

WE ASPIRE TO OPERATE SUSTAINABLY, WITHOUT HARM TO PEOPLE, THE ENVIRONMENT AND THE COMMUNITIES IN WHICH WE OPERATE.



Chief Executive's Message

AECI is fully committed to operating sustainably, without harm to our workforce, service providers, customers, suppliers, the environment and the communities in which we operate. This SHEQ Framework provides direction to all our businesses globally, our **World in 1**, to ensure that we progress on our journey towards Zero Harm.

Leaders are accountable for managing and enabling SHEQ practices, but every individual in AECI is accountable for ensuring that we "do it safely, or not at all". The successful implementation of the SHEQ Framework depends on each of us applying its principles daily. This booklet provides you with detailed guidance on doing so successfully.

I am committed to meeting our Zero Harm milestones and I ask you to join me. Together towards Zero Harm!

Mark Dytor | Chief Executive



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Introduction

At AECI, our goal is **Zero Harm**. We aspire to operate sustainably, without harm to people, the environment and the communities in which we operate.

AECI operates a wide range of businesses across multiple locations, industry sectors and operations. As such, the Safety, Health, Environmental and Quality (SHEQ) requirements are diverse, and each area faces different challenges, however, across all our businesses our goal is the same: Zero Harm to all. **Figure 1** gives an overview of what it will mean to achieve Zero Harm.

The AECI SHEQ Framework sets out the systematic, consistent and integrated risk-based approach on our journey to Zero Harm. It is a guide to our businesses, and the SHEQ function, on the required practices that enable sustainable SHEQ results. It also provides the measure for maturity, which enables performance improvement.

The SHEQ Framework is an AECI-developed document that guides the journey towards Zero Harm. **Figure 2** is the graphical representation of this Framework. The inputs into this Framework ensure that our approach is comprehensive. They include legislation, ISO standards, Process Safety Standards and Responsible Care® principles. Other inputs include AECI best practices, the European Foundation for Quality Management approach, SHEQ approaches in the chemical and mining industry and Risk Management approaches (**Appendix H**).



FIGURE 1: The meaning of Zero Harm

Purpose

The AECI SHEQ Framework is our standardised approach to managing risk and improving SHEQ performance.

The purpose of the SHEQ Framework is to:

1

ENABLE SUSTAINABLE SHEQ RESULTS

A risk-based approach enables our businesses to manage SHEQ risks effectively to achieve Zero Harm sustainably. Zero Harm is defined in **Figure 1** below to the left.



PROVIDE ONE DIRECTION FOR SHEQ

The SHEQ Framework facilitates a common understanding of terminology and how individual practices contribute to AECI's overall SHEQ performance. It also aligns teams on their roles and responsibilities.

3

PROVIDE LEADERS WITH THE TOOLS TO EMBED SHEQ PRACTICES

Leaders are accountable for managing SHEQ risks. Each SHEQ Framework element gives practical guidelines on what needs to be implemented to do this sustainably.



PROVIDE A MEASURE OF SHEQ MATURITY

Each element has a Maturity Assessment to assist leaders in identifying gaps and direct improvement towards resilient practices.

SHEQ Framework



FIGURE 2: SHEQ Framework

Positioning the SHEQ Framework

At AECI, our SHEQ direction for Zero Harm is cascaded as follows (Figure 3):

- 1 Group SHEQ Policy provides Group-wide direction for the achievement of Zero Harm.
- 2 Group SHEQ Framework Consists of the SHEQ Fundamentals and SHEQ performance requirements. Our SHEQ Fundamentals provide the context and belief system (WHY) for our SHEQ approach and are critical enablers of Zero Harm. The Performance Requirements per element in the SHEQ Framework describe WHAT needs to be done to achieve Zero Harm.
- FIGURE 3: Positioning the SHEQ Framework

- 3 Procedures and Standards Group procedures and Business procedures and standards which specify HOW performance requirements should be met.
- 4 Checklists, work instructions, etc Area-specific checklists, work instructions, inspections, and other operational practices are used to ensure that SHEQ practices are implemented and consistently executed.



Group SHEQ Policy

AECI is a South African-based business focused on providing products and services to a broad spectrum of customers in the Mining Solutions, Chemicals, Water and Process, Plant and Animal Health, Food and Beverage sectors.

The safety and wellbeing of all our people (employees, contractors, suppliers, customers, and communities) and the environment is of paramount importance to the AECI Group and fundamental to the sustainability and growth of our operations. Our aspiration is to operate sustainably, without harm to people, the environment and the communities in which we operate.

Our **Zero Harm** integrated approach to the management of Occupational Safety, Process Safety, Occupational Health, the Environment, Product Transportation, Responsible Care® and Quality is based on the fundamentals of Accountable Leadership; Engaged and Empowered Employees; Risk-based SHEQ Management; and Continuous Improvement. The approach is detailed in the AECI SHEQ Framework which is implemented and embedded by the Management of every Group business to enable the journey towards Zero Harm.

The AECI Chief Executive, assisted by the AECI Executive Committee and guided by the Social and Ethics Committee on behalf of the Board of Directors, is responsible for the annual review of the SHEQ Policy, to ensure it continues to meet its intended objectives and for overseeing its implementation Group-wide and for monitoring SHEQ performance.

We are committed to:

- Providing a safe and healthy working environment for all our people;
- > Operating our business with integrity and Responsible Care®;
- Creating a climate conducive to Zero Harm where people are empowered to exercise the desired behaviours;
- Complying with all relevant safety, health, environmental and duty of care legislation and other requirements in the countries where we operate;
- > Responsibly managing our environmental impacts;
- Safely transporting and delivering all our products and services;
- Proactively managing SHEQ risks through effective preventative and corrective controls;
- Embedding high standards and processes as detailed in the AECI SHEQ Framework;
- Meeting and exceeding customer requirements and expectations for quality products and services;
- Training and developing employees and contractors in all relevant aspects of SHEQ;
- Promoting and actively driving environmental solutions towards a sustainable future;
- Fostering and encouraging open dialogue with interested and affected stakeholders; and
- Sharing SHEQ results, good practices, learnings and solutions openly and extensively.

Mark Dytor Chief Executive, AECI February 2019

Overview of the SHEQ Framework

Zero Harm is a goal which must be enabled through strategic **Direction**, engaged **People** and risk-based **Processes** to deliver continuously improving SHEQ **Results**. The SHEQ Framework (**Figure 2**) has Zero Harm at its core and is divided into four main sections supported by the SHEQ Fundamentals as a belief system.

The SHEQ Framework elements capture the building blocks required to enable excellent SHEQ performance and include all SHEQ sub-functional areas, leadership responsibilities, enabling tools and systems, people-related levers and the measurement of SHEQ results.

Main Sections

Our leaders set a clear course of action which leads to the achievement of Zero Harm.

SHEQ Fundamentals

ACCOUNTABLE LEADERSHIP

Our leaders set the tone for Zero Harm in AECI, from the top all the way to frontline team leaders.

PEOPLE



We value our people and their contribution to achieving Zero Harm.

ENGAGED PEOPLE

Our people are empowered to own and actively participate in the journey to Zero Harm, they demonstrate and live by the desired behaviours every day. Each of the main sections are sub-divided into elements which provide insight into the building blocks required to achieve Zero Harm. These **elements** are:



DIRECTION

- 1.1 Strategy
- 1.2 Targets and plans
- 1.3 Leadership



PROCESS

- 3.1 Risk management
- 3.2 Operations control
- 3.3 Systems
- 3.4 Governance



PEOPLE

- 2.1 Training and skills
- 2.2 Human capital
- 2.3 Culture and behaviour
- 2.4 Engagement



RESULTS

- 4.1 Measurement
- 4.2 Improvement



We design, manage and improve our processes to enable the achievement of Zero Harm. RESULTS <u>+</u>1



We achieve and sustain excellent SHEQ results that meet or exceed Zero Harm goals.

RISK-BASED SHEQ MANAGEMENT

We prioritise our SHEQ management actions based on a thorough understanding of our SHEQ risk profile and exposure related to the effectiveness of our critical controls.

CONTINUOUS IMPROVEMENT

We drive continuous improvement actions to achieve sustainable Zero Harm. We have a mindset of "beyond compliance to excellence".

Implementing the SHEQ Framework

The intent of the SHEQ Framework is to provide guidance to leaders on how to practically implement the SHEQ Fundamentals. The Framework is based on a continuous improvement methodology with a **Plan, Do, Review, Improve (PDRI)** cycle. **Figure 4** illustrates how the PDRI cycle can be used to implement the Framework. The PDRI principle is also applicable to the performance requirements and maturity assessment of each element.



Elements Layout

Each element of the SHEQ Framework is described in the following way:

The **Purpose** of the element and why it was included in the SHEQ Framework.

The **Definition of victory** for successful implementation of the element. Leaders will aim to achieve these goals.

The **Performance requirements** describe the outcomes of effectively applying the Plan, Do, Review and Improve process in the element. Where applicable, cross-references to other elements are indicated.

The Roles and responsibilities for: LEADERS SHEQ FUNCTION

GROUP SHEQ FUNCTION

The **Tools, processes and procedures** available for implementing the element.

A **Maturity assessment** with which you can rate your team's maturity for each SHEQ outcome.

Maturity Assessment

The maturity assessment methodology used in our SHEQ Framework is built on international business excellence principles.

The SHEQ maturity matrix in **Figure 5** illustrates the progression of maturity stages and explains the principle that excellent SHEQ performance (i.e. Zero Harm) must be underpinned by resilient practices to be sustainable.

Figure 6 illustrates the four maturity stages. It is important to understand that practices in the REACTIVE stage must be stopped. In the COMPLIANT stage, practices are embedded to build a solid foundation of compliance. Compliant practices are required to remain in place even if higher maturity practices are implemented. This is the first step in the journey towards Zero Harm and sustainability. PROACTIVE practices build on a strong compliant foundation to ensure that effective, risk-based SHEQ management practices deliver value. In the RESILIENT stage, the team reaches their full potential of Zero Harm and sustainability by embedding best in class practices, while compliant and proactive practices remain in place.

The SHEQ maturity of a team is determined through a self-assessment workshop which includes the following:

- The team's SHEQ performance, i.e. y-axis (refer to Appendix F for guidance on the performance maturity assessment).
- The team's SHEQ practices, i.e. x-axis (refer to each element in this Framework for the practices maturity assessment tables).

