



Requirements



Rules



Standards



Governance



Regulations



Transparency



Policies



Law

EHS COMPLIANCE

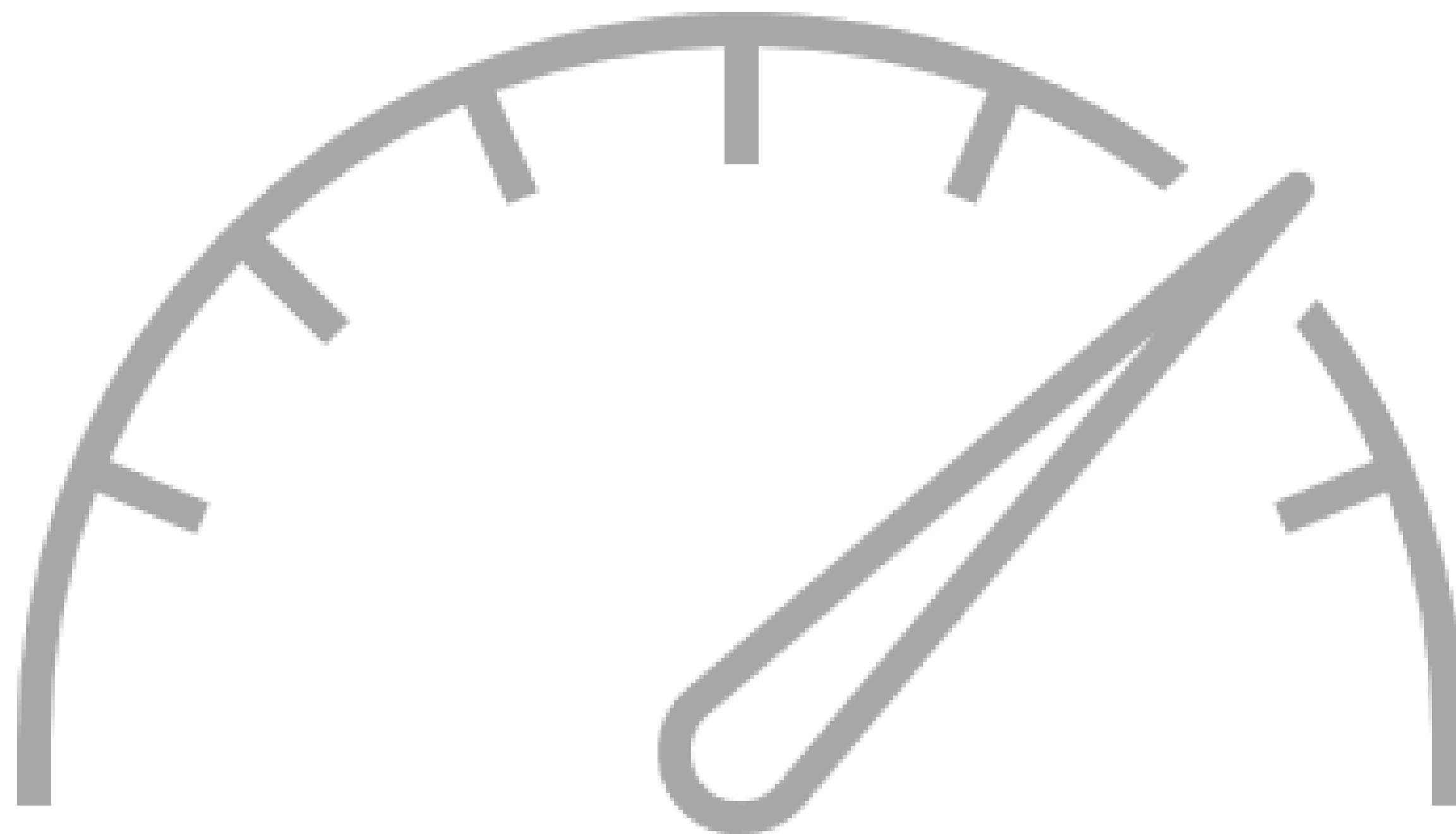
