

CLP

HSE Management System Standard



About CLP Group

The **CLP Group** is one of the largest investor-owned power businesses in Asia Pacific with investments across Hong Kong, Mainland China, Australia, India, Southeast Asia and Taiwan. Hong Kong-listed CLP Holdings Limited is the holding company for the CLP Group, which has a diversified portfolio of generating assets that uses a wide range of fuels including coal, gas, nuclear and renewable sources.

Through CLP Power Hong Kong Limited, the Group operates a vertically integrated electricity supply business that provides a highly reliable supply of electricity to 80% of Hong Kong's population. The CLP Group is the largest external investor in the energy sector in Mainland China, with a focus on low-carbon energy. The Group's wholly-owned subsidiary EnergyAustralia is a leading integrated energy company in Australia, providing gas and electricity to households and businesses. Apraava Energy, in which CLP has a 50% interest, is one of India's biggest renewable energy producers with operations in power generation and transmission.

CONTENTS

FOREWORD

1

Health, Safety and Environment Management System (HSEMS)

2

Section 1

5

1.1 Leadership and Commitment

Section 2

7

2.1 Risk Management

2.2 Design Planning

2.3 Legal and Other Requirements

2.4 Strategy and Planning

2.5 Training and Competency

2.6 Contractor Management

Section 3

16

3.1.1 Safety - Vehicle and Mobile Equipment

3.1.2 Safety - Working at Heights and Dropped Objects

3.1.3 Safety - Lifting Operations

3.1.4 Safety - Confined Space

3.1.5 Safety - Electrical Safety

3.2.1 Environment - Hazardous Substances Discharge

3.2.2 Environment - Waste Management

3.2.3 Environment - Air Emission Management

3.3.1 Health and Wellbeing - Occupational Health and Hygiene

3.3.2 Health and Wellbeing – No Alcohol and Drugs

3.3.3 Health and Wellbeing – Return to Work and Injury Management

3.3.4 Health and Wellbeing – Psychological Health

3.4.1 Process Safety

Section 4

45

4.1 Incident Reporting and Investigation

4.2 Emergency Preparedness and Response

4.3 Performance Monitoring and Reporting

4.4 Assurance and Review

4.5 Management of Change

FOREWORD

At CLP we care about how results are obtained and not just that they are obtained. This fundamental underpins our transformation into a Utility of the Future, with an increased attention on decarbonisation, digitalisation, cost efficiency and project delivery excellence. Our growing and evolving range of business activities commits us to manage a wider set of risks to people and the environment as part of our daily operations.

We remain steadfast in our commitment to continually improve our performance on health, safety and the environment (HSE), and recognise that excellence in these key facets can only be achieved if we operate in a planned and systematic way. I am therefore pleased to present our revamped HSE management framework - the CLP Group Health, Safety and Environment Management System (HSEMS).

The HSEMS aims to uplift CLP's mandatory HSE requirements, increase the Group's capabilities and strengthen our capacity to prevent harm to our people, assets and the communities in which we operate.

Our success comes from the proactive attitude our people display towards the management of the potential health, safety and environment impacts of everything we do. This enables us to strive towards delivering world class and sustainable energy solutions to our customers everyday.



Chiang Tung Keung
Chief Executive Officer
November 2023



Health, Safety and Environment Management System (HSEMS)

Framework

The CLP Group HSE Management System is the main tool used to implement the CLP Group HSE policy commitments, and CLP Group HSE Management Governance requirements.

The framework of the CLP Group HSE Management Governance is shown in Figure 1.

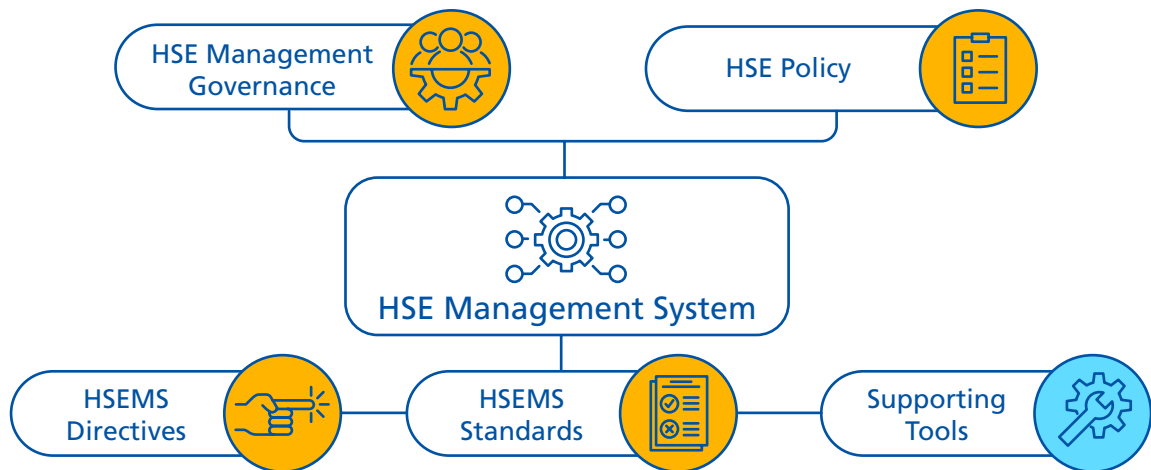


Figure 1 CLP Group HSE Management Governance Framework

Yellow circle: Mandatory Blue circle: Recommended

The HSEMS consists of four sections which follows the plan, do, check and act cycle:

- Leadership and Commitment;
- Planning and Support;
- Operational Enablers; and
- Monitoring, Learning and Improving.

Within each section are elements that consist of standards, relevant directives and supporting tools. Details are shown in Figure 2.



Figure 2 CLP Group HSEMS Elements

Scope

The CLP Group's HSE Policy, HSE management governance and associated HSE standards apply to all CLP controlled operations to ensure a consistent approach to managing HSE while still allowing variability due to local factors.

HSEMS Document Structure

HSE Policy

CLP Group has an integrated HSE Policy that is updated every three years and approved by the CEO. The policy establishes the strategy, direction, and vision of CLP's HSE performance expectations. It reflects the nature, scale, and potential HSE impacts from CLP's activities, products, and services.

The policy is communicated to all relevant stakeholders and is available on the CLP Group website.

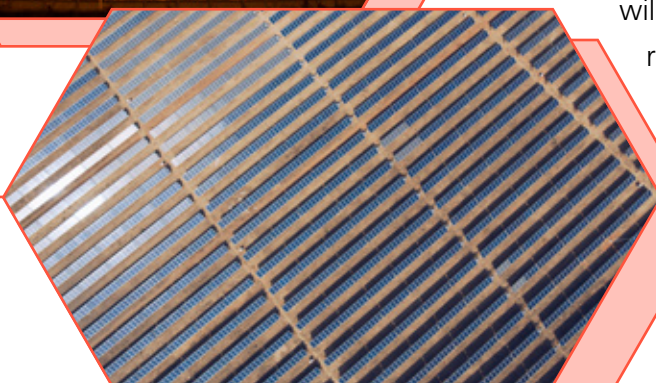
HSEMS Standards

HSEMS Standards are mandatory and assist in supporting the detailed requirements of the HSE Policy and the Groupwide HSE risks.

HSEMS Standards set out what must be achieved rather than how to achieve it. The method of achieving these requirements is up to individual CLP controlled operations to manage. The CLP controlled operation has the flexibility to ascertain how best to meet the requirements of HSEMS Standards that suit their business best.



Where applicable local legal and other requirements specify more stringent requirements than CLP Group's HSEMS Standard mandatory requirements, local legal requirements will take precedence. Where no applicable legal requirements are specified, the applicable HSEMS Standard mandatory requirement will become the minimum compliance requirement for the CLP controlled operation.



HSEMS Directives

HSEMS Directives have been developed to supplement HSEMS Standards by determining how processes are conducted across the Group. The HSEMS Directives are mandatory and apply to all CLP controlled operations.

