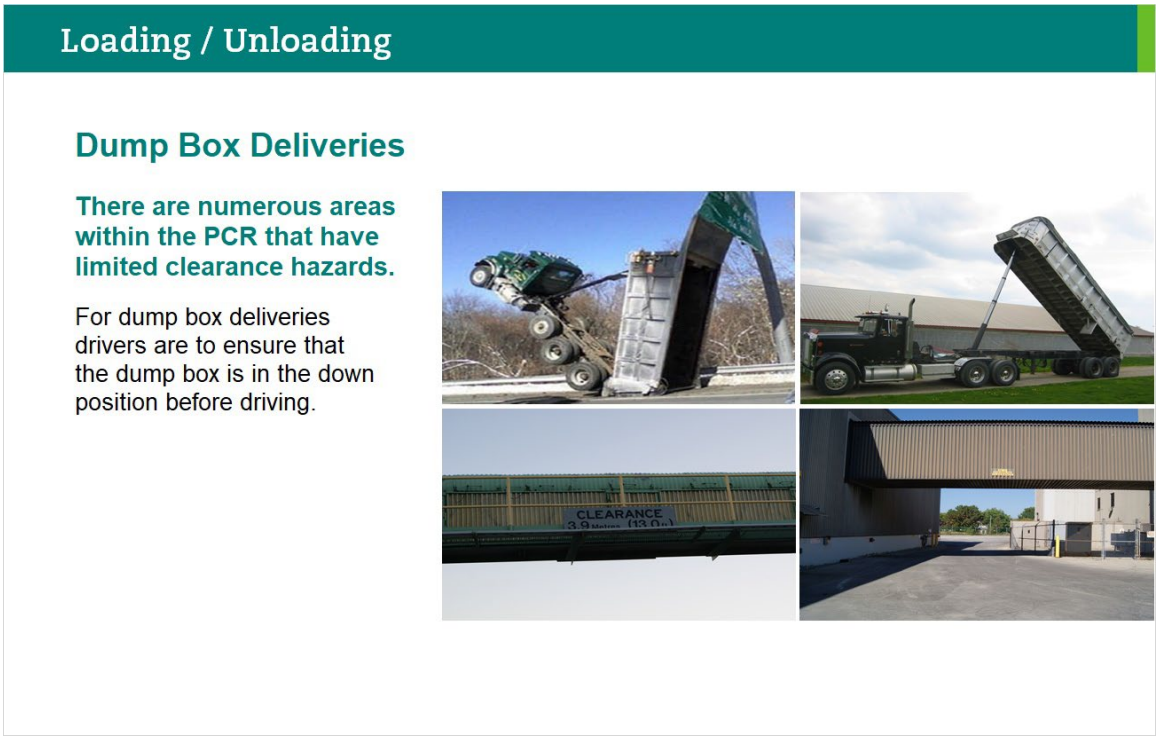
Chemical Deliveries

For chemical deliveries, always ensure proper connections are made to the proper lines. If you are unsure of the location, ask for clarity.

Prior to off loading, ensure that contact is made with a Vale Employee.