A SHEQ maturity assessment assists leadership teams in identifying gaps and improvement opportunities on their journey to Zero Harm. The outcomes from a workshop must be improvement focus areas for the next 12 to 18 months (refer to **Appendix F** for the process guidelines).



FIGURE 5: Maturity matrix for sustainable performance

FIGURE 6: Maturity stages for practices



PRINCIPLE

Reactive practices must be stopped. Compliant practices form the foundation and must always remain in place. Proactive and resilient practices are embedded on the foundation of compliance.

SHEQ Sub-functions

Every element in the SHEQ Framework is applicable to each sub-function within SHEQ, even though the performance requirements might be applied slightly differently in each area. The sub-functions and their summarised role and scope are described below (refer to Appendix A for more detail).

ENVIRONMENT



ROLF

Responsibly manage and minimise the environmental impact of our operations.

SCOPE

- Minimise the negative impact of pollution on people and the environment.
- > Support environmental compliance, transparent reporting and stakeholder engagement for environmental performance.

OCCUPATIONAL SAFETY

ROLE

Create a safe workplace for our people and service providers by preventing exposure to hazards and mitigating the impact of any exposure that has occurred to eliminate injuries.

SCOPE

- > Manage hazards to ensure the workplace is safe.
- > Protective clothing and equipment.
- Ensure safe task execution.

GOING GREEN



SCOPE

PROCESS SAFETY

ROLE

SCOPE

- Inherently safe design.
- > Hazard identification, classification and mitigation.
- Asset integrity and management of change.

PRODUCT TRANSPORTATION



ROLE

To ensure that our products are transported. In a responsible manner and without causing harm to any person, the environment, equipment, infrastructure or the product itself.

SCOPE

- > Safe inbound and outbound transportation of dangerous and non-dangerous goods by road, rail, marine and air.
- Compliance to international chemicals management regulations and best practices.
- > Give effect to our Product Stewardship commitment and obligations.

OCCUPATIONAL HEALTH

ROLF

SCOPE





ROIF

Achieve product and service quality in terms of performance, reliability and durability to give AECI a competitive edge.

SCOPE

- Lead guality assurance programmes.
- > Quantitative and gualitative measurement of product and/or service quality
- Collaborate with Marketing teams to understand customer requirements.

Notes



DIRECTION

Our leaders set a clear course of action which leads to the achievement of Zero Harm.

Supported by the SHEQ Fundamental Accountable leadership

⁶⁶ Our leaders set the tone for Zero Harm in AECI, from the top all the way to frontline team leaders.

1.1 Strategy

We set and enable a clear direction for Zero Harm.

1.2 Targets and Plans

We translate our SHEQ Strategy into targets and plans which are executed and tracked.

1.3 Leadership

Our leaders set the tone for Zero Harm through embedding the SHEQ Fundamentals.



1.1 Strategy

PURPOSE

To set clear direction for SHEQ practices that enables sustainable excellence in SHEQ performance and Zero Harm.

DEFINITION OF VICTORY

- The SHEQ Policy and Strategy give the Group clear and consistent direction for meeting SHEQ requirements.
- Leaders understand the needs and risks of their businesses and have developed effective strategies to achieve Zero Harm.
- Leaders ensure SHEQ practices are consistently reviewed and applied to enable excellent SHEQ performance and Zero Harm.
- The Zero Harm milestones are achieved, sustained and improved. [4.1]
- AECI Group businesses collaborate to ensure a consistent approach in all areas.

PERFORMANCE REQUIREMENTS

- > The Group SHEQ Policy and Strategy:
 - » Are appropriate to the nature, scale and potential SHEQ impacts of our operations.
- » Consider:
 - Stakeholder requirements. [2.4]
 - Relevant legislation (including changes and amendments). [3.4]
 - The SHEQ Fundamentals.
 - Our values and Group strategy.
 - Internal performance and capabilities.
 - · ISO standards and requirements.
 - Effective mitigation of SHEQ risks.
- » Are approved by the CE and relevant Board committee.
- » Are reviewed and updated based on changing risk profiles [3.1], the results of SHEQ audits, reviews and incident investigations and changing legislation. [3.4]

- The Group SHEQ Framework and Fundamentals provide direction for the practices to be implemented and improved to achieve the aspiration of Zero Harm. These are based on sustainability and a risk-based approach [3.1] and clearly outline the SHEQ performance requirements. [1.2]
- AECI businesses cascade and implement the Group SHEQ Policy, Strategy, Framework and Fundamentals through:
 - » Business-specific SHEQ Policy if required.
 - » Formal approval by the business leadership. [1.3]
 - » Effective communication to all stakeholders. [2.4]
 - » The alignment of all our people with Zero Harm. [2.1, 2.2, 2.3, 2.4]
 - » Embedding it into the business practices and rhythms to ensure sustainability. [3.3]

ROLES AND RESPONSIBILITIES LEADERS

- Adopt and endorse the SHEQ Policy, strategy, Fundamentals and Framework.
- Credibly demonstrate commitment, support and personal accountability for Zero Harm through active and visible participation.
 [1.3, 2.3]
- Drive the buy-in for and embedding of Zero Harm through the implementation of the SHEQ Policy, Strategy, Framework and Fundamentals.
- Ensure that suitable and adequate capabilities and competencies are available to implement and sustain the SHEQ Strategy. [2.1]
- Ensure that appropriate resources are provided and that teams are empowered to implement the SHEQ Strategy. [1.3, 2.2]

SHEQ PRACTITIONERS

- Provide support for the implementation of the SHEQ Policy, Strategy, Fundamentals and Framework.
- Support and advise leaders in continuously improving the SHEQ management system and enabling the implementation of the SHEQ Strategy.

- Provide input to the business strategic planning and risk management processes to ensure that the Group SHEQ Strategy and risk management are integrated and aligned with the business direction.
- Provide input to setting, monitoring and auditing of SHEQ performance requirements. [4.1]
- > Evaluate any SHEQ factors or influences (e.g. legislation, marketplace) that may impact on business-specific operations and SHEQ Strategy implementation.

GROUP SHEQ

- Develop the Group SHEQ Policy, Strategy, related milestones [1.2], Framework and Fundamentals.
- > Evaluate any SHEQ factors or influences (e.g. legislation, marketplace) that may impact on the Group operations or SHEQ Strategy.
- Promote the SHEQ Policy, Strategy,
 Framework and Fundamentals throughout the Group.
- > Engage with leaders to attain commitment and ensure implementation. [1.3]
- Have management oversight over the SHEQ resources, capabilities and competencies across the Group to implement the SHEQ Strategy.
- Track the implementation of the SHEQ Strategy and Framework, as well as its effect on SHEQ performance. Review and update these periodically.

TOOLS, PROCESSES AND PROCEDURES

- Senior management strategy sessions
- > BIGGER Values
- > SHEQ committee meetings
- AECI Group SHEQ Strategy/Framework and implementation journey map
- > SHEQ Fundamentals
- › Responsible Care[®] global charter
- AECI business strategy
- Management review
- › Group SHEQ Policy
- Business-specific SHEQ Policy
- Industry best practices

MATURITY ASSESSMENT

OUTCOMES	REACTIVE	COMPLIANT	PROACTIVE	RESILIENT
1. Group SHEQ Policy	A SHEQ Policy does not exist or is only a paper exercise with no visibility or buy-in from leaders.	A formal SHEQ Policy exists, is endorsed by the CEO and is used by the SHEQ team to provide direction.	Leaders commit to the SHEQ Policy and communicate it.	The SHEQ Policy is consistently used by teams to guide SHEQ Strategy and improvement plans.
2. Commitment to Zero Harm direction	Zero Harm is a theoretical idea and is supported only by some.	Most leaders and teams understand and support Zero Harm. The SHEQ team drives improvement of SHEQ practices.	All leaders and teams are actively involved in achieving Zero Harm which is evident in continuously improving SHEQ practices.	All leaders and teams pro-actively work together to embed SHEQ practices which is evident in the achievement of Zero Harm milestones.
3. Group SHEQ Strategy	No formal SHEQ Strategy exists, or if it does, it has limited visibility.	The SHEQ Strategy considers the BIGGER values, Group strategy, stakeholder requirements, SHEQ risks and relevant legislation. It is visible and communicated to all leaders.	The SHEQ Strategy is translated into SHEQ objectives and plans and cascaded to teams, taking the teams SHEQ performance and risks into account.	The SHEQ Strategy is actively implemented by leaders and teams and it provides a clear roadmap to achieving Zero Harm. Innovation is an integrated part of the SHEQ strategy to reduce SHEQ risks.
4. SHEQ Framework and Fundamentals	SHEQ practices are driven by fear or as a reaction to incidents. SHEQ Fundamentals are seen as pointless.	Leaders understand the SHEQ Fundamentals and the SHEQ Framework is utilised to drive standardised SHEQ practices.	Teams know the SHEQ Fundamentals and implement risk-based SHEQ management through the SHEQ Framework.	Teams reduce SHEQ risks by embedding SHEQ Fundamentals and prioritised continuous embedding and improvement of SHEQ practices.
5. SHEQ Resources (people, time and funding)	No or inadequate resources are available to execute the SHEQ Strategy.	Resources are made available to implement prioritised parts of the SHEQ Strategy.	Adequate resources are actively deployed and used to drive the implementation of the SHEQ Strategy.	Resources are available and deployed to actively drive risk reduction, improvement of SHEQ practices and embedding of the SHEQ Strategy.

1.2 Targets and Plans

PURPOSE

To translate the SHEQ Strategy into milestones and targets which are supported by plans to achieve Zero Harm.

DEFINITION OF VICTORY

- The Zero Harm Strategy milestones are reached and sustained through the achievement of SHEQ objectives and targets.
- Leaders demonstrate their commitment, support and personal accountability for the achievement of SHEQ targets and plans.
- Improved stakeholder engagement [2.4], confidence and ownership of SHEQ targets through implementation of effective plans.