HSEMS Supporting Tools

HSEMS Supporting Tools have been developed to provide further support or guidance. The supporting tools are not mandatory and act as a resource to support CLP controlled operations. Individual operations may adopt guidance or supporting tool or may tailor it to suit their operational needs.

Assurance

Assurance activities for the HSEMS consist of three lines of defence:

- First line: Operational – Business Unit operational HSE
- Second line: Functional – Group HSE
- Third line: Independent – Internal or external

Assurance activities at the Group Level will be prioritised on a risk-based approach. Further mandatory requirements for CLP controlled operations are shown in the Assurance and Review Standard.

Managing Exemptions

Where CLP controlled operations cannot conform to the mandatory requirements of the HSEMS, an exemption must be requested and approved.



Section

1

1.1 Leadership and Commitment



Objective

To provide a set of HSE leadership qualities including HSE commitments, accountabilities, and responsibilities.

Pre-requisites

CLP controlled operations are expected to have the following:

- 1) Employees who provide HSE advice, assistance and expertise relevant their HSE role are deemed competent;
- 2) Roles, responsibilities and accountabilities including delegation of authority are documented, communicated, exercised and adhered to; and
- 3) Leaders are responsible for HSE at all levels within the CLP controlled operations and top management are ultimately accountable for HSE management within their own respective business units.

Mandatory Requirements

Ref No.	Mandatory Requirement
1.1.1	Enable employees to report hazards, risks, near misses and incidents without fear of reprisal or adverse company action.
1.1.2	Apply the CLP Group HSE Management System Implementation Directive (CLPH-GOHSE-DIR-001.1) to CLP controlled operations, and where required, adhere to the HSEMS Exemptions Directive (CLPH-GOHSE-DIR-001.2).
1.1.3	Apply the CLP controlled operations HSE Behavioural Framework to their day to day interactions.
1.1.4	Apply the CLP controlled operations Fair and Just Principles to employees and contractors.
1.1.5	Complete a HSE related leadership training program(s) or equivalent for leaders as stipulated by the CLP controlled operations within set timeframes and conduct refreshers at regular intervals.
1.1.6	Adequately provide resources to support effective HSE management of the CLP controlled operations.
1.1.7	Develop a process(es) to recognise, reinforce and reward HSE innovation, continual improvements and positive behaviours.

Section

2

- 2.1 Risk Management
- 2.2 Design Planning
- 2.3 Legal and Other Requirements
- 2.4 Strategy and Planning
- 2.5 Training and Competency
- 2.6 Contractor Management



Objective

To define the identification, assessment and control of HSE risks and opportunities associated with current or future activities.

Pre-requisites

CLP controlled operations are expected to have the following:

- 1) Compliance to all local legal requirements for developing, reviewing and reporting risk;
- 2) Controls are established based on the hierarchy of controls; and
- 3) Personnel conducting or involved in risk assessment are competent.

Mandatory Requirements

Ref No.	Mandatory Requirement
Risk and control	
2.1.1	Implement local CLP controlled operation processes that identify and reduce HSE risks (including process safety) to as low as reasonably practicable.
2.1.2	Assess HSE risk against a risk matrix that is aligned to the CLP Group Risk Matrix.
2.1.3	Review the impact to existing HSE risks and/or controls when the following occurs: <ul style="list-style-type: none">• Material changes to tasks, processes, plant, operations or personnel; or• A significant HSE incident occurs within CLP or externally.
2.1.4	Implement control actions within set timeframes and track to ensure they are in place and adequate.
Risk register and communication	
2.1.5	Develop and maintain a risk register capturing HSE risks and opportunities.
2.1.6	Capture and communicate significant HSE hazards, risks, and opportunities to relevant executive management, Board committees, frontline workers and other stakeholders as required.

Objective

To provide a systematic approach in identifying potential environmental risks, liabilities, and impacts of proposed projects.

Application

Projects within the scope of Project Management Governance System (PMGS) in CLP controlled operations.

A project is defined as a temporary effort undertaken to produce a desired product, service, or outcome. Individual repetitive work, such as maintenance, overhauls or inspections are typically not considered as Projects.

Pre-requisites

CLP controlled operations are expected to have the following:

- 1) Compliance to local legal and other requirements for projects approvals or equivalent; and
- 2) Personnel conducting or completing assessments and monitoring for design planning process are trained and competent.

Mandatory Requirements

Ref No.	Mandatory Requirement
2.2.1	<p>Complete and submit to Group HSE, an Environmental Due Diligence report or equivalent, prior to the "Final Investment Decision" for projects that are required to go through the CLP Holdings Investment Committee. The EDD is to be completed in conformance to the following:</p> <ul style="list-style-type: none">• The EDD Directive (CLPH-GOHSE-DIR-002.2.1); and• Relevant Project Management Governance System (PMGS) requirements.
2.2.2	<p>Complete an Environmental Impact Assessment in conformance to the EIA Directive (CLPH-GOHSE-DIR-002.2.2) for any projects covering the following conditions:</p> <ul style="list-style-type: none">• Potential power generation, transmission and distribution, mines, and other power related projects;• Major upgrade projects which trigger an EIA either by regulations or by financiers;• Decommissioning projects which trigger an EIA either by regulations or by financiers;• As stipulated by legal and other requirements; or• As required by the CLP Holdings Investment Committee. <p>Small-scale investment or acquisition projects are exempted from the requirements stipulated in the standard. CLP controlled operations are required to contact Group HSE for advice on a case-by-case basis.</p>

Objective

To identify, document, maintain, communicate and ensure compliance to all relevant HSE legal and other requirements.

Pre-requisites

CLP controlled operations are expected to have the following:

- 1) Personnel conducting or involved in the identification, interpretation and evaluation of HSE legal and other requirements are competent; and
- 2) A register or equivalent is available containing applicable HSE legal and other requirements.

Mandatory Requirements

Ref No.	Mandatory Requirement
2.3.1	Processes are in place that identify, record, embed, maintain, communicate and report all applicable HSE legal and other requirements including the CLP Group HSE mandatory requirements.
2.3.2	Evaluate compliance to legal and other requirements on a periodic basis and communicate results to key stakeholders and drive continual improvement of HSE management.
2.3.3	Establish a process to manage breaches, non-conformities and non-compliances including tracking remedial actions to completion.
2.3.4	Control and secure access of the register containing HSE legal and other requirements or equivalent from accidental amendments or deletion.

Objective

To provide a systematic approach of ensuring HSE becomes an integral part of business planning with a strategy, targets and plans being established and monitored.

Pre-requisites

CLP controlled operations are expected to have the following:

- 1) HSE performance is included as part of overall organisational performance;
- 2) HSE targets and plans are effectively communicated to relevant stakeholders; and
- 3) HSE targets and plans have an accountable person and are adequately resourced to achieve its intended outcome.

Mandatory Requirements

Ref No.	Mandatory Requirement
Strategy, Targets and Plans	
2.4.1	Develop a Board approved Group HSE strategy for a pre-defined period incorporating a risk-based approach, the requirements of the HSE policy, and feedback from relevant stakeholders.
2.4.2	Establish and monitor the CLP controlled operation's HSE targets and HSE plans to ensure operationalisation and effective implementation of the CLP Group HSE strategy.
Accountability and Review	
2.4.3	Implementation of the Group HSE strategy is the accountability of CLP controlled operations management.
2.4.4	Review of policy, objectives and targets, and alignment with Group HSE strategy are completed by the business unit top management at pre-defined intervals for continual improvement.

Objective

To identify requirements and maintain HSE training and competencies so that employees have the necessary HSE skills and knowledge to complete their work safely and in an environmentally responsible way.

Pre-requisites

CLP controlled operations are expected to have the following:

- 1) HSE training complies with all relevant local legal requirements; and
- 2) HSE training provided internally or externally are carried out by a competent person who is qualified or authorised to carry out the training.