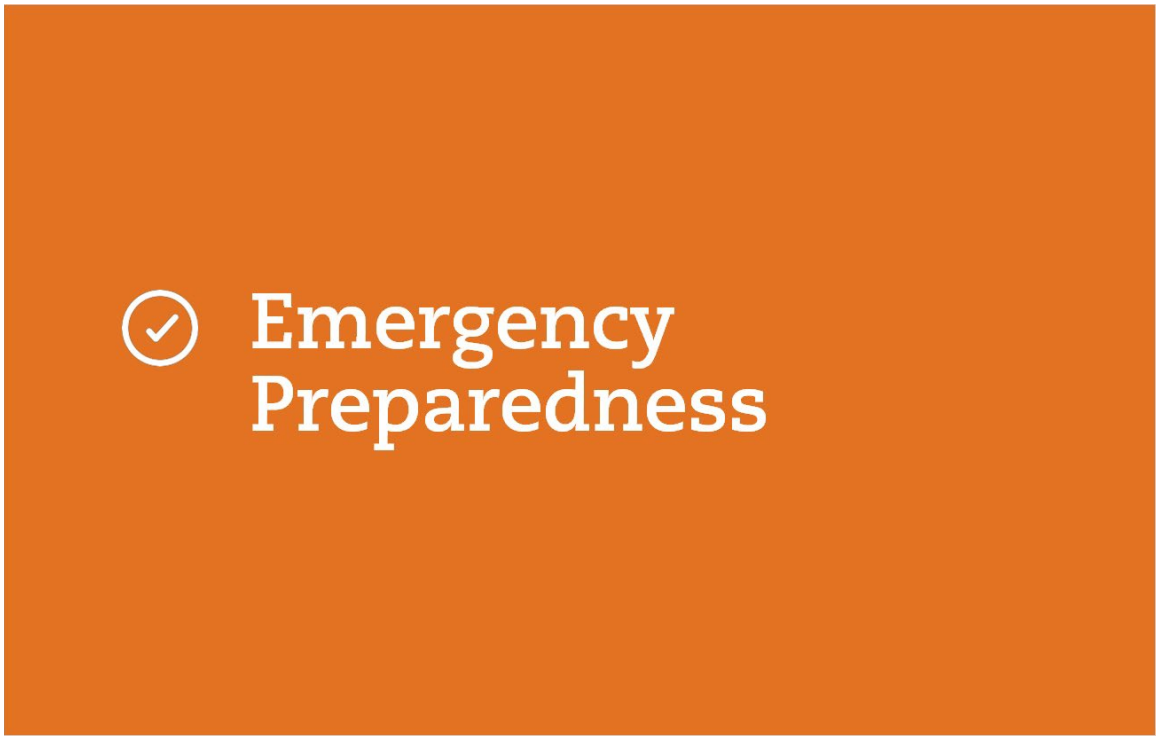
Follow all procedures and protocols related to the chemical that is being delivered. Report all spills to your Vale contact immediately.

6.9 Dump Box Deliveries



7. Emergency Preparedness

7.1 Emergency Preparedness



7.2 Emergency Preparedness

Emergency Preparedness

Vale's Emergency Policy defines an emergency as:

- a situation or a set of circumstances which, if not promptly eliminated, controlled, or contained, results or could result in significant injury to people (including the community) and/or damage to the plant, property or the environment."
- Vale has developed an Emergency Preparedness plan to provide an appropriate and consistent response to any reasonably foreseeable emergency situation likely to occur at the Company's Port Colborne operating facilities.