PERFORMANCE REQUIREMENTS

AECI businesses:

- Translate the SHEQ Strategy [1.1] into clear short-, medium-, and long-term objectives, milestones and specific, measurable, attainable, relevant and time-bound (SMART) targets for their teams.
- Define and cascade leading and lagging SHEQ measurements to all operations levels where appropriate to the risk profile, exposure and nature of the specific operations.
- Develop SHEQ plans which are adequately resourced and prioritised in terms of people [2.2], time and funding. These plans include detailed actions, timelines and assigned responsibilities, to enable teams to achieve SHEQ milestones and targets.
- Implement and track the execution of SHEQ plans to ensure that high-risk areas are prioritised, deviations are identified, and corrective action is taken timeously. [4.2]

- Review SHEQ targets and plans at least annually by considering:
 - » Legal and other business requirements. [3.4]
 - » Current performance trend analysis of leading and lagging measurements. [4.1]
 - » Targets that are realistic and measurable but stretch teams to improve. [4.2]
 - » Risk profiles in each area. [3.1]
 - » How incentivising measurements influences behaviour and how interdependencies between measurements may incentivise opposing behaviours. [2.2] [2.3]

ROLES AND RESPONSIBILITIES LEADERS

- Adopt, endorse and credibly demonstrate commitment and personal accountability for the successful achievement of SHEQ targets and plans, which are revised at least annually. [1.3]
- Prioritise targets and plans according to the specific business SHEQ risks.
- Execute, assess, track and manage SHEQ performance and plans through setting clear expectations to achieve milestones and targets.
- Ensure that appropriate resources are provided for execution of the SHEQ plans. [2.2]
- Take proactive steps to implement corrective action when deviation from the SHEQ plan occurs.
- Understand and develop required capabilities and competencies [2.1] in the business to support the achievement of the SHEQ objectives, targets and plans.

SHEQ PRACTITIONERS

- Facilitate the process of creating and cascading business SHEQ targets which are aligned with Group SHEQ targets and plans.
- Identify and communicate the relevant
 SHEQ targets and plans to the business and enable processes to effectively establish, monitor and maintain them at operational and functional levels.
- Monitor the business SHEQ milestones, targets and plans to provide regular reporting to management. [4.1]
- Support and advise leaders in continuously improving the SHEQ management system and how to achieve SHEQ targets and plans. [4.2]
- Provide ongoing feedback to teams regarding their SHEQ performance.
- Provide input to setting, tracking and auditing of SHEQ performance standards.

GROUP SHEQ

- Develop and prioritise the Group SHEQ objectives, targets and focus areas.
- Standardise SHEQ measurement definitions across the Group.
- > Ensure Group-level SHEQ plans are aligned.
- Develop criteria for measuring, tracking and reporting of SHEQ plan implementation.
- Regularly review SHEQ plan progress.
- > Present progress against SHEQ milestones.

TOOLS, PROCESSES AND PROCEDURES

- > Group SHEQ lagging measurement procedure
- Performance management system
- SHEQ management systems
- Group SHEQ leading measurement guidelines

MATURITY ASSESSMENT

OUTCOMES	REACTIVE	COMPLIANT	PROACTIVE	RESILIENT
6. SHEQ milestones and targets	Are not always clear and are cascaded to a very limited extent.	Are SMART, based on the SHEQ Strategy and are communicated and cascaded to all operations levels.	Are stretched and set based on desired risk reduction areas and an improvement pull.	Drive a culture of sustainable achievement of Zero Harm by incentivising the right behaviours and benchmarking against industry leaders.
7. Leading and lagging measurements	Limited measurement and reporting which is mostly focused on lagging measurements.	Standardised lagging measurements are implemented and data collection methods for these are established.	Standardised and risk-based leading measurements are implemented. The SHEQ measurement structure is integrated into a business management system for data capturing, processing and reporting.	Interdependencies between leading and lagging measurements are understood and managed to continuously improve SHEQ performance and to reduce risk exposure.
8. SHEQ plans and resourcing	SHEQ plans don't exist and/or are not adequately resourced.	SHEQ plans are developed, adequately resourced (people, time and funding), prioritised and broken down into detail actions, responsibilities and timelines.	SHEQ plans are derived from analysing gaps, leading measurement trends and SHEQ risks. SHEQ plan execution outcomes are incorporated into individual performance plans.	Leaders collaborate across the Group to ensure detailed planning trade-offs optimise resources and SHEQ plan execution.
9. Execution tracking and corrective action	SHEQ plan execution is not tracked and/or corrective action is not taken for identified deviations.	SHEQ plan execution is tracked to ensure focus on high risk areas. Leaders actively drive SHEQ plan execution and provide execution support.	SHEQ plan execution is integrated into Group level tracking. Deviations are identified and corrective action taken timeously.	Teams take full ownership of the embedding of SHEQ plans which is evident in SHEQ performance gaps being closed sustainably.

1.3 Leadership

PURPOSE

Our leaders set the tone for Zero Harm.

DEFINITION OF VICTORY

- Leaders credibly demonstrate their commitment to SHEQ through visible, purposeful and systematic leadership and active participation in SHEQ programmes.
- Leaders create a conducive climate for achieving Zero Harm, in accordance with our values.
- SHEQ risks are effectively managed through clear and positive leadership and direction.
- Leaders ensure SHEQ practices are consistently applied to enable excellent SHEQ performance and continuous improvement towards Zero Harm.

PERFORMANCE REQUIREMENTS

All leaders:

> Set the direction for Zero Harm:

- » Leaders are credibly committed and accountable to drive, support and evaluate Zero Harm and SHEQ practices.
- » Leaders internalise the SHEQ Fundamentals as a personal belief system and act as a role model for Zero Harm. [2.3]
- » Leaders set objectives and targets in line with Zero Harm milestones and the Group plan and implement plans to achieve it. [1.2]
- » Leaders champion the Zero Harm strategy and its implementation. [1.1]

> Ensure that our people are engaged in the Zero Harm journey:

- » Leaders promote an open and trusting environment through caring for teams and understanding how their behaviour impact the engagement and behaviour of our people. [2.3]
- » Leaders ensure that appropriate and competent resources are available to achieve Zero Harm. [2.1, 2.2]
- » Leaders embed effective engagement of stakeholders to ensure they are appropriately informed, involved and enabled. [2.4]

> Enable Zero Harm with risk-based processes:

- » Leaders ensure that all significant SHEQ risks are identified, managed, evaluated and controlled effectively. [3.1]
- » Leaders ensure that fit for purpose management systems are implemented and maintained. [3.3]
- » Leaders ensure compliance with legal and other SHEQ requirements and provide assurance. [3.4]
- » Leaders ensure that all projects, operations and Supply Chain activities are effectively managed to achieve Zero Harm. [3.2]

> Drive Zero Harm results:

- » Leaders define, monitor and review SHEQ performance. [4.1]
- » Leaders reinforce a mindset of "beyond compliance", drive continuous improvement and strive for SHEQ excellence. [4.2]

ROLES AND RESPONSIBILITIES LEADERS

- Take accountability to lead the Zero Harm journey for the protection of our people's and the community's health and safety as well as the environment.
- Focus on getting sustainable SHEQ results through a risk-based SHEQ approach and reinforcing a Zero Harm culture.
- Cascade, manage and drive execution, instil operations discipline and ensure that teams comply with SHEQ requirements.
 [2.3, 3.2]
- Drive compliance but expect excellence on the journey to Zero Harm. [4.2]
- Do not allow work to be undertaken or continued if it cannot be done without harm. [3.2]
- Encourage incident reporting and drive improvement through investigations and embedding of learnings. [3.1, 4.2]
- Manage SHEQ performance through setting clear expectations and providing appropriate recognition and consequence management. [1.2, 2.2]
- Practice Visible Felt Leadership that reinforce safe behaviours through care, coaching and mentoring.

SHEQ PRACTITIONERS

- Engage with leaders to attain agreement and commitment to the Zero Harm journey.
- Support leaders in implementing the SHEQ strategy, Fundamentals and Framework and continuously improving the SHEQ management system.
- Assist leaders to understand the tone they set through their behaviour, as well as the climate and engagement of our people on the journey to Zero Harm.

GROUP SHEQ

- Demonstrate Zero Harm leadership in the Group.
- Engage with Executive and Senior Management to attain commitment and to assist them to set the tone for Zero Harm in the Group.
- Ensure buy-in from Executive and Senior Management for the SHEQ strategy,
 Fundamentals and journey towards
 Zero Harm.

TOOLS, PROCESSES AND PROCEDURES

- Group and business-specific SHEQ Policy
- Group SHEQ Strategy and implementation journey map
- > SHEQ Fundamentals and Framework
- > PSM Framework
- Visible felt leadership
- Leadership development programmes (e.g. GIBS)
- Performance Management System

MATURITY ASSESSMENT

OUTCOMES	REACTIVE	COMPLIANT	PROACTIVE	RESILIENT
10. Accountable leadership	Leaders are only visible during or after SHEQ incidents and create a culture of fear and blame. The SHEQ function mainly takes ownership for SHEQ.	Leaders are visibly committed to Zero Harm. Leaders enable teams to fulfil their SHEQ responsibilities and lead by example.	Leaders inspire Zero Harm behaviour and proactively address SHEQ performance improvement through implementing of mature SHEQ practices.	Leaders consistently set the tone for Zero Harm. They create a climate where individuals take personal accountability for achieving SHEQ targets and plans and are recognised for it.
11. Empowered and engaged people	SHEQ is not a way of life and people are mostly disengaged.	Every team member understands what is required to achieve Zero Harm, is competent and feels empowered to execute their daily jobs with Zero Harm.	Teams are proactively involved in SHEQ programs and people are individually committed to Zero Harm to themselves, others and the environment.	Our people consistently live the desired SHEQ behaviours to demonstrate that Zero Harm is a way of life. All people are passionate about achieving Zero Harm.
12. Risk-based SHEQ approach	There is limited understanding of SHEQ risks and controls in teams.	Top SHEQ risks and related controls are identified, assessed, prioritised and implemented to ensure legal compliance.	Risk-based SHEQ practices are applied in teams. Risk controls are monitored, action is taken proactively to ensure effectiveness and assurance is given on all critical controls.	Integrated management of SHEQ risks across disciplines. Learnings from control failures are implemented, checked for effectiveness and embedded. Controls are improved continuously to reduce risk.
13. Continuous improvement mindset	SHEQ practices are mostly dependent on the team's experience, and not embedded. The team has a limited view on gaps or improvement areas.	SHEQ practices are compliant with legal requirements which are executed through procedures, SOPs, COPs, works instructions, etc.	Improvement areas in SHEQ practices are identified proactively based on an understanding of the maturity of practices and actioned to achieve improved SHEQ results.	A mindset of continuous improvement is embedded and drives the achievement of sustainable Zero Harm results.