Mandatory Requirements

Ref No.	Mandatory Requirement
HSE Training and Competency System	
2.5.1	Develop and implement a HSE training and competency system or equivalent to ensure workers are competent, equipped, have up to date training, and where required, certified to complete their work.
HSE Training Plan	
2.5.2	Develop and implement a HSE training plan according to training needs analysis and training matrix.
2.5.3	Document and maintain roles with mandatory technical certification, registrations or licensing.
HSE Induction	
2.5.4	Develop and implement a HSE induction program or equivalent covering significant and relevant HSE information to ensure the safety of employees, contractors, and visitors prior to commencing work or entering a CLP controlled operation.
HSE Training and Induction Records	
2.5.5	Keep records of completed HSE training including inductions.

Objective

To provide a framework covering the health, safety and environmental requirements for contractors engaged by CLP controlled operations that include their capabilities and competencies to minimise adverse impacts to health, safety and the environment.

Application

Contract activities with potential adverse impacts to health, safety, and the environment according to materiality assessed by the CLP controlled operations.

Contract activities covers the following:

- Contractors whose work and/or workplace is controlled by the CLP controlled operation
- Contractors whose work is not controlled by the CLP controlled operation but is working within the CLP controlled operation (e.g. maintenance of supplier equipment such as a printer)
- Contractors whose work is controlled by the CLP controlled operation but in a workplace outside the control of the CLP controlled operations (e.g. working in a public area such as a road)

Pre-requisites

CLP controlled operations are expected to have the following:

- 1) Personnel conducting or involved in the management of contractors are competent including the use of external subject matter experts;
- 2) Contracting approach and contracts comply with local legal requirements; and
- 3) Liaise with CLP controlled operation's procurement team or equivalent

Mandatory Requirements

Ref No.	Mandatory Requirement
Establish HSE capability criteria of Contractors	
2.6.1	Assess the need for a Request for Information (RFI)/Expression of Interest (EOI) depending on criticality of the services required.
2.6.2	Develop and implement a RFI/EOI health, safety, and environment (HSE) capability criteria for the CLP controlled operation that includes but are not limited to the following: <ul style="list-style-type: none">• Contractor holds the appropriate registration, licenses, insurances, and permits for the type of work they will be required to perform;• A mechanism to assess whether the contractors are capable for the work with focus on critical HSE risks; and• Confirm the contractor's historical service experience and associated HSE performance records.

Ref No.	Mandatory Requirement
Request for Proposal (RFP) / Request for Quote (RFQ) and Contract award	
2.6.3	<p>Develop a RFP / RFQ that considers the following HSE requirements:</p> <ul style="list-style-type: none"> • The scope of work and the site conditions including foreseeable hazards in the area; • General site-specific HSE requirements to fulfil throughout the life of contract work; • Licences, permits, procedures, or relevant documentation are kept valid; • Specific HSE requirements to manage foreseeable risks in the work scope; • HSE responsibilities of each company and relevant people; • Main contractor being accountable for HSE performance of appointed subcontractors with CLP having the authority to accept or reject subcontractors nominated; • Work scope or service specific HSE plan and associated deliverables supplied by contractor as part of the tender return and finalized before work commences; • Level of HSE performance; and • Process for contract deviation or non-conformance including the relevant approvals required.
2.6.4	<p>Undertake an RFP / RFQ evaluation process in line with the CLP controlled operation procurement process and select the most suitable contractor that includes an assessment for HSE criteria.</p>
Kick-off meeting and Readiness Review	
2.6.5	<p>Communicate to the contractor their HSE responsibilities during the kick-off meeting including but not limited to the following:</p> <ul style="list-style-type: none"> • On-going performance monitoring and reporting requirements including CLP's right to conduct an independent incident investigation; • Contractor to explain the subcontractor management process and how they will meet the CLP controlled operation requirements; • Ensuring all project / site-specific HSE risks and requirements are understood, and controls executed within the agreed timeline; and • Local CLP controlled operations HSE risk and controls that may impact the contractor, special permits and/or authorizations.
2.6.6	<p>Conduct a readiness review prior to mobilisation that includes verification of compliance to contract and legal requirements.</p>

Ref No.	Mandatory Requirement
Contract Delivery	
2.6.7	Confirm with contractors that relevant training has been delivered to frontline workers (including sub-contractors) to explain the HSE requirements including the use of equipment, tools, and materials.
2.6.8	Develop a process during contract delivery to ensure compliance with local legal and contract requirements.
2.6.9	Conduct HSE inspections and audits with contractors at regular intervals based on risk to ensure the following: <ul style="list-style-type: none"> • Adequate working conditions and control measures are in place; and • Conformance to applicable management system requirements as specified in the contract and approved HSE plan.
2.6.10	Follow the appropriate management of change management process as defined by the CLP controlled operations.
2.6.11	Ensure that there is adequate level of supervision based on risk to monitor the following: <ul style="list-style-type: none"> • Contractor HSE performance; and • HSE concerns are communicated and resolved timely.
Review and Close Out	
2.6.12	Develop a process to ensure that contracted work has been completed and conforms to the HSE performance level that was agreed upon.
2.6.13	Record and report contractor HSE performance data in conformance to the requirements of the CLP Group HSE Reporting Data Specification Directive (CLPH-GOHSE-DIR-004.3.2)

Section

3

- 3.1.1 Safety - Vehicle and Mobile Equipment
- 3.1.2 Safety - Working at Heights and Dropped Objects
- 3.1.3 Safety - Lifting Operations
- 3.1.4 Safety - Confined Space
- 3.1.5 Safety - Electrical Safety
- 3.2.1 Environment - Hazardous Substances Discharge
- 3.2.2 Environment - Waste Management
- 3.2.3 Environment - Air Emission Management
- 3.3.1 Health and Wellbeing - Occupational Health and Hygiene
- 3.3.2 Health and Wellbeing – No Alcohol and Drugs
- 3.3.3 Health and Wellbeing – Return to Work and Injury Management
- 3.3.4 Health and Wellbeing – Psychological Health
- 3.4.1 Process Safety





Objective

Prevent a fatality or serious injury arising from a collision between vehicles, mobile equipment and/or people, or vehicle rollovers.

Application

CLP owned vehicles and mobile equipment.

It does not cover aviation, marine vehicles, third party hired vehicles (e.g. car rental) or equipment operated on fixed rails or tracks (e.g. stacker).

Pre-requisites

CLP controlled operations are expected to have the following:

- 1) Compliance to all local legal requirement related to vehicles and mobile equipment;
- 2) Processes that ensure the procurement and maintenance of fit-for-purpose vehicles and mobile equipment;
- 3) Driver/operator authorisation processes, including a requirement to comply with traffic laws; and
- 4) Driver/operators are medically and physically fit to operate the vehicle/mobile equipment including being free from alcohol, drug (impairment/illicit), and the effects of fatigue.

Critical Controls (*Work must not start until applicable critical controls are confirmed to be in place and effective*)

- 1) Wear seatbelts (where fitted) at all times when operating a vehicle/mobile equipment
- 2) Ensure that all tie up fixtures or gears are appropriate for the load and secured
- 3) Apply the handbrake or equivalent with proper gear in place when parking vehicles or mobile equipment



Mandatory Requirements

Ref No.	Mandatory Requirement
Planning, Processes, and Systems	
3.1.1.1	Complete pre-start safety checks of vehicles and mobile equipment at defined frequencies to verify equipment is safe for use and unsafe equipment is removed from service.
3.1.1.2	Plan trips and monitor for safe arrival using Journey Management protocols when the circumstances warrant.
3.1.1.3	Manage traffic at CLP controlled operations to ensure vehicle and mobile equipment movements are separated from pedestrians so far as reasonably practicable.
3.1.1.4	Secure and balance loads being transported to protect the driver and other road users.
Vehicles and Mobile Equipment	
3.1.1.5	Install operator warning systems, technology, or other safety features to prevent or mitigate the impact of a collision or roll-over.
People	
3.1.1.6	Where fitted, wear seatbelts when operating a vehicle or mobile equipment.
3.1.1.7	Verify driver/operator competency to use a specific type of mobile equipment or heavy vehicle prior to authorisation.



Objective

To prevent a fatality or permanent damage arising from a free fall of person from one level to another level, and dropped objects.