7.3 Emergency Preparedness

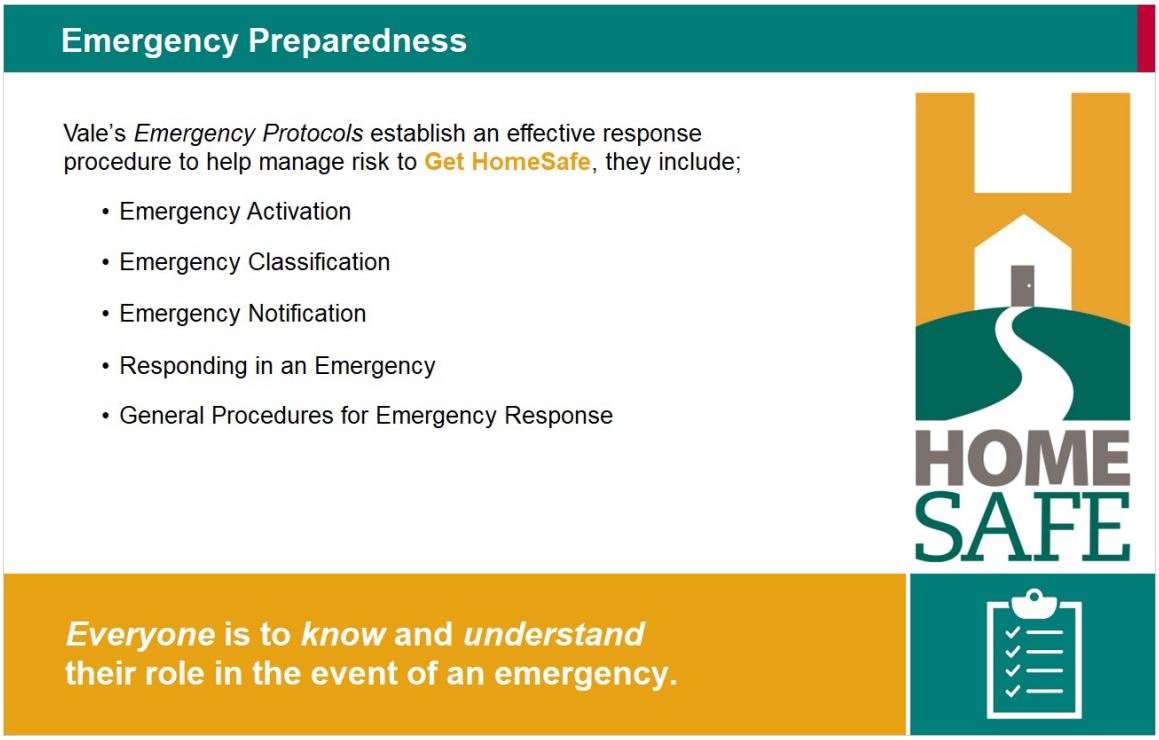
Emergency Preparedness

The Port Colborne Refinery site has a set of Emergency Procedures that include;

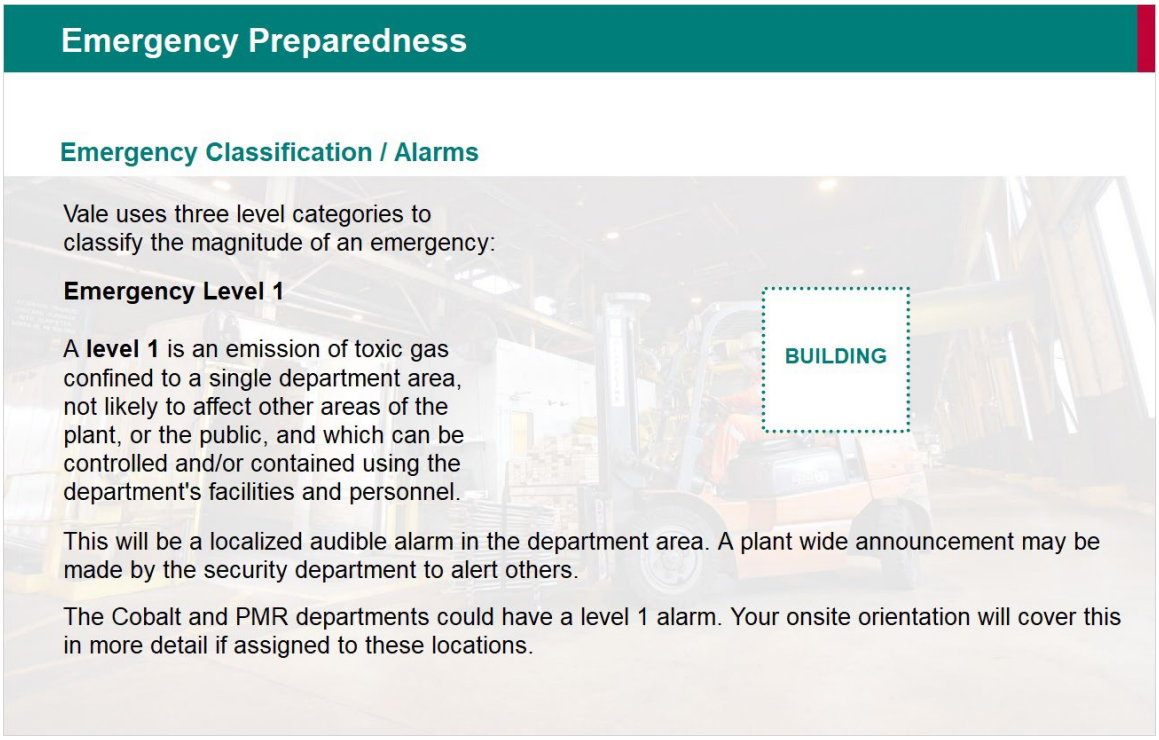
- Emergency Protocols *(e.g. knowing where the safe assembly areas are located).*
- Fire Safety
- Emergency Management