PEOPLE

We value our people and their contribution to achieving Zero Harm.

Supported by the SHEQ Fundamental **Engaged people**

•• Our people are empowered to own and actively participate in the journey to Zero Harm, they demonstrate and live by the desired behaviours every day.

2.1 Training and Skills

We develop our people to ensure competence in working with Zero Harm.

2.2 Human Capital

We apply HR processes to enable the achievement of Zero Harm.

2.3 Culture and Behaviour

We create a Zero Harm climate and embed the right behaviours.

2.4 Engagement

We communicate and manage change pro-actively with our SHEQ stakeholders.



2.1 Training and Skills

PURPOSE

To enable our people to develop the skills and competencies required to perform their work activities with Zero Harm.

DEFINITION OF VICTORY

Our people:

- Have the necessary competence to apply risk-based SHEQ requirements resulting in improved risk management and prevention of incidents. [3.1]
- Are aware of and trained on the relevant critical controls in their work environment and are empowered to manage risks and prevent incidents pro-actively. [3.1]
- Understand their SHEQ roles and responsibilities and the potential consequences of departing from SHEQ procedures. [2.2]

PERFORMANCE REQUIREMENTS

AECI businesses:

- Determine the necessary SHEQ competencies required for specific job functions, management levels, SHEQ risk exposure and location.
- Translate SHEQ competencies into training matrices and plans which are managed to ensure the timeous execution of the training plan.
- > Ensure that SHEQ training content includes:
 - » All local and international SHEQ legislative and Group requirements.
 - » Relevant SHEQ risks and controls and people's contribution to the effectiveness of risks being managed. [3.1]
 - » Standardised SHEQ tools, requirements and procedures. [3.3]
 - » Regularly updated content based on revised SHEQ risks, controls and learnings from incidents, audits, changes to legislation and best practices. [3.4]
- Measure the effectiveness of training through competency assessments to ensure that SHEQ knowledge gained in training is applied in practice. Relevant action is taken to address competency gaps after training. This includes retraining, coaching and mentoring when required.

- Retain appropriate documented SHEQ training and competency records. [3.4]
- > Use coaching, mentoring and/or on-the-job training by leaders to ensure continuous improvement of the practical application of SHEQ requirements.

ROLES AND RESPONSIBILITIES LEADERS

- Identify the relevant generic and job-specific
 SHEQ competencies based on risk exposure.
- Identify the relevant training to address the competencies and include the required training on the training matrix.
- Prioritise resources and manage the execution of the SHEQ training matrix and plan.
- Share learnings from incidents and coach teams on the application of relevant SHEQ requirements, with specific emphasis on critical control operating effectiveness.
 [2.4, 3.1, 4.2]
- Review the effectiveness of SHEQ training interventions and take action to close identified gaps.

SHEQ PRACTITIONERS

- Assist leaders to identify relevant job-specific SHEQ competencies and related training and include these on the training plan/matrix.
- Regularly review SHEQ training content to ensure that it is relevant and effective.
- > Ensure SHEQ training plan records are maintained, stored and backed up.
- Analyse the trends of the effectiveness of SHEQ training interventions and act timeously to close identified gaps on overall trends. [4.1, 4.2]
- Identify relevant new SHEQ skills and training requirements based on progress and maturity on the Zero Harm journey.

GROUP SHEQ

- Develop and review the minimum requirements for the Group SHEQ training matrix.
- Provide SHEQ training content where it is required to be standardised across the Group.

- Regularly review Group-standardised
 SHEQ training content to ensure that all relevant updates are incorporated.
- Determine the minimum SHEQ training requirements per job profile where it is required to be standardised across the Group.
- Provide governance on Group-wide SHEQ training activities.
- Check that SHEQ training is effective and applied in a standardised way across AECI.
- Coordinate Group-wide SHEQ training effectiveness reviews.
- Assess and recommend SHEQ training Service Providers.

TOOLS, PROCESSES AND PROCEDURES

- Performance Management System and Learner Management System
- Human Capital Management System (HCMS)
- Personal Development Plans
- Training needs analysis (Baseline compulsory training matrix)
- Training Centre Matrix
- Recognition for prior learning
- Compliance management system
- Safety Through Empowerment of People (STEP) – Coaching approach
- PSM Framework
- › Group training standard/procedure

SHEQ TRAINING SUGGESTIONS

- > SHEQ induction and awareness
- › Life Saving Behaviours (LSB) [2.3]
- > Relevant SHEQ risk management [3.1]
- > Visible felt leadership [1.3]
- Responsible Care[®] (including PSM) [3.2]
- › Fundamentals of process safety
- > Train the trainer for in-house SHEQ training
- Incident investigation and RCA [3.1]
- > Relevant SHEQ legislative training
- Practical demonstrations of critical controls and LSB

(This is not a comprehensive or mandatory list).

MATURITY ASSESSMENT

OUTCOMES	REACTIVE	COMPLIANT	PROACTIVE	RESILIENT
14. SHEQ competencies and training plans	Generic SHEQ competencies and plans without consideration of risk exposure.	Job-specific SHEQ competencies are identified based on risk exposure and are included in training matrices.	Job-specific SHEQ competencies are updated based on learnings from incidents, audit findings and best practices.	Are updated in anticipation of emerging SHEQ risk trends or changes in the working environment.
15. Service provider SHEQ competencies	Are not formally defined.	There are formally-defined SHEQ competencies for Service Providers and minimum SHEQ training is provided.	SHEQ competencies for Service Providers are reviewed to include learnings from incidents, audit findings and best practices.	Through mutually beneficial partnerships and collaboration, Service Provider SHEQ competencies are established and maintained.
16. SHEQ training content	Includes the bare minimum.	Includes all legislative requirements.	Includes relevant SHEQ risks and controls and is updated regularly to include control effectiveness and audit findings.	Are updated regularly to address emerging SHEQ trends and risks, as well as learnings from incidents and best practices.
17. Coaching and mentoring	Not a practice among leaders.	First line leaders play a coaching role to ensure that their teams execute their jobs with Zero Harm.	Coaches and mentors play a key role in on-the- job training to enable continuous improvement towards Zero Harm.	Teams coach each other as part of a culture of continuous improvement towards Zero Harm.
18. SHEQ training effectiveness	Is not reviewed at all or in a haphazard way.	The effectiveness of SHEQ training interventions is reviewed based on theoretical "pass rate", and any gaps are closed.	Managers monitor how acquired skills are applied and adapt SHEQ training interventions to ensure the specific learning outcome is met.	The embedding of SHEQ competences is evident in the reduction of repeat incidents and improved SHEQ results.

2.2 Human Capital

PURPOSE

To structure, resource and manage our workforce to enable the achievement of Zero Harm.

DEFINITION OF VICTORY

There are processes in place to enable:

- The development of an organisational structure which supports the execution of SHEQ objectives.
- The recruitment, selection, placement and retention of individuals with the necessary SHEQ competencies and Zero Harm mindset.
- Performance management, recognition and consequence management which enable and enhance SHEQ performance.

PERFORMANCE REQUIREMENTS

AECI businesses:

- Design and resource organisational structures to ensure safe, productive and responsible operations with competent teams and the necessary legal appointments.
- Design, resource and allocate fit-for-purpose
 SHEQ structures to enable safe, responsible and productive operations.
- Include SHEQ requirements for job-specific competencies, compliance and behaviours in job profiles. SHEQ risks are considered during the design and review of operations jobs profiles.
- > **Recruit**, select and place our workforce with SHEQ requirements and objectives in mind.
- Identify and fill SHEQ-critical positions timeously.
- Define SHEQ responsibilities and accountabilities that are properly documented, communicated, understood and applied.
- Include SHEQ KPIs and targets in performance agreements. [1.2] [4.1]
- Empower and enforce accountability for delivering on agreed SHEQ milestones and targets. [1.2]

- Manage deviations from expected
 Zero Harm behaviours [2.3] according
 to Human Capital policies with due
 consideration for distinguishing between
 mistakes and violations.
- Include elements that promote desired Zero Harm behaviours into recognition schemes. [2.3]
- Use relevant management tools to guide and improve individual SHEQ performance.

ROLES AND RESPONSIBILITIES LEADERS

- Ensure that operations are structured and resourced to execute daily operations activities safely and responsibly and to comply with SHEQ fundamentals, practices, laws and other statutory requirements, with emphasis on SHEQ-critical positions.
- Ensure that operations resources, roles and responsibilities are aligned with the objective of Zero Harm.
- Appoint appropriately qualified and competent people with the necessary SHEQ experience and mindset.
- Ensure that the agreed SHEQ activities, targets and plans are included in individual performance agreements.
- Establish the criteria for SHEQrelated recognition.

SHEQ PRACTITIONERS

- Support leaders and teams in the execution of their SHEQ-related roles and responsibilities.
- Set and agree with leaders, the SHEQspecific objectives, targets and plans for inclusion in performance agreements and recognition schemes. [1.2]
- Review and track SHEQ performance as input to performance reviews. [4.1]

GROUP SHEQ

 Define SHEQ responsibilities and accountabilities for the SHEQ function.

- Design and review the SHEQ functional organisational structures, job profiles and job descriptions to ensure that the function is fit-for-purpose.
- Oversee the appointment of SHEQ resources in the Group and align roles and responsibilities.
- Monitor critical SHEQ skills Group-wide.
- Develop succession plans for SHEQ management positions. Collaborate with business leadership to manage these plans across the Group.
- Provide input into the development of the disciplinary code with reference to SHEQrelated transgressions.
- Provide guidance on SHEQ KPIs and targets as well as other SHEQ elements for performance agreements and recognition schemes.