Application

CLP activities where there is a reasonable risk of freefall from one level to another and/or CLP activities where there is a risk of dropped objects resulting in permanent damage or fatality. These may include but not limited to activities such as working at heights, product and material storage, activities involve using of hand tools at heights, and facility/equipment maintenance. However, this standard does not include lifting, loading and unloading operations. For these activities, refer to the Safety- Lifting Operations Standard (CLPH-GOHSE-STD-003.1.3).

Pre-requisites

CLP controlled operations are expected to have the following:

- 1) Activities are conducted in compliance to all local legal requirements;
- 2) Workers involved in activities at heights are trained, deemed competent, and authorised to conduct the activity;
- 3) Height activities are planned to minimise exposure of fall hazards (both people and objects) to as low as reasonably practicable; and
- 4) Workers are fit for work and not under the influence of drugs or alcohol.

Critical Controls (Work must not start until applicable critical controls are confirmed to be in place and effective)

- 1) Attach to a designated anchor point at all times when using a fall arrest or fall restraint system
- 2) Confirm barricading is in place to protect from penetrations (floors and roof openings)
- 3) Tether tools and equipment to a secure attachment point to prevent them from falling



Mandatory Requirements

Ref No.	Mandatory Requirement
Planning, Processes, and Systems	
3.1.2.1	Stop work when site conditions are not appropriate or when there is a likelihood of adverse weather impacting working at height activities including the risk of dropped objects.
3.1.2.2	Develop and implement a working at height rescue plan that includes availability of rescue personnel and relevant rescue equipment.
3.1.2.3	Maintain an adequate worksite and exclusion zone to minimise the risk of dropped objects from heights.
Working Platforms and Fall Protection Equipment	
3.1.2.4	Install, assess, use, inspect and maintain working platforms as per supplier's recommendations.
3.1.2.5	Work platforms are appropriate for the task, secured, and used on a stable surface.
3.1.2.6	Fall restraint and arrest systems are designed, installed, operated, and maintained in accordance with the manufacturer's recommendations and fit for purpose.
3.1.2.7	Anchor points are verified or assessed by a competent person as adequate to hold the force they are likely to be exposed to.
3.1.2.8	Secure or remove materials, tools, and equipment from height, to prevent dropped objects.
People	
3.1.2.9	Workers are trained and assessed as competent in the use of specific fall protection equipment.
3.1.2.10	Check fall protection personal protective equipment is in good condition, functioning, and properly worn.
3.1.2.11	100% tie-off (continuous protection) is required when workers are exposed to an unprotected edge.



Objective

Prevent fatality or permanent damage arising from drop of load/equipment from lifting operations.

Application

CLP lifting operation activities where there is a potential risk of fatality or permanent damage. This includes complex and heavy lifts as assessed by CLP controlled operations.

Pre-requisites

CLP controlled operations are expected to have the following:

- 1) Activities are conducted in compliance to all local legal requirements;
- 2) Workers involved in lifting operation activities are trained, deemed competent, and authorised to conduct the activity; and
- 3) Workers are fit for work and not under the influence of drugs or alcohol.

Critical Controls (Work must not start until applicable critical controls are confirmed to be in place and effective)

- 1) Conduct integrity lift prior to a full lift
- 2) Operate the lifting appliance within the safe working load
- 3) Ensure that no one is under a load when conducting lifting operations



Mandatory Requirements

Ref No.	Mandatory Requirement
Planning, Processes, and Systems	
3.1.3.1	Develop, implement and communicate lifting procedures, plans or equivalent to prevent serious injury and fatality risks from lifting operations so far as reasonably practicable.
3.1.3.2	Establish an exclusion zone for lifting operations including strict control of access.
3.1.3.3	Agree on method and maintain communication within the working team, and with other impacted teams.
Lifting Appliance and Gear	
3.1.3.4	Select appropriate lifting appliance and gear, and inspect, operate and maintain as per manufacturer's recommendation.
People	
3.1.3.5	Verify and assure planned controls are implemented before conducting lifting operations.



Objective

To prevent a fatality or permanent damage from exposure to damaging energy while conducting activities in a confined space.

Application

CLP controlled operation works conducted inside a confined space where there is a risk of permanent damage or a fatality from hazardous atmospheres, engulfment, or as specified in local legal and other requirements.

A confined space is defined as a space that is by virtue of its enclosed nature with the following conditions:

- Not designed for continuous personnel occupancy; and
- Likely or potentially likely to have adverse health and safe risks from the following:
 - o Atmosphere with unsafe oxygen levels;
 - o Contaminants including gases, vapours or dust which may create explosion or fire risks;
 - o Harmful contaminants above occupational exposure limits;
 - o Heat from impacting working environment; or
 - o Engulfment.

Pre-requisites

CLP controlled operations are expected to have the following:

- 1) Activities are conducted in compliance with all local legal requirements;
- 2) Workers conducting confined space works are competent and where required, have the appropriate licences, or equivalent;
- 3) Confined space activities are assessed and planned to minimise exposure to hazardous atmospheres, explosion, or engulfment to as low as reasonably practicable;
- 4) Workers are fit for work and not under the influence of drugs or alcohol;
- 5) Confined space structure has been constructed by competent workers and maintained; and
- 6) A process to identify and confirm confined spaces is implemented.

Critical Controls (*Work must not start until applicable critical controls are confirmed to be in place and effective*)

- 1) Continuously monitor the atmosphere in a confined space using calibrated gas monitors with audible alarms for adverse deviations in the atmosphere unless stated otherwise by a risk assessment
- 2) The requirement to stop work and evacuate when site conditions are not appropriate (e.g. breaching a liquid level mark, mechanical ventilation failure) has been communicated and understood by all relevant workers



Mandatory Requirements

Ref No.	Mandatory Requirement
Planning, Processes, and Systems	
3.1.4.1	Identify, barricade and signpost confined spaces to prevent unauthorised entry.
3.1.4.2	Isolate potential damaging energy resulting in the release of solids, liquids, or gas affecting the confined space.
3.1.4.3	Check that confined space air quality is safe to conduct the confined space activity, (prior to entry), and continuously monitor unless stated otherwise in a risk assessment report, Confined Space Permit or equivalent.
3.1.4.4	Develop and implement a rescue plan for each confined space and ensure that all rescue equipment and trained personnel are available.
3.1.4.5	Complete and display the risk assessment report and the Confined Space Permit or equivalent in a prominent position at the entrance to the confined space.
3.1.4.6	Ensure a confined space watcher or equivalent is in place when there are people inside a confined space.
Confined Space Equipment	
3.1.4.7	Inspect, calibrate, and maintain atmospheric detector and monitoring equipment as per the manufacturer's recommendation.
3.1.4.8	Provide suitable working atmospheres within the confined space through purging, ventilation, and/or cleaning.
3.1.4.9	Select appropriate confined space tools and equipment, and inspect, operate and maintain them as per the manufacturer's recommendation.
People	
3.1.4.10	Ensure that workers conducting atmospheric testing are competent with the use of the specific testing equipment and to monitor the potential contaminants within the confined space.
3.1.4.11	Train the CLP controlled operation's emergency response team members in rescuing personnel from confined spaces.
3.1.4.12	Appoint a competent standby person(s) or equivalent to monitor all persons entering / exiting the confined space, communicate with workers inside the confined space, and able to raise the alarm in case of an emergency.



Objective ●

Prevent a fatality or permanent damage from electrical energy while conducting work on or around electrical equipment.

Application ●

CLP controlled operation activities involving electrical equipment or system, ranging from high voltage to low voltage, which has a credible risk of causing permanent damage to people, including workers and the public.

Pre-requisites ●

CLP controlled operations are expected to have the following:

- 1) Activities are conducted in compliance to all local legal requirements;
- 2) Safe work procedures to conduct electrical works are established and followed;
- 3) Permit to work system established and risk assessments are conducted as per the electrical work permit requirements;
- 4) Workers are fit for work and not under the influence of drugs or alcohol; and
- 5) Workers wear appropriate personal protective equipment based on risk of the electrical work.