***Everyone* is to *know* and *understand* their role in the event of an emergency.**

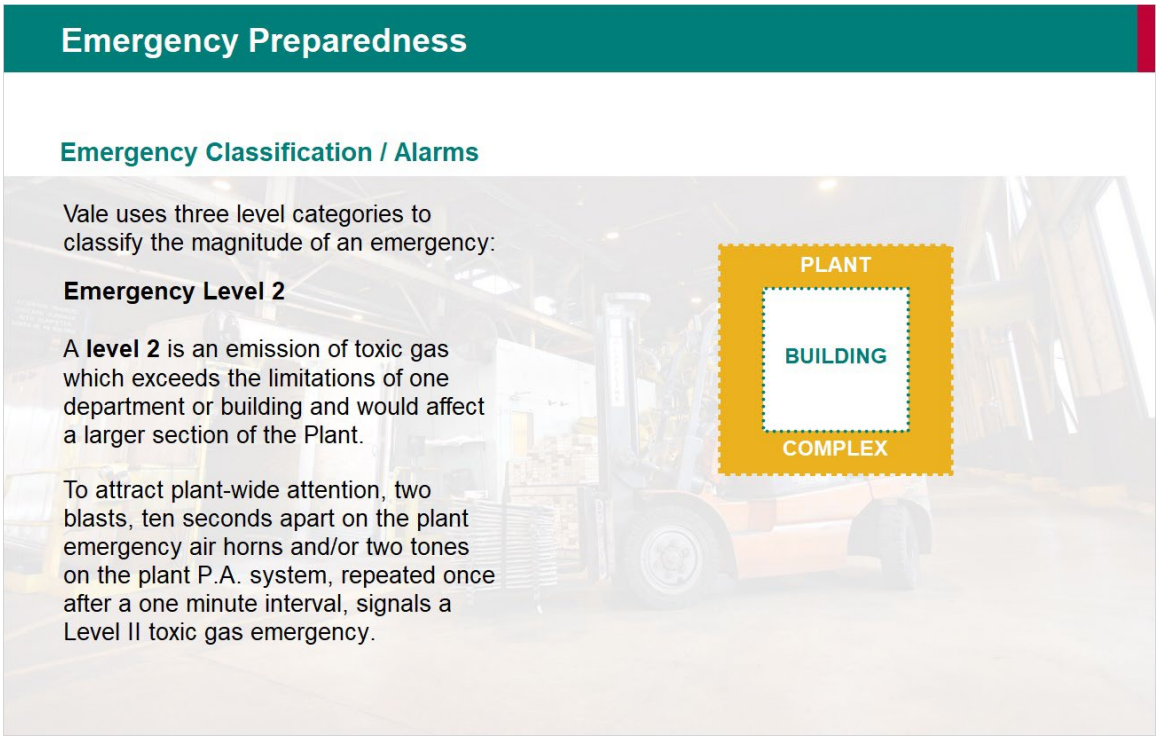
7.4 Emergency Preparedness



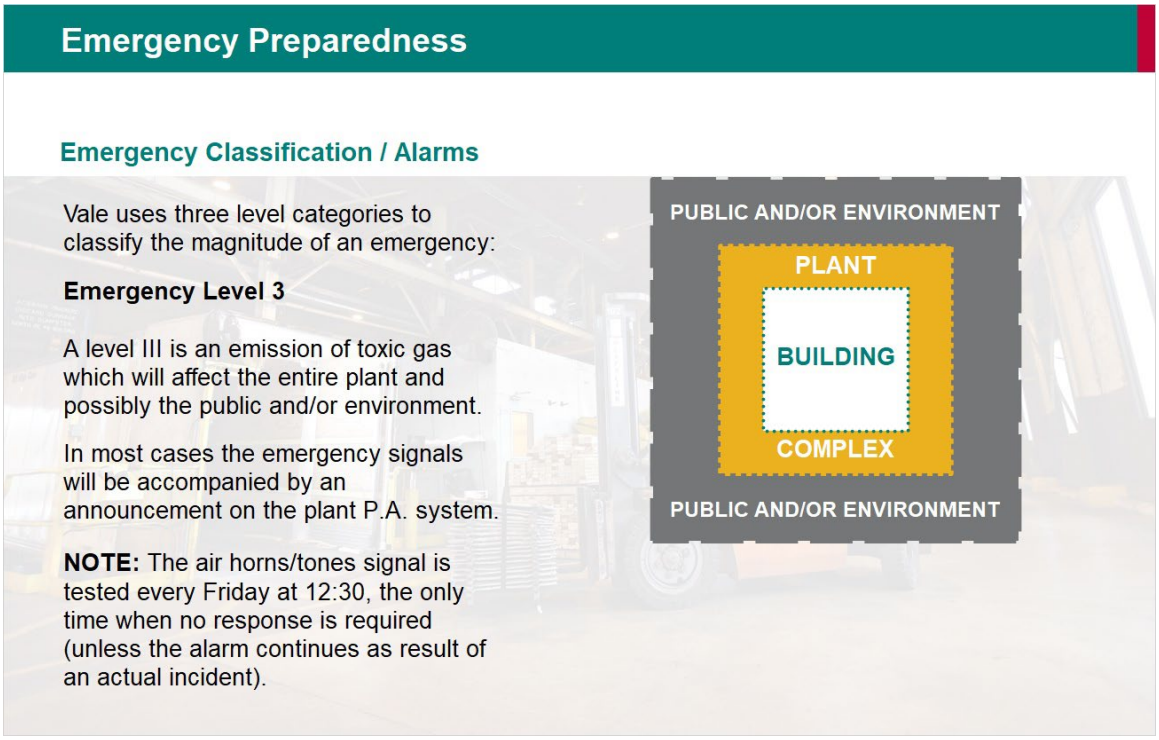
7.5 Emergency Classification Alarms- Level 1



7.6 Emergency Classification- Level 2



7.7 Emergency Classification Alarms- Level 3



7.8 Gas Emergency Safe Rooms

Emergency Preparedness

Gas Emergency Safe Rooms

Safe Rooms for personnel assembly are located in each department throughout the plant.

You will be shown the location of the safe room(s) in the area you will be working by Your Vale Representative.

A handout sheet showing refinery safe room locations is also available following this orientation.

These Safe Rooms have been selected to provide maximum safety for personnel considering possible gas emission sources and prevailing wind directions.

7.9 Course of Action

Emergency Preparedness

Course of Action

Upon hearing the emergency alarm, as quickly and safely as possible proceed to the nearest Safe Room.This will normally be the safe room identified to you by your Vale Representative during the on-site orientation.

In transit alert everyone that a gas emergency is in progress and direct them to the Safe Room.

Once in the Safe Room, ensure that your name is logged in on the form provided, and after having allowed for sufficient time for others in the area to report, seal the room shut according to the instructions posted in the area using the kit provided in the Safe Room.

Listen for instructions and/or situation updates over the plant P.A. system.

7.10 Course of Action

Emergency Preparedness

Course of Action

A gas emergency leak repair team will be dispatched to correct the alarm situation.