TOOLS, PROCESSES AND PROCEDURES

- Performance Management System and Learner Management System
- Human Capital Management System (HCMS)
- > Human Capital Interviewing documentation
- James Reason model (human behaviour deviation analysis) – refer to incident management process
- MIE system for background and security checks
- > On the job coaching
- Talent Board
- › Disciplinary code
- > High potential candidates
- Man job specs (Health)
- Pre-employment Medicals and AECI Human Resources policies
- Labour Relations Act
- > Employment Equity Act
- > Basic Conditions of Employment Act
- SHEQ job profiles/descriptions

MATURITY ASSESSMENT

OUTCOMES	REACTIVE	COMPLIANT	PROACTIVE	RESILIENT
19. SHEQ accountabilities	Are not always defined or documented and don't take SHEQ risks into account.	Are formally documented and reflect SHEQ risks and controls in job profiles.	Are translated into individual performance agreements and people are developed to fulfil their SHEQ accountabilities.	People take full ownership for their SHEQ accountabilities. Teams apply SHEQ behaviours in daily activities.
20. Structure, recruitment and selection	SHEQ requirements are not considered in the organisational structure or the recruitment and selection processes.	The organisational structure is designed to ensure safe and productive operations. People are recruited and selected considering SHEQ requirements to ensure competent teams.	SHEQ-critical positions are identified and succession plans are developed to ensure these positions are filled by competent people timeously.	Multiple individuals are coached and trained to improve SHEQ experience and develop the internal resource pool for SHEQ- critical positions.
21. SHEQ function structure	SHEQ structure not fully implemented and/or under-resourced.	Designed SHEQ structure implemented and adequately resourced. SHEQ support formally agreed with leaders.	The SHEQ structure matches the SHEQ risk profile of the business. The SHEQ team enables operations teams on the Zero Harm journey.	An optimised SHEQ structure enables the execution of the SHEQ Strategy through true partnership with operations teams.
22. SHEQ performance and consequence management	Inconsistent performance and consequence management process.	Individuals are held accountable for their SHEQ performance. SHEQ-related consequence management is consistently and fairly applied.	Individuals take ownership of SHEQ performance and leaders coach for improvement. There is a clear distinction made between violations and errors.	Teams take ownership for SHEQ behaviour which is evident in SHEQ performance. SHEQ errors and violations have been reduced through effective consequence management and other relevant management tools.
23. SHEQ recognition	Recognition is mostly given for production performance and SHEQ performance is driven by meeting legal requirements.	Recognition schemes include SHEQ performance elements.	Team recognition reinforces positive SHEQ behaviours.	Continuous informal SHEQ recognition forms part of the culture.

2.3 Culture and Behaviour

PURPOSE

To create a Zero Harm climate where people are empowered to exercise the desired SHEQ behaviours in every task, every day.

DEFINITION OF VICTORY

People:

- > Understand the desired SHEQ behaviours and embrace a Zero Harm personal risk attitude.
- Are involved in the continuous drive to prevent SHEQ incidents and to exercise personal responsibility to ensure Zero Harm.
- Display a risk-aware culture that drives SHEQ performance improvement in their daily decision making, activities and behaviour.
- > Embed the Zero Harm Fundamentals and align with the AECI values.

PERFORMANCE REQUIREMENTS

AECI businesses:

- Create, maintain and foster a climate that is conducive to achieving Zero Harm. Including to:
 - » Understand, accept and reinforce accountability for SHEQ. [2.2]
 - » Empower individuals to successfully fulfil their SHEQ responsibilities. [2.1, 2.2]
 - » Embed the principle of no work unless it can be done with Zero Harm. [3.2]
 - » Build trust, exercise fairness and demonstrate care. [1.3]
 - » Reinforce accountability for SHEQ by leaders who lead by example through visible felt leadership. [1.3]
 - » Embed operations discipline and continuously improve on SHEQ performance. [3.2, 4.2]
 - » Encourage the reporting of all incidents to learn and prevent recurrence. [4.1]
 - » Ensure open and effective communications which create an environment conducive to learning. [2.4]

- Implement the AECI Life Saving Behaviours and ensure they are understood, adopted, practiced and embedded. [2.4]
- Enable leaders to enhance safety engagement and climate through behaviour transformation interventions, to achieve and sustain Zero Harm.
- Monitor and analyse behaviours through applicable behaviour-based programmes that engage the workforce and cover all activities to continuously reinforce desired SHEQ critical behaviours.
- Measure, analyse and continuously drive a climate conducive to Zero Harm. [4.1, 4.2]

ROLES AND RESPONSIBILITIES LEADERS

- Create a climate which embraces
 Zero Harm by credibly demonstrating unwavering commitment and personal accountability to Life Saving Behaviours and the SHEQ Fundamentals.
- Recognise and mitigate the potential impact of cultural and geographic diversity to achieve Zero Harm.
- Ensure that people are aware of and trained in desired SHEQ behaviours. [2.1]
- Guide positive SHEQ behaviour by recognising and reinforcing the desired SHEQ outcomes.
- Create a platform of trust where all SHEQ matters can be openly discussed and reviewed. [2.4]
- Drive behaviour-based programmes to address SHEQ critical behaviours.
- > Remove barriers preventing safe behaviour.

SHEQ PRACTITIONERS

- Enable behaviour-based programmes and interventions to address SHEQ critical behaviours.
- Ensure employees, Service Providers and visitors are provided with the necessary awareness, knowledge, understanding, skills, abilities and competence to guide behaviour to achieve SHEQ objectives.
- Assist leaders and teams to understand how their behaviour influences the Zero Harm climate in the business.

GROUP SHEQ

- Determine and review AECI Life Saving Behaviours according to the Group SHEQ risk profile, SHEQ risk controls, learnings from incidents, audit findings and best practices.
- Develop and maintain behaviour-based programs and interventions to transform SHEQ behaviour and enhance the Zero Harm culture and strategy.
- Review and recommend climate diagnostic processes for Zero Harm.
- Analyse climate diagnostic results and recommend interventions to create engagement and improve the climate for Zero Harm.

TOOLS, PROCESSES AND PROCEDURES

- > Life Saving Behaviours (**Appendix B**)
- > Behaviour-based safety programme
- › Zero Harm climate diagnostics
- SHEQ Fundamentals
- Stop Work Authority process
- Disciplinary code

MATURITY ASSESSMENT

OUTCOMES	REACTIVE	COMPLIANT	PROACTIVE	RESILIENT
24. Life Saving Behaviours (LSBs)	Are not formally defined and/or not implemented.	Formally defined LSBs are implemented and drive awareness for Zero Harm.	Are reviewed and updated regularly. Implemented LSBs results in reduced high severity incidents.	Are updated in anticipation of emerging SHEQ risk trends or changes in the working environment. LSBs are totally embedded in the culture.
25. SHEQ climate and behaviour transformation	Some individuals still perform work unsafely and try to hide incidents for fear of reprisal.	Individuals are empowered to take personal accountability for SHEQ. No work is done unless it is done safely.	The SHEQ climate is measured in regular climate diagnostics which are done in high-risk areas and used to drive SHEQ improvement actions.	Leaders create Zero Harm climate of openness, care, trust and accountability. This is evident in sustained SHEQ performance and behaviours.
26. Incident reporting culture	Some incidents are not reported.	A reporting culture exists.	Incident reporting is viewed as a way to improve SHEQ risk management.	Unsafe behaviours and practices are challenged without fear of unfair negative consequences. Solutions are co-created and implemented.
27. Behaviour-based programme	No behaviour-based programme exists or is not effectively implemented.	A standardised behaviour- based programme is implemented and supported by leaders and teams.	Observations from the behaviour-based programme are analysed and barriers are removed to drive behaviour improvement.	The behaviour-based programme is fully embedded, owned and driven by the team. It is used to create a climate for Zero Harm.

2.4 Engagement

PURPOSE

To build strong relationships with stakeholders to enable the achievement of Zero Harm.

DEFINITION OF VICTORY

- All stakeholders are engaged and empowered to fully support the Zero Harm journey.
- Our people are enthusiastic about and fully committed to Zero Harm and take positive action to improve SHEQ performance.
- All employees actively participate in the Zero Harm journey.

PERFORMANCE REQUIREMENTS

AECI businesses:

- Implement relevant SHEQ communication and engagement plans for stakeholders to ensure that they are actively engaged in SHEQ activities and programmes aimed at Zero Harm.
- > Ensure that the **content of communication** to relevant stakeholders includes:
 - » True engagement, two-way communication and participation.
 - » Relates to the hearts and minds of our people to ensure they are engaged.
 - » SHEQ hazards, risks and effectiveness of critical controls. [3.1]
 - » Induction, training, SHEQ notifications and SHEQ meetings. [2.1]
 - » Defined responsibilities and authorities. [2.2, 3.4]
 - » SHEQ performance. [4.1]
 - » Specific requirements as listed in applicable ISO standards.
 - » Emergency preparedness. [3.2.2]
 - » Emergency/incident communication.
 - » Learnings and actions from incidents, audits and reviews, and emergency drills. [2.4, 4.2]

- » Sharing of good practices such as positive SHEQ behaviours. [4.2]
- » Encouragement to take an active role in SHEQ performance improvement, including promotion and recognition of such examples. [4.2]
- Manage changes which impact on people, through a change management process to mitigate the risk of compromising Zero Harm.
- Assess the effectiveness of SHEQ communication and engagement through processes such as audits, reviews and climate diagnostics and close identified gaps. [3.4, 4.1]

ROLES AND RESPONSIBILITIES LEADERS

- > Lead the Zero Harm discussions in the team.
- Create platforms for open, two-way communication and engagement about SHEQ matters. Create an avenue for appropriate stakeholder involvement which allows them to raise concerns and contribute ideas without the fear of negative consequences. [1.3, 2.3]
- Ensure that the change management process followed for any people-impacting change addresses the risk of compromising Zero Harm.
- Communicate appropriate SHEQ information to enhance the team's journey to Zero Harm.
- Ensure that SHEQ communication and engagement effectiveness is continuously improved.

SHEQ PRACTITIONERS

- Identify and understand the engagement requirements of all relevant SHEQ stakeholders.
- Develop business-specific SHEQ communication and engagement plans and manage its execution.

- Guide leaders about measures to address relevant SHEQ stakeholders' engagement, especially during periods of significant change.
- Collate accurate and current businessspecific SHEQ communication materials to enable Zero Harm communication.
- Ensure that relevant SHEQ committees, forums and other communication channels are established and are effective.
- Review the effectiveness of communication and engagement interventions and advise leaders accordingly.

GROUP SHEQ

- Establish and coordinate Group-wide
 SHEQ communication and engagements.
- Assist with Group guidelines for SHEQ communication and engagement plans.
- Provide Group-wide guidelines to ensure stakeholders remain committed to Zero Harm during periods of significant Group-wide change.