Critical Controls (*Work must not start until applicable critical controls are confirmed to be in place and effective*) ●

- 1) Verify the electrical equipment is isolated / de-energized (i.e. proving dead) before working on it
- 2) Identify and maintain a safe working distance from live exposed conductor
- 3) Implement lockout / tagout procedure after isolation



Mandatory Requirements

Ref No.	Mandatory Requirement
Planning, Processes, and Systems	
3.1.5.1	Create and maintain an electrically safe working environment that reduces electrical risk from adverse site conditions or operational error so far as reasonably practicable.
3.1.5.2	Identify and confirm the right electrical system / equipment prior to commencing work.
3.1.5.3	Control access to area with live exposed conductors.
3.1.5.4	Establish and implement procedures to ensure isolation of electrical energy hazards for non-live works.
3.1.5.5	Establish and implement management of technical change process that assesses and manages risk of changes to electrical systems or equipment.
3.1.5.6	Establish and maintain communication to carry out electrical works safely within working team(s).
3.1.5.7	Develop and implement an emergency plan that ensures necessary rescue equipment and trained personnel are readily available.
Electrical Equipment	
3.1.5.8	Inspect, maintain and test the electrical equipment and its components regularly.
3.1.5.9	Equip electrical equipment with proper protection system / device to prevent or mitigate the risk of arc flash or electrocution.
People	
3.1.5.10	Appoint or authorise personnel who are competent to work on specific voltage or electrical equipment.

Objective

To prevent and mitigate uncontrolled discharge of hazardous substances in environmentally sensitive areas that result in severe environmental impact.

Application

Activities within CLP controlled operations where there is a risk of uncontrolled discharge of hazardous substances in an environmentally sensitive area (as defined by legal and other requirements) resulting in severe environmental impacts.

Pre-requisites

CLP controlled operations are expected to have the following:

- 1) Environmentally sensitive areas are well defined;
- 2) Activities are conducted in compliance to all local legal requirements; and
- 3) Workers involved in the transportation, use, handling and disposal of hazardous substances are trained, deemed competent, and authorised (where required) to conduct the activity.

Critical Controls (Work must not start until applicable critical controls are confirmed to be in place and effective)

- 1) Segregate the storage and discharge areas of hazardous substances to prevent uncontrolled discharge
- 2) Confirm that the secondary containment (e.g. bund wall, sumps/pits, drip/oil tray) is adequate (e.g. sufficient containment size), operational and in the correct position

Mandatory Requirements

Ref No.	Mandatory Requirement
Planning, Processes, and Systems	
3.2.1.1	Develop and implement emergency spill response plans and remediation plans to minimise the adverse environmental impacts from uncontrolled discharge.
3.2.1.2	Develop, and implement a stock register or equivalent of hazardous substance which include relevant information of safety, health and environmental risks.
Containment, Pipelines and Equipment	
3.2.1.3	Design, install, inspect, test, and maintain containers, pipelines and storage facilities in accordance with manufacturer's recommendations.
3.2.1.4	Ensure that the construction, and operation of containers, pipelines and storage equipment are fit for purpose including considerations for foreseeable site-based hazards and environmental conditions.
3.2.1.5	Install operator warning systems, technology, or other safety features to prevent or mitigate the severe impact of overpressure / overflow / overfilling.
3.2.1.6	Install permanent / temporary secondary containment system able to contain adequate volume of stored substances for bulk storage / containers.
3.2.1.7	Store hazardous substances in designated containers, pipelines and equipment in designated storage areas, label them appropriately, and identify the locations of hazardous substances.
People	
3.2.1.8	Competent workers are present or close by the operational area when hazardous substances are being moved, filled or discharged.

Objective

To provide a process for controlling and managing waste produced at CLP controlled operations, including the prevention and mitigation of the significant environmental impacts related to waste management.

Application

This standard applies to activities where waste generated by CLP controlled operations are regulated by local waste management legal and other requirements or have an adverse environmental impact, as identified by the following processes:

- The Environmental Impact Assessment or key issues assessment process during the planning and construction stage;
- The significant environmental aspects identification and evaluation process under an Environmental Management System; or
- Any other risk assessment process where significant environmental risks / aspects are determined.

Pre-requisites

CLP controlled operations are expected to have the following:

- 1) Activities are conducted in compliance to all local legal requirements and with necessary licences, approval or permission and maintain record retention;
- 2) Workers involved in the transportation, use, handling and disposal of waste are trained, licenced and authorised (where required) to conduct the activity; and
- 3) Adequate HSE information and equipment are provided to workers in handling wastes.

Mandatory Requirements

Ref No.	Mandatory Requirement
Planning, Processes, and Systems	
3.2.2.1	<p>Develop, implement, and maintain a process to control and manage waste generated by CLP controlled operations to reduce environmental risks to as low as reasonably practicable that comprises of the following:</p> <ul style="list-style-type: none"> • Identification and classification of wastes including waste types generated by the CLP controlled operation; • Waste management based on local legal and other requirements; • The waste management hierarchy (avoidance, reduce, reuse – e.g. Circular economy, recycle, treat or dispose); • Control measures to reduce HSE risks for applicable waste types; and • The monitoring and reporting process.
3.2.2.2	Classify wastes generated by CLP controlled operations as hazardous or non-hazardous, and in accordance with local legal and other requirements or, if unavailable, follow international practices.
3.2.2.3	Appoint an accredited laboratory to test unclassifiable wastes, otherwise consider and handle the waste as hazardous waste.
3.2.2.4	Develop and implement an emergency response plan(s) for hazardous waste related emergencies.
3.2.2.5	Capture, record, and report waste management performance data in accordance with local legal and other requirements including hazardous waste related incidents and near misses.
3.2.2.6	Develop, implement, and maintain a monitoring process for waste management from waste generation to disposal.
Packaging, Labelling and Storage	
3.2.2.7	Develop, implement, and maintain a process to pack, label and store hazardous wastes generated by CLP controlled operations.
3.2.2.8	Segregate and store hazardous and non-hazardous wastes separately in a secure area to prevent contamination between incompatible wastes.
3.2.2.9	Pack and store hazardous wastes in containers of suitable design and construction to prevent nuisance odours, leakage, spillage, or escape of the contents under normal storage and handling conditions. All hazardous waste containers must have a clear and visible label compliant with relevant legal requirements to identify the waste type.

Ref No.	Mandatory Requirement
Packaging, Labelling and Storage	
3.2.2.10	Store liquid hazardous waste in a bunded area in compliance with local legal and other requirements.
3.2.2.11	Develop access control to hazardous waste storage area.
3.2.2.12	Develop, implement, and maintain a process to ensure hazardous waste containers and storage areas are inspected regularly to identify damage and spillage.
Collection and Transport	
3.2.2.13	Collection and transport of hazardous wastes are licensed, approved, or permitted by local regulatory authorities.
3.2.2.14	Ensure that wastes transported off CLP controlled operations comply with local legal and other requirements or have control measures to prevent environmental nuisance.
Treatment and Disposal	
3.2.2.15	Treat or process wastes that are to be recycled so far as reasonably practicable.
3.2.2.16	Treat waste that cannot be reused or recycled so far as reasonably practicable, and disposed of in a licensed waste facility.

Objective

To provide a process for monitoring and controlling air emissions at CLP controlled operations to mitigate and prevent significant air emission impacts produced.

Application

This standard applies to activities where air emissions at CLP controlled operations are regulated by local air emissions legal and other requirements (e.g., EIA Directive – CLP Group Emissions Limits for Coal-fired and Gas-fired Power Plants Table (CLPH-GOHSE-DIR-002.2.2)) or have a risk of adverse environmental impact identified by the following processes:

- The Environmental Impact Assessment or key issues assessment process during the planning stage;
- The significant environmental aspects identification and evaluation process under an Environmental Management System; or
- Any other risk assessment process where significant environmental risks / aspects are determined.