Once it has been verified that a risk is no longer present, the "all clear" signal will be given by Plant Security "ONLY" over the plant P.A. System. Only then can you leave the Safe Room.

Contractors using the Security Gate sign-in system must report to the Main Gate for a head count. Only then can you return to your work area.

7.11 Course of Action

Emergency Preparedness

No Plant Entry During Gas Emergency

There are red strobe lights on top of the posts on either side of the gate at the main entrance to the plant. When they are flashing, they alert vehicles of a Level 2 Gas Emergency.

There is a sign located on the right side of the roadway at the entrance to the plant alerting vehicles of a gas emergency.

When the sign has dropped down, the lights on the sign are flashing and the alarm is sounding it alerts vehicles about to enter the plant of a Level 3 Gas Emergency.

If either of these alarms are active, leave the area immediately - do not enter the plant.

After allowing for sufficient time to pass, call your Vale Representative to verify that the emergency is over and it is safe to enter the plant.

!

No Plant Entry During Gas Emergency

7.12 Responding to a Fire

Responding to a Fire

Reporting a Fire

In the event of a fire, early detection and immediate reporting are essential. The procedures to follow are posted in conspicuous places throughout the plant. The telephone extension to call is - 6211.

7.13 Small Fire Response Procedure

Fire Safety

Small Fire Response Procedure

Fire extinguishers are to be used only on fires which appear to be manageable.

At no time shall an employee put their safety, or the safety of others, at risk to extinguish a fire.

A person discovering a fire may attempt to extinguish it, if it is small and only if they are knowledgeable in the use a fire extinguisher and it is safe to do so.

If more than two extinguishers are used and the fire is still not out, follow the Large Fire Response procedures.

If a Vale fire extinguisher or fire hose is used for any reason, it must be reported to the Vale Representative.

7.14 Small Fire Response Procedure

Responding to a Fire

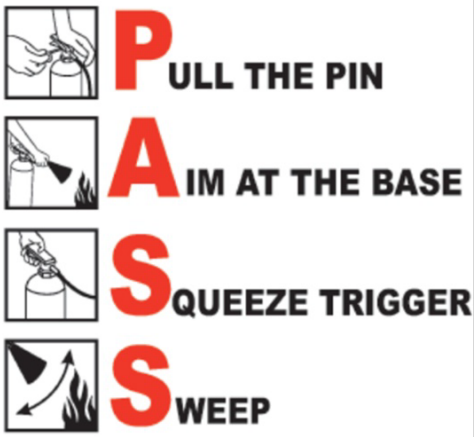
Small Fire Response Procedure

A fire extinguisher which has been used, or does not work, should be laid on its side to indicate to other responders not to use that fire extinguisher.

Test extinguisher before approaching the fire.

Keep low and approach with the wind at your back.

Back away, watching for rekindle.



7.15 Large Fire Response Procedure

Fire Safety

Large Fire Response Procedure

When a fire is too large to extinguish, leave the area immediately, closing doors behind you. Notify others as you leave the building.

Activate the nearest Fire Alarm system pull station, located at exit doors or contact the area control room.

Go to the department assembly area for a head count. This area will be identified during the On Site Orientation.

Call the plant emergency number - 6211 and clearly identify the location of the fire using the nearest building door number.

8. Conclusion

8.1 Quality Assurance

8.2 Conclusion

Conclusion

This concludes the material for the Port Colborne Truck Driver Orientation. You should now have a working knowledge and understanding of:

- Plant Entry
- Site Specific Hazards and Controls for the PCR.
- Procedures in the event of:
  - Equipment Damage
  - Personal Injury
  - Process Upset (Emergency Preparedness)
- Plant Exit Procedure

This Orientation provided information to access the PCR. In order to feel comfortable with the area, you may arrange a field visit with your Vale Contact Person to specifically identify procedures provided in this Orientation.

Additionally, depending on the site or work you're doing, you may require task-specific information through either the local Learning & Development Group or your Vale Contact Person.