TOOLS, PROCESSES AND PROCEDURES

- Group SHEQ communication tools, such as incident flash notifications and Lessons learned communication templates
- > SHEQ Committee meetings
- Business communication sessions
- Union meetings
- Team building
- Innovation platform
- > AECI corporate communications policy
- > AECI corporate crisis communication policy
- Business-specific Management of Change Procedure with reference to employees
- Internal publications

MATURITY ASSESSMENT

OUTCOMES	REACTIVE	COMPLIANT	PROACTIVE	RESILIENT
28. SHEQ communication and engagement	SHEQ communication is done inconsistently and/or restricted to SHEQ incidents.	A basic SHEQ communication and engagement plan is in place and executed mostly by the SHEQ function.	SHEQ communication and engagement plans are informed by good understanding of the current and required levels of Zero Harm engagement of relevant stakeholders. Leaders take ownership of SHEQ communication with teams.	The plans are informed by the teams' progress on the Zero Harm journey. Stakeholders actively participate in two-way communication opportunities created by leaders.
29. Change management processes	Change management is done haphazardly.	The SHEQ team monitors changes which can impact the Zero Harm engagement of stakeholders.	Senior leaders implement measures to mitigate the impact on Zero Harm as part of an integrated change plan.	The potential impact of planned changes on Zero Harm are assessed with relevant stakeholders and all work together to mitigate the risk of compromising Zero Harm.
30. Effectiveness of SHEQ communication and engagement	No or very little communication effectiveness monitoring is done. Communication and engagement is not effective.	Effectiveness is assessed based on informal checks and SHEQ audits. Minimum requirements are met.	Effectiveness is assessed in a structured way and analysed to understand root causes of SHEQ stakeholder engagement. Improvement actions are agreed with stakeholders.	Effectiveness is continuously assessed through close relationship management of stakeholders. Stakeholders are keen ambassadors of Zero Harm.



PROCESS

We design, manage and improve our processes to enable the achievement of Zero Harm.

Supported by the SHEQ Fundamental **Risk-based SHEQ management**

We prioritise our SHEQ management actions based on a thorough understanding of our SHEQ risk profile and exposure related to the effectiveness of our critical controls.

3.1 Risk Management

We identify, understand, manage, monitor, govern, assure, analyse and improve all SHEQ risks. This includes incident management.

3.2 Operations Control

We manage the full life cycle of our assets and operations.

3.2.1 Project Management:

- » Design, construction, commissioning.
- » Decommissioning, demolition, remediation, rehabilitation.
- » Acquisition
- » Concept development

3.2.2 Operations and Maintenance:

- » Zero Harm work practices.
- » Asset management.

3.2.3 Supply Chain:

- » Service providers, contractors, procurement and inbound activities.
- » Product transportation and outbound activities.
- » Marketing, sales and customers.

3.3 Systems

We enable our SHEQ Framework with processes, technology and tools.

3.4 Governance

We ensure compliance, good oversight and provide the required assurance.



3.1 Risk Management

PURPOSE

To proactively manage SHEQ risks through effective preventive and corrective controls to enable the achievement of Zero Harm.

DEFINITION OF VICTORY

- Effective management of all prioritised SHEQ risks, including the mitigation and/or elimination of potential high severity incidents.
- All critical controls are operating effectively.
 [3.2, 3.4]
- Through incident investigations, the correct root causes are identified, preventive and corrective actions are implemented and learnings are embedded to prevent repeat incidents. [2.4, 3.2, 4.2]

PERFORMANCE REQUIREMENTS

AECI businesses:

Identify and understand SHEQ risks:

- Identify and understand SHEQ risks (including SHEQ hazards, related unwanted events, their causes, consequences and related controls) by performing the appropriate risk assessments:
 - » *Baseline risk assessments:* Identification of all potential workplace SHEQ hazards/risks.
 - » *Issue-based risk assessments:* Assessing and mitigating specific workplace SHEQ risks.
 - » *Continuous risk assessments:* Identification of the day-to-day operations SHEQ risks.
- Determine the highest SHEQ risks through risk rating of its probability/likelihood and consequences/impacts to create a risk profile.
- Develop and implement preventive and corrective controls to mitigate SHEQ risks.
- Prioritise controls based on:
 - » Criticality.
 - » The hierarchy of controls: elimination and substitution, isolation, engineering, administrative and PPE.
 - » The ALARP (As Low As Reasonably Possible) principle for residual risk.

- > Ensure that each SHEQ risk is assigned to a risk owner, every control assigned to a control owner and that control executers are trained to effectively execute the controls for which they are responsible for.
- Develop an assurance plan for SHEQ controls.

Manage and monitor SHEQ risks:

- Actively manage critical controls for design and operating effectiveness.
- Apply a formal management of change process to manage risks associated with planned, unplanned, permanent, temporary or incremental changes, to ensure the consequences of any changes are mitigated, communicated and understood.
- Establish a business continuity plan to mitigate risks associated with a major event.

Govern and assure SHEQ risks:

- Report on control effectiveness through consolidated assurance information.
- Perform structured incident investigations to determine the root causes of unwanted events, develop and implement preventive and corrective actions and embed the learnings. These include:
 - » Potential or actual harm incidents.
 - » SHEQ non-conformances related to deviations from standards, quality, SHEQ audits, and legal non-compliances.
 [3.3, 3.4, 4.2]
- Prioritise and resource incident investigations based on actual or potential severity.

Analyse and improve SHEQ risk profile and exposure:

- Review the risk profile and update the business risk register annually as a minimum or more frequently as applicable, and in the event of major changes to business or operations activities or the occurrence/recurrence/upward trend of unwanted SHEQ events or control failures.
- Analyse control failure trends and implement actions to specifically improve the design and operating effectiveness of critical controls. [4.1,4.2]
- Embed a structured, risk-based process to embed learnings to prevent actual or potential high severity incidents. [4.2]

ROLES AND RESPONSIBILITIES LEADERS

- Demonstrate accountability as risk owners and control owners throughout the risk management process and thereby set the tone for risk appetite and tolerance.
- Create a fully embedded risk management culture within teams. Coach employees on making risk management a part of their daily decision-making process. [2.3, 3.2]
- > Oversee the management of SHEQ risks and non-conformances. [3.2]
- Monitor and report on the operating effectiveness and adequacy of critical controls. Report on top SHEQ risks and give assurance of effective SHEQ risk management to relevant governance structures. [4.1, 3.4]
- Prioritise management actions related to highest SHEQ risks and potential/actual high severity incidents.
- Ensure adequate communication and training on hazard identification, risk assessment, risk management tools, and management of risk controls are provided to employees and service providers. [2.1, 2.4]

SHEQ PRACTITIONERS

- Provide effective SHEQ risk management advisory support to leaders.
- Facilitate and/or co-ordinate risk assessments and annual risk reviews.
- > Facilitate incident investigations.
- Manage the business SHEQ risk profile database.
- Enable leaders to take pro-active action on the effectiveness of critical controls.
- Distribute incident investigation learnings. [2.4]
- Coordinate the implementation of the SHEQ risk and incident management procedures and tools.
- > Analyse control failure trends.

GROUP SHEQ

- Align SHEQ risk management with the Group Enterprise Risk Management Framework.
- Develop and review Group SHEQ risk and incident management procedures, with enabling standardised tools. [3.3]
- Coordinate ongoing awareness and training to enhance a fully embedded risk management culture within the Group.
- Determine Group top risks and analyse Group-wide control effectiveness trends.
- Develop a Group SHEQ risk profile and recommend relevant critical controls.
- Provide assurance to the Board and other relevant Group Committees that SHEQ risks are being managed effectively.
- > Analyse Group-wide incident trends.

TOOLS, PROCESSES AND PROCEDURES

- AECI Enterprise Risk
 Management Framework
- › Group SHEQ risk management procedure
- Group SHEQ incident management procedure
- Group communications procedure
- › Management of Change Procedure
- Business continuity plan
- Applicable risk assessment tools (e.g. HAZOP)
- Bow-tie analysis methodology and Critical Control Management. (Appendix D)
- Incident Management process
 (Appendix E)
- > ISO 31000 Risk Assessment Guideline

- Group risk matrix
- Impact and Aspect Register
- > Risk profile database
- › Approve Inspection Authority reports
- > Task/Job observations
- Close call/Near miss reporting
- › Group SHEQ incident classification matrix
- > RCA Tools, e.g. fault tree analysis
- Group SHEQ communication tools, such as incident flash notifications and Lessons learned communication templates
- > Management reviews and audits
- > Business Letters of Assurance

MATURITY ASSESSMENT

OUTCOMES	REACTIVE	COMPLIANT	PROACTIVE	RESILIENT
31. SHEQ risk profile	A team SHEQ risk profile does not exist or is developed using inconsistent processes. SHEQ risk profiles are not reviewed.	A team SHEQ risk profile is developed using the Group risk matrix and risk management process and is reviewed at least annually.	Teams understand their highest SHEQ risks. SHEQ profiles are reviewed when unwanted events occur, recur or control failures trend upward.	SHEQ risk profiles drive risk-based decision making. Lessons from SHEQ risk profile reviews are embedded.
32. SHEQ risk controls	SHEQ risk controls are identified on an ad hoc basis, are managed by the SHEQ function and control effectiveness is rarely reviewed.	High SHEQ risks are identified, analysed and understood. Related risk controls are implemented and managed by teams.	A structured process is followed to manage critical control effectiveness and to give first level assurance of its effectiveness.	SHEQ risk control effectiveness is continuously improved and used as a leading indicator to improve SHEQ performance.
33. Incident management	SHEQ incidents are investigated informally with no root cause analysis and limited management of corrective actions.	The Group incident investigation procedure is followed, and root causes are determined for all incidents. Preventive and corrective actions are managed formally.	Investigations are prioritised and resourced based on the potential or actual severity of incidents. Thorough RCAs are done, and root causes are addressed sustainably.	Actions and learnings from incidents are shared, applied and embedded to prevent occurrence and recurrence of incidents. The effectiveness of actions is monitored.

3.2 Operations Control 3.2.1 Project Management

PURPOSE

To manage project-related SHEQ risks to achieve Zero Harm.