Pre-requisites

CLP controlled operations are expected to have the following:

- 1) Activities are conducted in compliance to all local legal requirements; and
- 2) All personnel involved in air emissions sampling, analysis and reporting are trained, deemed competent to fulfil their roles and responsibilities.

Mandatory Requirements

Ref No.	Mandatory Requirement
Planning, Processes, and Systems	
3.2.3.1	Develop, implement and maintain a process to monitor and control air emissions at CLP controlled operations.
3.2.3.2	Apply the air emissions hierarchy of control (avoid, minimise, or control) to reduce air emission risks to as low as reasonably practicable for identified and relevant air emissions sources, including but not limited to stationary, fugitive, and mobile emission sources.

Ref No.	Mandatory Requirement
Emission Control – Fugitive Emissions Sources	
3.2.3.3	Develop and implement a process to control fugitive emissions generated from CLP controlled operation activities.
3.2.3.4	Prohibit the open burning of any waste, including hazardous and non-hazardous materials at CLP controlled operations.
3.2.3.5	Develop and implement a process to phase out, record, track, and report Ozone Depleting Substances used within CLP controlled operations.
3.2.3.6	Develop and implement a process to maintain and monitor all equipment, including a maintenance program, in accordance with local legal requirements or manufacturer's recommendations.
Emission Control – Mobile Emissions Sources	
3.2.3.7	Ensure all mobile equipment are maintained to control mobile source emissions, particularly the generation of dark smoke.
Emission Control – Stationary Emissions Sources <i>(Applicable to thermal combustion plants only. All others exempted)</i>	
3.2.3.8	Develop, implement, and maintain appropriate control measures to reduce the emissions from a fixed source of air pollution.
3.2.3.9	Develop, implement, and review a maintenance process, including a preventive maintenance program, for combustion equipment and emission control equipment to ensure the performance and reliability to control emissions.
Emission Monitoring	
3.2.3.10	Develop and implement air emissions monitoring and measurement program for thermal plants based on legal and other requirements, or if unavailable, in conformity to the requirements of internationally recognised methods for sampling, collection, measurement and analysis.
3.2.3.11	Calibrate, maintain and test air emission sampling and monitoring equipment as per local legal and other requirements, or if unavailable, as per manufacturer's recommendations.
3.2.3.12	Embed a quality assurance and quality control process for air emission monitoring requiring laboratory analysis and ensure it is conducted by an accredited laboratory or as stipulated by local legal and other requirements.
3.2.3.13	Regularly monitor dark smoke emitted from the mobile machineries and take immediate actions to mitigate the dark smoke emission.
3.2.3.14	Develop and implement a process to record all relevant performance and measurement data or information including monitoring and measurement results.

Objective

To identify, assess and manage acute and long-term health effects that could cause permanent damage to workers.

Application

Work activities at CLP controlled operations where there are potential risks of exposure to health hazards which can cause acute and long-term health effects to workers. Health hazards include but are not limited to:

- Physical hazards;
- Biological hazards;
- Chemical hazards;
- Ergonomic and psychosocial hazards; and
- Medical conditions including impairment due to alcohol and illicit drug.

Pre-requisites

CLP controlled operations are expected to have the following:

- 1) Activities are conducted in compliance with local legal requirements;
- 2) Health risks are assessed and managed by trained and competent persons (internal or external); and
- 3) Adequate resources are allocated to implement health and wellbeing programs or plans in this standard.

Mandatory Requirements

Ref No.	Mandatory Requirement
Health Hazards Identification and General Management	
3.3.1.1	Develop and implement a health risk assessment (HRA) process or equivalent that identifies and assesses health hazards and potential impact groups or individuals in CLP controlled operations.
3.3.1.2	Implement controls identified in the HRA or equivalent to eliminate or minimise the impact of identified health hazards to as low as reasonably practicable.
3.3.1.3	Communicate to workers the identified health hazards and corresponding controls in the work activities.
3.3.1.4	Identify, select and use appropriate personal protective equipment (PPE) that provides a sufficient level of protection against the hazard exposure so far as reasonably practicable.
3.3.1.5	Develop and implement an ongoing monitoring and protection program to assess and control the exposure of physical, biological and chemical hazards found within the CLP controlled operation for identified groups or individuals.
3.3.1.6	Assist in the rehabilitation and return to work of employees who suffered from impairment or inability to perform work activities.
Physical Hazards	
3.3.1.7	Assess and manage the excessive levels of ionizing and non-ionizing radiation, noise, vibration, and temperature of the worksite that may cause injury or ill health to workers.
Biological Hazards	
3.3.1.8	Provide and maintain adequate hygienic facilities from identified biological hazards at the work site.
3.3.1.9	Ensure water (potable and non-potable) supplied by CLP controlled operations is adequate, treated and managed in accordance with local legal requirements or a recognised international standard.
3.3.1.10	Ensure food is stored and handled appropriately, catering equipment and facilities are maintained, to minimise contamination and bacterial growth.
3.3.1.11	Develop and implement a process to manage local communicable diseases, including: <ul style="list-style-type: none"> • Controls that prevent an outbreak of diseases; and • A response plan to mitigate the impact on workers' health and CLP's operations in the case of an epidemic.

Ref No.	Mandatory Requirement
Chemical Hazards	
3.3.1.12	Identify, assess and manage chemicals to minimise the risk of inhalation, absorption, or ingestion by workers to a level so far as reasonably practicable or below the occupational exposure limit.
3.3.1.13	Store, handle, transport, and dispose of hazardous chemicals in accordance with local legal requirements and manufacturer's recommendations.
Medical Conditions, Ergonomic and Psychosocial Hazards	
3.3.1.14	Develop and implement a fitness for work program to ensure workers are medically fit to perform their activities without adverse risk to the health and safety of themselves or others.
3.3.1.15	The fitness for work program includes pre-employment and ongoing medical examinations for identified at risk groups or individuals to ensure they are fit for their duties and assess any adverse health effect due to workplace exposure.
3.3.1.16	Develop and implement a process to assess and manage the impact of fatigue from work activities, including consideration of appropriate working duration and shift pattern.
3.3.1.17	Assess work activities that involve chronic repetitive and forceful motions for ergonomic hazards, and implement controls to reduce the risk of injury or ill health including musculoskeletal disorders.
3.3.1.18	Conform to the requirements of the Health and Wellbeing – No Alcohol and Drugs Standard (CLP-GOHSE-STD-003.3.2) to protect workers and public from adverse impact of alcohol or illicit drug impairment.

Objective

To protect the workforce and public from the potential adverse impacts of the influence of alcohol and illicit drugs, and provide assistance as necessary.

Application

This standard applies to all employees and contractor personnel (unless otherwise specified) whilst at work or performing activities at CLP controlled operations.

Consumption of alcohol on CLP non-operational premises (e.g., corporate offices) may only be permitted with prior Management approval (which cannot be given at premises where alcohol is expressly prohibited). This restriction does not apply to Company-owned or leased residential premises.

Pre-requisites

CLP controlled operations are expected to have the following:

- 1) Compliance with local legal requirement related to alcohol and illicit drugs; and
- 2) Resourced to carry out alcohol and illicit drug testing within their respective operation.

Mandatory Requirements

Ref No.	Mandatory Requirement
General Management of Alcohol and Illicit Drugs	
3.3.2.1	People under the influence of alcohol or illicit drugs are strictly prohibited from entering or working at CLP controlled operations.
3.3.2.2	Relevant management at CLP controlled operations may grant an exemption on the consumption of alcohol at work-related events outside operational areas. Where this occurs, a process must be developed to manage and authorise the event.
3.3.2.3	On reasonable grounds, restrict access to CLP controlled operations of people showing signs of being incapable of safely performing their duties, or may be a risk to others, due to the effects of alcohol or illicit drugs.
3.3.2.4	The operation of any equipment or vehicles under the influence of alcohol or illicit drugs is strictly prohibited.