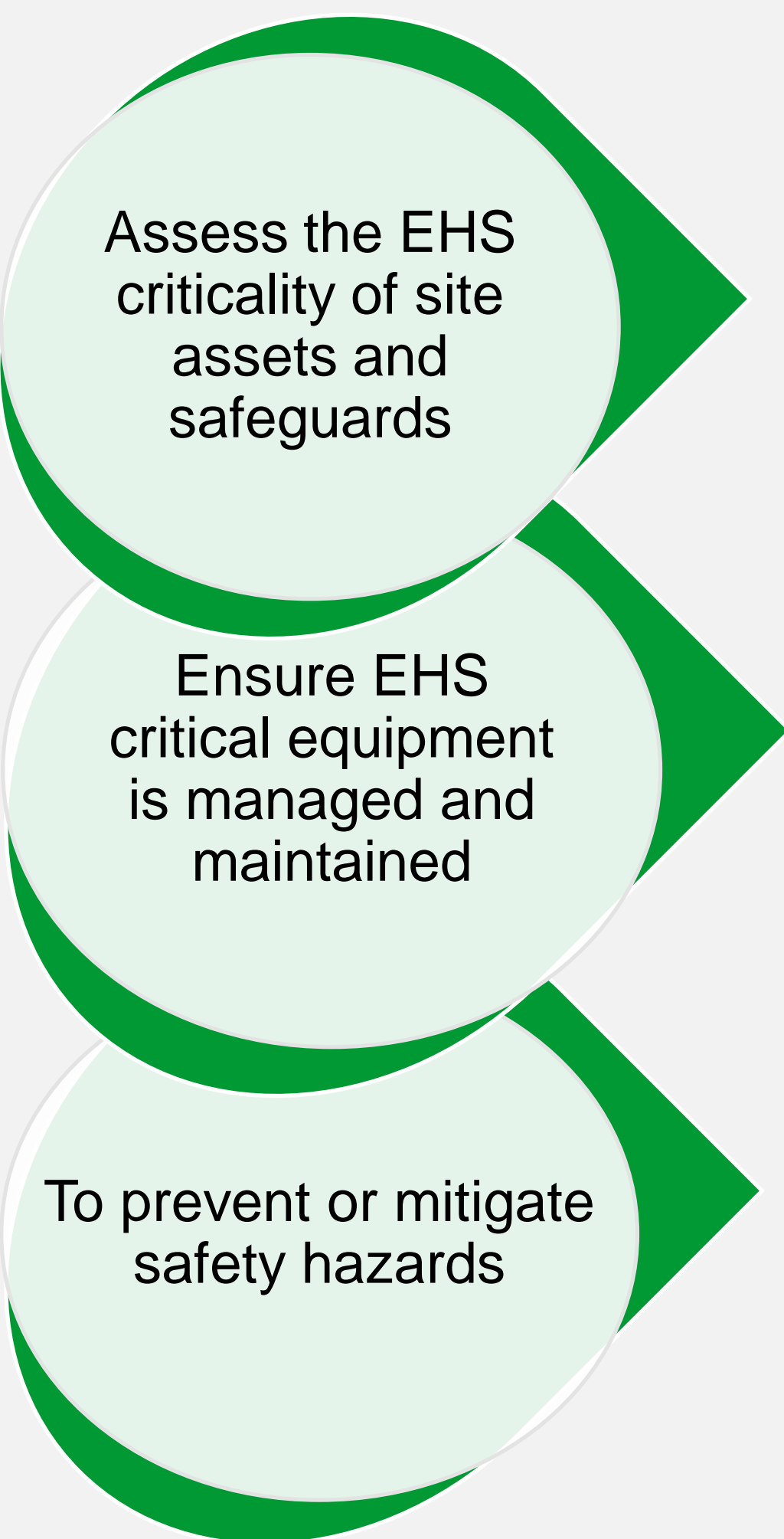
IVL EHS-405

EHS Criticality Assessment

March 2022

Training Objectives

Explain the key requirements of IVL EHS-405 to:



What does 'EHS Critical' mean?