DEFINITION OF VICTORY

- SHEQ requirements are included and executed in the formal Project Management process.
- > SHEQ risks related to the acquisition, design, concept development, construction, commissioning, decommissioning, demolition, remediation and rehabilitation of our products, plants, assets and facilities are effectively managed. [3.1]
- Design principles of inherent safety, sustainability and productivity are followed to reduce SHEQ risks.

PERFORMANCE REQUIREMENTS

AECI businesses:

Ensure asset, project and product alignment with SHEQ requirements during the planning/ design phase

- Perform SHEQ risk studies for all projects and modifications. [3.1]
- Apply SHEQ and legal criteria when prioritising and approving capital projects. [3.4]
- Planning for adherence to SHEQ and legal requirements when acquiring, designing, constructing, modifying products, plants, assets and facilities. This includes considering future SHEQ requirements and risk reduction as an objective during detail design, technology selection and capital approval.
- Evaluate and manage SHEQ risks and deliverables through a formal project management process for all phases of projects.

Manage SHEQ risks during project implementation

- Follow a management of change (MOC) process for all projects and design changes to mitigate SHEQ risks.
- Do not allow deviations from approved SHEQ design practices and standards unless reviewed and approved by the designated authority, and after the rationale for the decision is documented.

- Establish quality assurance processes to ensure that facilities and materials meet all SHEQ specifications and that products, construction and other changes are in accordance with applicable standards.
- > Perform pre-start up reviews to confirm:
 - » Basic engineering design principles were followed.
 - » Construction is in accordance with specifications.
 - » Operations integrity measures are in place.
 - » Emergency, operations and maintenance procedures are in place and set out clear requirements. [3.2.2]
 - » Risk-management recommendations have been addressed and required actions have been taken, [3.1]
 - » Training of personnel has been completed. [2.1]
 - » Regulatory and permit requirements are met. [3.4]
- Formally transfer end-of-job documentation to operations prior to beneficial operation to ensure knowledge transfer for safe and sustainable operations.
- Manage project record keeping through a formalised document governance process which ensures continued availability of records. [3.3]
- Measure project performance according to SHEQ criteria and update the project management process and procedures in line with improvement opportunities. [4.1, 4.2]

Closure and End-of-Life projects

- Plan for and manage the decommissioning or abandonment of plants, assets, facilities, and products and remedy any resulting SHEQ impacts and risks.
- Provide resources (people, time and funding) for the disposal, rehabilitation, decommissioning and/or demolition of assets.
- Regard closure projects as important and give equal attention to manage and reduce SHEQ risks.
- Establish an external review process to ensure SHEQ and legal requirements are met. [3.4]

ROLES AND RESPONSIBILITIES LEADERS

- Embed a mind-set of "beyond compliance" for new designs and asset upgrades impacting SHEQ risks. [1.3, 2.3]
- Incorporate SHEQ requirements into project plans and embed the expectation of Zero Harm.
- Ensure design principles of inherent safety, sustainability and productivity are followed to reduce SHEQ risks.
- Approve project plans only when they adequately address SHEQ and legal requirements.
- Ensure that SHEQ requirements are addressed throughout all project phases and "gate reviews".
- Manage SHEQ project risks through the formal project management process and procedures. [3.4]
- > Ensure that long-term planning includes the provision of resources for closure projects.
- Sign off completed projects that meet SHEQ and legal requirements.

SHEQ PRACTITIONERS

- Participate in project reviews and risk assessments.
- Scan the SHEQ industry and legal landscape to advise project teams of applicable future requirements and changes in legislation.
- Provide specialist SHEQ input for project execution.
- > Guide teams and verify that SHEQ requirements for projects are met.
- Facilitate handover and acceptance of SHEQ related end-of-job documentation.

GROUP SHEQ

- Scan the SHEQ industry and legal landscape to advise Group of future requirements and changes in legislation impacting the Group.
- Provide specialist assistance for specific SHEQ-related capital projects (e.g. asset upgrade projects with process safety implications, rehabilitation projects with environmental implications, new plant design with health risk or quality implications).
TOOLS, PROCESSES AND PROCEDURES

- > HIRA
- > Aspects and Impact register
- Planned Task/Job Observations (PTO/PJO)
- › MOCs and HAZOP studies
- Project SHEQ Management plan
- Environmental impact assessment
- Pre-start safety
- > Layer of protection analysis (LOPA)

- Safety Integrity Level (SIL)

MATURITY ASSESSMENT

- Compliance Management Tool (Exclaim)
- > Expenditure Proposal procedure
- Business Project Management guidelines
- > Due diligence study
- Decommissioning/demolition procedure
- Rehabilitation procedure
- Contractor Management
- Group PSM standards

OUTCOMES	REACTIVE	COMPLIANT	PROACTIVE	RESILIENT
34. Plan/design for project alignment with SHEQ requirements	Little consideration of SHEQ requirements for projects.	SHEQ and legal requirements, including risk studies are considered during the planning/design phase for a project.	Future SHEQ requirements are considered in trade-off decisions for projects. SHEQ risk studies drive improved project design standards.	Industry leading SHEQ technologies are sustainably implemented. Risk reduction practices are built into project planning/designs.
35. Project implementation	Project cost and schedule drive project performance. An MOC process is rarely used. Pre-start up SHEQ reviews are done as a tick-box exercise. End-of-job documents are incomplete.	SHEQ requirements are embedded in the way projects are executed. All end-of-job documents are complete and accurate.	Pre-start up SHEQ reviews are done to ensure SHEQ risk controls are implemented prior to start up. A structured MOC process is always followed.	A Zero Harm mindset is embedded in project execution teams. Project objectives of Zero Harm, project cost and schedule are not in conflict, but are optimised to deliver a sustainable Zero Harm result.
36. Closure/End-of life projects	Closure projects are started because of external pressures.	Closure/end-of-life decisions are based on minimum legal compliance. Closure projects are planned for and resources are provided.	Closure decisions are based on the mitigation of future risks. Rehabilitation risks are mitigated proactively during plant design.	Leaders actively pursue opportunities to minimise the SHEQ impact of operations closure. Lessons learned from previous closures are incorporated into the project management process and procedures.

3.2 Operations Control 3.2.2 Operations and Maintenance

PURPOSE

To operate and maintain facilities to achieve and sustain Zero Harm.

DEFINITION OF VICTORY

- Management of SHEQ risks is integrated into daily operations and activities. [3.1]
- Asset integrity is maintained and operating envelopes, maintenance plans and risk controls are effectively implemented to ensure safe and reliable operations.

PERFORMANCE REQUIREMENTS

AECI businesses:

- Have a comprehensive SHEQ programme in place which establishes applicable peoplerelated Zero Harm work practices for each site, including:
 - » Life-saving behaviours. [2.3]
 - » Stop-work authority.
 - » Permit to work.
 - » Continuous risk assessments of day-to-day risks. [3.1]
 - » Personal protective equipment appropriate for the risk exposure in each area.
 - » Medical surveillance and a health education process. [2.2]
 - » A road safety management process.
 - » A behaviour-based programme which allows for the identification and implementation of behaviour improvement actions. [2.3]
- Implement start-up, operating, maintenance, shutdown, emergency and process safety standards and procedures which include
 SHEQ risk controls. These are reviewed periodically or when required by a change in risks and/or risk controls. [3.1]
- Develop an emergency response plan which addresses all applicable SHEQ risks.
 Perform emergency drills, test emergency communication systems [2.4], and provide feedback on lessons learned and actions required to close identified gaps. [4.2]
- Manage both temporary and permanent changes which affect our people, equipment, procedures, processes or technology through a formal management of change process

which considers and mitigates the SHEQ risks and ensures SHEQ requirements are not compromised.

- Identify and implement SHEQ improvement actions to improve operations control and incorporate these improvements into procedures. [4.2]
- Operate and maintain facilities to prevent injuries, illness, incidents and environmental impact. These processrelated Zero Harm work practices include:
 - » Operating according to a defined **operating envelope**.
 - » Identifying process safety critical equipment and executing planned preventive maintenance strategies according to a risk-based inspection programme.
 - » Calibrating and verifying **equipment** to ensure accurate SHEQ monitoring.
 - » Applicable risk assessments. [3.1]
- » Critical control monitoring. [3.1, 4.1]
- » Good housekeeping and operational discipline.
- » Management of hygiene stressors.
- » Analysing, testing and verifying the **quality** of raw and final products.
- » Preventing negative **environmental** consequences through responsible management and monitoring of natural resources, waste, effluent and emissions, and compliance to licence conditions.
- » Identifying **root causes of failures** through failure analysis and resolving these causes, while also analysing possible failure modes and effects to prevent or mitigate the effects of future SHEQ incidents.
- » **Auditing and reviewing** operating envelopes, maintenance plans, process safety critical equipment and environmental management plans on a regular basis or when a change in SHEQ risks or risk controls occurs. [3.4]

ROLES AND RESPONSIBILITIES LEADERS

- Give personal, visible commitment and support for the SHEQ programme implementation in operations.
- Develop and execute the asset management strategy to ensure the ongoing integrity and safe operation of facilities.