Ref No.	Mandatory Requirement
Alcohol and Drug Testing	
3.3.2.5	<p>Develop and implement an alcohol and illicit drug testing program for relevant personnel based on risks under the following scenarios:</p> <ul style="list-style-type: none"> • Pre-employment; • Post-incident; • Causal; and • Random. <p>The alcohol and drug testing program must include the following processes as a minimum:</p> <ul style="list-style-type: none"> • Obtaining consent prior to testing (including the handling process of consent refusal); • Records management and confidentiality; and • Quality control and assurance.
3.3.2.6	Testing of alcohol and drugs is conducted by a competent and authorised person.
3.3.2.7	Ensure that equipment and tools used to conduct alcohol and drug testing are operated and maintained (where required) as per manufacturer instructions.
3.3.2.8	Use an accredited laboratory for conducting laboratory testing of alcohol and drug samples. If none is available, use a reputable laboratory.
Alcohol and Drug Result Management	
3.3.2.9	Evaluate drug test results based on local legal requirements. If unavailable, refer to international guidelines for drug and alcohol testing recommended drug panel cut-offs, and consider local drug abuse patterns.
3.3.2.10	Develop and implement a process to manage positive alcohol and illicit drug results in line with the CLP controlled operation's relevant Human Resource team or delegate, or the contractor management team or equivalent if related to contractors.
Support and Rehabilitation	
3.3.2.11	Develop and implement an alcohol and illicit drugs rehabilitation program to assist relevant employees in line with the CLP controlled operation's relevant Human Resource team or delegate.
3.3.2.12	Provide training and information about the effects of illicit drugs and alcohol use to workers, and the CLP controlled operation's requirements for alcohol and illicit drugs.

Objective ●

To provide injured or ill employees a safe and supportive process to remain at work or return to work as part of their rehabilitation from injury or ill health.

Application ●

This standard applies to all CLP controlled operation employees. It includes physical health, mental health and other medical conditions for both work-related and non-work-related injuries or ill health of employees.

The application of this standard excludes general sick leave.

Pre-requisites ●

CLP controlled operations are expected to have the following:

- 1) Compliance with local legal requirements related to return to work and injury management;
- 2) Personnel involved in managing return to work cases and / or injury management are competent and where required, have the appropriate qualifications; and
- 3) Duty of care is provided for employees and others.

Mandatory Requirements

Ref No.	Mandatory Requirement
Rehabilitation and Return to Work Management	
3.3.3.1	<p>Develop, implement and maintain a Rehabilitation and Return to Work process that considers the following aspects:</p> <ul style="list-style-type: none"> • Early contact and support for the injured or ill employee in consultation with a competent rehabilitation professional; • The initial rehabilitation assessment or planning; • The employee's capacity including restrictions, reasonable adjustments required, and / or recommendations; • What duties the employee will perform including suitable or modified duties; • Supervision requirements; • Working hours including modifications to working hours; • Timeframe for monitoring progress, any further medical review and review period of the Rehabilitation and Return to Work Plan; and • Pay arrangements on the Rehabilitation and Return to Work plan.
3.3.3.2	Ensure that access to a rehabilitation or medical professional / organisation is available where required to support the injured or ill employee and/or provide independent advice to key stakeholders on the Rehabilitation and Return to Work for injured or ill employees.
3.3.3.3	Communicate the Rehabilitation and Return to Work process to all relevant stakeholders.
3.3.3.4	Store case information in a secure digital database with the ability to keep accurate records of the sequence of events, track and report work related injury and ill health statistics.
Training and Competency	
3.3.3.5	Consult with competent and experienced rehabilitation or medical experts when developing the Rehabilitation and Return to Work process.
3.3.3.6	<p>Provide training and competencies to key stakeholders who facilitate the Rehabilitation and Return to Work process that includes:</p> <ul style="list-style-type: none"> • Early identification of injury and ill health; • Early contact and support for injured or ill employees; • Early intervention Rehabilitation and Return to work process for injured and ill employees; • Confidentiality of the injured person's conditions and adherence to local privacy laws for medical disclosures; and • Ethical behaviour and professionalism when dealing with the injured person.

Objective

To establish processes, programs and training required to effectively and safely manage and promote the psychological health of CLP controlled operation employees.

Application

This standard applies to all CLP controlled operation employees.

Pre-requisites

CLP controlled operations are expected to have the following:

- 1) Compliance with local legal requirement related to psychological health management;
- 2) Personnel involved in managing psychological health conditions are competent and where required, have the appropriate qualifications; and
- 3) Duty of care is provided for employees and others.

Mandatory Requirements

Ref No.	Mandatory Requirement
Psychological Health Strategy and Management	
3.3.4.1	Develop, implement and maintain a Psychological Health Management strategy and process that covers the following: <ul style="list-style-type: none"> • Identified psychosocial risk factors; • Psychological health promotion and wellbeing programs; and • Immediate support process or equivalent that provides immediate psychological support to employees who may be experiencing acute psychological distress from both work related and non-work related causes.
3.3.4.2	Consult with competent and experienced psychological experts, health professionals or medical experts in development and implementation of Psychological Health Management process.
Psychological Health Training	
3.3.4.3	Provide psychological health and leadership training to key stakeholders and managers to enhance their knowledge and skills to support employees Psychological Health.

Objective

To set a consistent approach to reduce the risk of Process Safety Events at CLP controlled operations.

Application

This standard is applicable to CLP controlled operations where there is potential loss of primary containment causing permanent damage to people, environment or assets. It is recognised that each CLP controlled operation is different, there are variations in culture, experience and legal requirements which may require some variations in implementation approach.

Pre-requisites

CLP controlled operations are expected to have the following:

- 1) Activities are conducted in compliance to all local legal requirements; and
- 2) Staff and contractors are competent to fulfil their roles in the activities of operations, maintenance and relevant emergency response.

Mandatory Requirements

Ref No.	Mandatory Requirement
Process Safety Management	
3.4.1.1	<p>Develop and maintain a system or equivalent that reduces process safety risks to as low as reasonably practicable and considers the following control areas:</p> <ul style="list-style-type: none">• Technical risk management;• Safety critical systems;• Alarm and instrument management;• Maintenance management;• Operations management;• Staff competence;• Emergency preparedness; and• Governance and assurance.

Ref No.	Mandatory Requirement
Technical Risk Assessment	
3.4.1.2	<p>Establish and implement a technical risk assessment process or equivalent in conformance to the Risk Management Standard (CLPH-GOHSE-STD-002.1) that identifies the hazards and ensures that the process safety risks arising from, but not limited to the following scenarios are systematically assessed and managed:</p> <ul style="list-style-type: none"> • Ongoing operations; • Handling of hazardous materials; • New projects; and • Technical changes.
3.4.1.3	Define the tolerable level for process safety related risks, and ensure it is consistently understood and implemented within CLP controlled operations.
3.4.1.4	Risk assessments are carried out and reviewed by competent personnel with appropriate independence, and approved by the appropriate level of management.
3.4.1.5	The status and effectiveness of the risk control measures are reviewed at regular intervals by the appropriate level of management to ensure that the control measures are implemented in a timely manner and verified at a frequency relevant to the level of risk.
Management of Change	
3.4.1.6	Develop and maintain a management of change process that identifies, assesses and manages process safety related risks arising from technical changes including emergency, temporary and permanent changes that is in conformance with requirements of the Management of Change Standard (CLPH-GOHSE-STD-004.5).
Safety Critical Systems	
3.4.1.7	Identify and maintain a register of Safety Critical Equipment (SCE) or Devices (SCD).
3.4.1.8	Understand the consequence of failure on Safety Critical Equipment / Safety Critical Devices.
3.4.1.9	Establish and implement inspection, testing and maintenance programs for Safety Critical Systems.
3.4.1.10	Implement a Computerised Maintenance Management System (CMMS) or equivalent to monitor the indicators on the work order completed within the prescribed time for the SCE / SCD.