Equipment and systems that protect against high EHS hazards and/or assure compliance with EHS requirements. It includes the following...

EHS Critical Protective Devices

Devices identified in a permit, regulatory and/or corporate requirement or in a Process Hazard Analysis as an Initiating Cause, Conditional Modifier, Independent Protection Layer or Mitigation Device for a Severity Category F or worse scenario

EHS Critical Equipment

Equipment whose failure could credibly result in a Severity Category F or more severe consequences or whose failure could lead to non-compliance with permit, regulatory or corporate requirements

EHS Critical Structures and Foundations

Structures and/or foundations designed to hold, support, contain and/or isolate EHS Critical Equipment

Why do we need a standard on EHS Criticality Assessment?

To identify equipment, devices and structures that are essential to preventing and/or minimizing EHS hazards

To ensure that this equipment, devices and structures are well managed and properly inspected and maintained

When changes are made affecting this equipment, the changes must be managed and information must be shared

Key Site Responsibilities

Site Head/Designee	Employee / Contractor	Project Manager
Ensure implementation of site-specific program	Be aware of and trained on the requirements of this standard	Ensure criticality assessments are carried out for capital projects
Provide support, resources and training to ensure this standard is met	Involve individuals experienced in the process under evaluation (e.g. operations specialist, process engineer)	
Ensure compliance with the site-specific program		

It is your responsibility to read the entire EHS-405 standard to understand the requirements in full

What does my site have to do?

THE BIG PICTURE

**01 | Develop and maintain
a *site-specific program*
that conforms to this
standard**

**02 | Train *employees and
management***

03 | Maintain *records*

Each of these requirements are described
in more detail on the following.

Let's look at each one in more detail...

01 | Develop and maintain *a site-specific program that conforms to this standard*

This is not a comprehensive list of the minimum requirements; full details are contained in EHS-405



Assess EHS Criticality and classify as either EHS Critical or Non-EHS Critical according to Attachment A and B of this standard



EHS Criticality Assessments shall:

- Include fixed equipment systems and equipment located inside and outside of the site boundary that is owned/operated by Indorama Ventures
- Be performed by competent personnel
- Be referenced with a unique identity number and maintained in a register
- Be retained for the life of the asset
- Be maintained as current through MOC and PHA processes

Let's look at each one in more detail...

02 | Train *employees and management*



Anyone with **direct responsibilities** for this standard and site-specific program must be initially trained



Refresher training must be conducted if changes are made to this standard or site-specific program

Let's look at each one in more detail...

03 | Maintain *records*

Records must be **controlled, kept up to date, and retained** in accordance with regulatory or site business segment record retention requirements, whichever is more stringent. **Examples** of records to be maintained, include but are not limited to:



List of EHS Critical Equipment



EHS Criticality Assessment documentation



Data required, including maintenance records, to be documented for the equipment

Questions?

Please contact Corporate EHS

Draft Quiz to Check Understanding

Q1

True or False:

EHS Criticality Assessments must be maintained as current through the site's Management of Change (MOC) process.

Q2

EHS Critical could refer to the following (check all that apply):

- a. Protective Devices
- b. Emission Control Equipment
- c. Structures and Foundations
- d. Cleaning supplies

Q3

True or False:

Criticality assessments include fixed equipment systems and equipment located inside and outside of the site boundary that is owned/operated by Indorama Ventures

Q4

EHS Criticality Assessments shall (check all that apply):

- a. Be performed by competent personnel
- b. Include the assignment of a unique identity number
- c. Be approved by the equipment manufacturer
- d. Be maintained in a register

Q5

True or False:

EHS Criticality Assessments do not apply to capital projects.