Ref No.	Mandatory Requirement
Alarm & Instrument Management	
3.4.1.11	Establish and maintain an alarm management process or equivalent to ensure that: <ul style="list-style-type: none"> • Alarms are prioritised consistently and actively managed to resolution; • No long outstanding alarms; and • Control loops are optimised and in control.
Maintenance Management	
3.4.1.12	Establish a maintenance strategy covering process safety for all asset types.
3.4.1.13	Ensure maintenance works are captured, prioritised, planned, scheduled and executed using a proactive approach common to CLP controlled operations.
Operations Management	
3.4.1.14	Establish and maintain a permit to work systems to assure the safety of the personnel, plant, process and integrity of the asset during work activities.
3.4.1.15	Ensure the process safety related risks from work tasks are identified and assessed before the work starts. Material changes during the work must be risk re-assessed and control effectiveness verified.
Staff Competence	
3.4.1.16	Ensure that staff and contractors have the required knowledge and skills to operate and maintain the respective plant effectively and safely.
Emergency Preparedness	
3.4.1.17	Ensure that the emergency response plan for credible process safety events consider involvement of external emergency services and general public.
Governance and Assurance	
3.4.1.18	Establish a process to report and investigate process safety related events.
3.4.1.19	Establish an assurance process to ensure conformity of the mandatory requirements in this Standard.

Section

4

- 4.1 Incident Reporting and Investigation
- 4.2 Emergency Preparedness and Response
- 4.3 Performance Monitoring and Reporting
- 4.4 Assurance and Review
- 4.5 Management of Change



Element 4.1

Incident Reporting and Investigation

Objective

HSE incidents are reported, classified, investigated and documented to ensure that improvement actions are taken, and lessons learnt are shared throughout the organisation.

Pre-requisites

CLP controlled operations are expected to have the following:

- 1) Compliance with local legislative requirements for incident reporting and notifications;
- 2) Local incident management process for reporting, response, and incident investigation to HSE incidents;
- 3) Employees and relevant contractors are trained to raise and report HSE incidents;
- 4) Investigators are suitably trained to generate quality incident investigation findings; and
- 5) Fair and just principles have been embedded to report and investigate HSE incidents.

Mandatory Requirements

Ref No.	Mandatory Requirement
Incident Classification, Escalation, Investigation and Management	
4.1.1	Classify, escalate, investigate and manage HSE incidents and near misses as per the CLP Group HSE Incident Management Matrix Directive (CLPH-GOHSE-DIR-004.1.1).
4.1.2	Record the statistics associated with HSE incident and near miss data as per the requirements of the Group HSE Reporting Data Specification Directive (CLPH-GOHSE-DIR-0004.3.2).
Incident Improvement Action Management	
4.1.3	Track to closure actual or potential severity 3 HSE incident improvement actions with effectiveness assessed.
4.1.4	Evaluate all improvement actions identified in the Incident Investigation Panel report 12 months after the issue of the Investigation Report by an independent internal audit team to ensure that the actions have been fully implemented.

Objective

To effectively plan, manage and respond to emergency events that have a potential to adversely impact the health and safety of personnel including surrounding communities, plant integrity and reliability, and the environment.

Pre-requisites

CLP controlled operations are expected to have the following:

- 1) Risk assessments are conducted for all foreseeable and credible emergency scenarios;
- 2) Respond to emergencies based on the people, environment, assets and reputation (PEAR) model;
- 3) Emergency equipment used are adequate, available, and maintained as per local legal requirements or as recommended by the manufacturer / supplier;
- 4) Emergency signage are visible and prominently displayed without obstruction and maintained; and
- 5) Personnel involved in emergency preparedness and response including the use, maintenance and testing of emergency equipment are deemed competent.

Mandatory Requirements

Ref No.	Mandatory Requirement
Emergency Response Plan and Crisis Management	
4.2.1	Develop, communicate, test, learn and regularly review endorsed emergency response plans for credible emergency scenarios specific to the hazards and risk of the CLP controlled operations.
4.2.2	Determine and equip a dedicated control centre area to manage emergencies including an alternative area should the dedicated areas become unavailable.
4.2.3	Develop and implement the Regional Crisis Management Plan that covers the respective CLP controlled operations to respond to major incidents impacting their business unit.
4.2.4	Escalate to the Group Chief Executive Officer or the Group Chief Operating Officer for major incidents impacting the CLP Group or requiring CLP Group intervention, and refer to the CLP Group Crisis Management Plan.
Emergency Response Equipment	
4.2.5	Equipment critical emergency equipment relying on electrical power with backup power or standby equipment, and test regularly.
4.2.6	Equipment, test and maintain telecommunication devices used for emergency purposes.

Objective

To ensure the handling of HSE performance metrics for the purposes of identifying emerging issues and driving continuous improvement.

Pre-requisites

CLP controlled operations are expected to have the following:

- 1) Compliance to all local legal and other requirements for external reporting to external agencies;
- 2) Local HSE data records and monitoring processes developed to record, monitor, calibrate, verify and report; and
- 3) Personnel recording, monitoring or reporting HSE data are trained and competent.

Mandatory Requirements

Ref No.	Mandatory Requirement
Performance Metrics, and Indicators	
4.3.1	Measure, record and monitor key HSE metrics and information at defined intervals to ensure effective risk control as described in the CLP Group HSE Reporting Data Specification Directive (CLPH-GO-HSE-DIR-004.3.2).
4.3.2	Establish performance indicators to measure the progress and effectiveness of HSE strategies, plans, and programs.
Reports and Quality Control	
4.3.3	Inform business unit top management and other identified stakeholders on HSE performance including the results of audits and assurance activities.
4.3.4	Establish data integrity and reporting processes to ensure the accuracy and integrity of HSE data collected in line with the CLP Group HSE Performance Data Reporting Directive (CLPH-GO-HSE-DIR-004.3.1).

Objective

To ensure that assurance activities are conducted to evaluate that the HSE Management System (HSEMS) is fit for purpose, implemented effectively and to identify opportunities for continual improvement of HSE management.

Pre-requisites

CLP controlled operations are expected to have the following:

- 1) Local HSE assurance process which includes scheduled inspections, observations and audits;
- 2) Results, evidence and information used in assurance activities are documented and retained as per local processes;
- 3) Improvement actions requiring a change to plant, process, people, plant integrity and reliability conforms to the local management of change process; and
- 4) Where needed, external assurance activities are conducted to evaluate conformity to external HSE obligations.

Mandatory Requirements

Ref No.	Mandatory Requirement
Schedule and Evaluate	
4.4.1	Conduct scheduled HSE management system assurance activities, including internal and external reviews, to ensure conformity and effectiveness of the HSEMS.
4.4.2	Evaluate the suitability, adequacy and effectiveness of HSE management through an annual Management Review including to ensure that the HSEMS is fit for purpose.
Communicate and Track	
4.4.3	Communicate to relevant stakeholder the results of assurance activities and any associated improvement actions.
4.4.4	Track improvement actions as a result of assurance activities to its completion.

Objective

To develop and implement a process that identifies, manages, and communicates HSE impacts from change (including permanent, temporary and emergency changes) covering plant (integrity and reliability) and process.

Other changes, such as changes concerning people, organisational, security, information technology, legal requirements, etc., are addressed in other respective systems or processes.

Pre-requisites

CLP controlled operations are expected to have the following:

- 1) Employees are trained to identify change and initiate the CLP controlled operation's management of change process; and
- 2) Personnel authorised to approve management of change are competent.

Mandatory Requirements

Ref No.	Mandatory Requirement
Management of Change Process	
4.5.1	Develop a process to identify, assess, request, approve, implement, communicate, train and review permanent, temporary, and emergency changes that affects the health or safety of people, or the environment.
4.5.2	Ensure that all temporary changes and emergency changes have an end date.
4.5.3	Store Management of Change documents within the specified local legal requirements or specified local process retention period.
Management of Change Actions	
4.5.4	Document, complete and validate identified management of change actions to their intended outcomes.
4.5.5	Actions related to Management of Change are validated by a different person than the person responsible for the action to verify satisfactory implementation.
Management of Technical Change for Plant, Equipment or Processes	
4.5.6	Adhere to the requirements stipulated in the Management of Change Directive for Technical Change in Plant, Equipment, or Processes (CLPH-GOHSE-DIR-004.5.1).

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