- Ensure that operations planning is done with a Zero Harm and sustainability mindset. [1.2]
- > Embed a customer-centric quality culture in teams. [2.3]
- > Ensure that daily high-risk jobs and tasks are defined, discussed and managed.
- Ensure that category one (critical equipment) maintenance schedules are communicated with the SHEQ department.
- > Maintain good operations discipline and a structured non-conformance process.
- Incorporate SHEQ risk controls into daily operations and activities and monitor them actively.
- Provide resources (competent people, time, funding, tools and equipment) to execute operations safely and responsibly. [1.2]
- > Ensure appropriate training is done as part of the MOC process. [2.1]
- Ensure that service providers are aligned with operations control requirements. [3.2.3]

SHEQ PRACTITIONERS

- Support and enable the implementation of the SHEQ programme in operations.
- Provide SHEQ expertise when developing, reviewing and implementing operations procedures and standards.
- Assist with trend analysis of critical control operating effectiveness and related SHEQ risk exposure. [4.1]
- Co-ordinate occupational health and hygiene programmes and ensure close-out of deviations.
- > Implement and manage SHEQ management systems to enable operations control. [3.3]

GROUP SHEQ

- Provide guidance on operations and maintenance critical controls for process safety critical systems.
- Develop standardised SHEQ systems to support operations control. [3.3]

TOOLS, PROCESSES AND PROCEDURES

- › Good Manufacturing Practices
- › Good Laboratory Practices
- Maintenance system
- AECI engineering standards

- Reliability centred maintenance compliance tool
- Process Safety Management standards
- Business-specific SOPs and procedures for operations and maintenance activities
- › Control of work standards such as:
 - » Energy isolation and lock-out
 - » Start-up and shutdown
 - » Decontamination
 - » Housekeeping, colour coding, identification and demarcation

MATURITY ASSESSMENT

OUTCOMES	REACTIVE	COMPLIANT	PROACTIVE	RESILIENT
37. Zero Harm work practices (people and process-related)	Zero Harm work practices are inconsistently applied and do not exist in all high-risk areas.	Zero Harm work practices are consistently applied. Leaders provide the necessary resources to enable safe operations.	Zero Harm work practices focus on effectiveness of controls.	Teams have embedded Zero Harm work practices. SHEQ risks are reduced through integrated improvements of Zero Harm work practices.
38. Operations and Maintenance Procedures	Procedures are not in place in all high-risk areas and/or do not address SHEQ risks and controls.	Procedures are in place for all high-risk areas and address SHEQ risks and controls. Procedures are periodically reviewed.	Operations teams actively use, review and optimise procedures to ensure that controls are executed effectively.	The use and adherence to procedures are embedded as key behaviours to reduce SHEQ risks.
39. Emergency response plans	Emergency response plans are not aligned with credible risk scenarios.	Emergency response plans are developed, based on credible high risk scenarios and are implemented.	Regular training, exercises and communication of emergency response plans result in effective plans.	When executed, emergency response plans credibly reduce negative consequences for people, assets and the environment.
40. Management of Change (MOC) process	Technical changes are not consistently reviewed through an MOC process.	A structured MOC process is in place and implemented consistently for technical changes.	SHEQ risks from technical changes are proactively managed through an integrated MOC system.	The MOC process is seen as a key enabler of operating envelope improvement actions.
41. Asset integrity	SHEQ critical equipment is not consistently identified and managed through maintenance strategies.	All SHEQ critical equipment is identified and managed through maintenance strategies and meets SHEQ legal requirements.	A list of SHEQ critical equipment is regularly updated and maintenance strategies are reviewed based on changes to SHEQ risks or controls.	Engineering and operations teams consistently collaborate to improve maintenance strategies which reduce SHEQ risks.

3.2 Operations Control 3.2.3 Supply Chain

PURPOSE

To execute our Supply Chain activities with Zero Harm to our people and other stakeholders.

DEFINITION OF VICTORY

- Our stakeholders, which include service providers, suppliers and customers, meet the prescribed SHEQ requirements.
- SHEQ risks and requirements related to products and services are managed throughout the Supply Chain life cycle. [3.1]

PERFORMANCE REQUIREMENTS

AECI businesses:

Ensure Zero Harm work practices are applied by suppliers, service providers and customers:

- Contractual agreements and applicable SLAs specify SHEQ requirements, SHEQ incentives and the right to terminate due to poor SHEQ performance.
- Contract owners, reporting relationships, lines of consultation and communication, roles and responsibilities, accountabilities and system interfaces as it relates to SHEQ are clearly documented in contracts and service level agreements.
- Risk-based evaluations are done when selecting, monitoring performance and re-evaluating suppliers, service providers and customers.
- Applicable SHEQ information and procedures are shared proactively. [2.4]
- Suppliers, service providers and customers are actively engaged in managing and improving SHEQ risks. [2.4]

Ensure SHEQ requirements are implemented across the Supply Chain

- > Service providers and subcontractors:
 - » Perform risk assessments for all activities and develop SHEQ plans prior to commencing any work. [3.1]
 - » Regularly report on their SHEQ performance and where required, participate in site meetings, reviews and incident investigations. [2.4, 3.1, 4.1]

- » Provide information on the hazards and risks associated with their equipment, products and services prior to the start of work or whenever changes occur. [3.1]
- Procured goods, suppliers and inbound Supply Chain activities
 - » Evaluate procured goods for SHEQ risks prior to purchasing and thereafter reviewed as required. [3.1]
 - » Consider legal compliance and safe chemical and food management practices for the procurement of raw materials and chemicals. [3.4]
 - » Only utilise approved suppliers who have passed a SHEQ accreditation assessment.
- Material and product transportation
 (In and outbound Supply Chain activities)
 - » Products and materials are transported by SHEQ-approved carriers, including road, rail, sea and air. Specific focus is placed on vehicle and driver safety.
 - » Community safety is considered by performing risk assessments which consider road conditions, weather conditions and loss of containment of hazardous chemicals, and developing mitigation plans. [3.1]
 - » On-site collection and delivery SHEQ requirements for loading, unloading and dispatch are adhered to.
- › Marketing, sales and customers
 - » Customers are approved based on meeting SHEQ requirements prior to delivery of products and services.
 - » Processes are in place to understand customer quality requirements, consistently deliver quality products and services, and measure customer satisfaction.
 - » AECI SHEQ requirements are met for AECI equipment and employees located at customer sites.
- › Product Stewardship
 - » Identify, assess and manage SHEQ and product integrity impacts of manufacturing, distribution, storage, use, recycling, potential release and disposal when developing, formulating or altering products, by-products or process streams. [3.2.1]
 - » Follow a formal product registration process for product sales to ensure compliance to SHEQ and legal requirements. Product safety information (including food labelling and chemical safety data sheets) is

provided to all customers, handlers or users of our products.

» Chemical and food quality testing is performed to ensure customer safety.

ROLES AND RESPONSIBILITIES LEADERS

- > Ensure contract owner accountabilities are clear and well managed.
- Involve suppliers, service providers and customers in SHEQ discussions, meetings and investigations. [2.4]
- Manage and evaluate supplier, service provider and customer SHEQ performance.
- Develop and implement product transportation risk management plans.
- Understand customer and legal quality requirements and ensure quality testing is performed.
- Manage the risks associated with manufacturing, procuring, selling, transporting, moving or storing equipment, materials and products.

SHEQ PRACTITIONERS

- Specify business specific SHEQ requirements to be included in contracts.
- Communicate relevant procedures and SHEQ information to suppliers, service providers and customers. [2.4]
- Facilitate supplier, service provider and customer SHEQ performance evaluations. [3.4]
- > Advise leadership on Responsible Care[®] practices.

GROUP SHEQ

Develop and review:

- > SHEQ requirements for suppliers, service providers and customers in consultation with Group Procurement and relevant specialists. These include SHEQ requirements for accreditation.
- A risk-based assessment for measuring supplier, service provider and customer SHEQ performance. [4.1]
- Systems for managing SHEQ risks related to manufacture, transportation and storage of hazardous products and food products where it requires Group-wide standardisation. [3.3]

TOOLS, PROCESSES AND PROCEDURES

- > Safety data sheet system (e.g. LISAM)
- > SQAS audits
- Customer Relationship Management (CRM)
- › Responsible Care[®] programme
- > SHEQ file requirements
- Globally Harmonised System of classification and labelling of chemicals (GHS)
- > Supplier audits and self-evaluation
- > SHEQ Criteria for suppliers
- Approved supplier list
- > Customer complaints and/or satisfaction
- Contract SLAs
- Contractor management process

MATURITY ASSESSMENT

OUTCOMES	REACTIVE	COMPLIANT	PROACTIVE	RESILIENT
42. Supplier, service provider and customer SHEQ management	SHEQ requirements are not specified in contracts and/or supplier, service provider and customer SHEQ performance is not evaluated.	Contracts specify SHEQ requirements and are monitored by contract owners.	Risk-based evaluations of supplier, service provider and customer SHEQ performance are analysed and discussed with relevant stakeholders regularly.	Contract owners and suppliers, service providers and customers work together to reduce SHEQ risks and improve performance.
43. Product safety	Risk-based processes for the evaluation, registration, transportation and storage of procured or manufactured products are inconsistently followed.	Risk-based processes for the evaluation, registration, transportation and storage of procured or manufactured products are followed in a structured and legally compliant way.	Product risks are well understood throughout the product life cycle. Plans are co-created with suppliers, service providers and customers to reduce SHEQ risks related to products.	Product safety industry trends are analysed and benchmarked. Collaborative efforts with customers and suppliers drives the strategic intent of product safety improvement.
44. Product and material transportation	Product and material transportation risks are rarely considered.	Product and material transportation legal and industry safety requirements are adhered with and monitored.	Product and material transportation risk management plans are in place and are regularly reviewed and improved.	The improvement of product and material transportation SHEQ performance is a collaborative effort between all stakeholders to achieve Zero Harm.
45. Product quality	Customer and legal requirements are not consistently met.	Customer and legal requirements are consistently met and quality verification is performed.	A relationship is established with customers to better understand quality requirements and improvement plans are actively managed.	Product quality is achieved consistently, resulting in it being a strategic driver for winning orders and maintaining key customers.

3.3 Systems

PURPOSE

To enable the implementation and embedding of the SHEQ Framework through systems, processes and tools.

DEFINITION OF VICTORY

- > A standardised SHEQ system that enables the management of SHEQ practices.
- SHEQ management systems, processes and tools are fully integrated into the daily operations and are enabling teams to achieve Zero Harm.

PERFORMANCE REQUIREMENTS

AECI businesses:

- Implement the SHEQ Framework which is based on and aligned with the following national/international management standards, as applicable to business units:
 - » ISO 9001
 - » ISO 14001
 - » ISO 22001/FSSC 22000
 - » ISO 17025
 - » ISO 45001
 - » SANAS/SANS Standards
 - » Process Safety Standards
 - » Responsible Care®
- Adopt applicable management standards for certification, considering the following:
 - » Customer and management requirements according to the business risks.
 - » Certification by accredited certification/ approval bodies.
 - » Implementation of recommendations from SHEQ certification and sharing of lessons learned. [3.4, 2.4]
 - » Other relevant/applicable standards/ legislation such as:
 - REACH
 - SEVESO
 - COMAH
 - NOSA CMB 253
 - ISO 50001 (Energy)

- Translate and communicate the SHEQ
 Framework and performance requirements to individual accountabilities. [2.2, 2.4]
- Implement SHEQ procedures to standardise SHEQ processes.
- Integrate and embed SHEQ management systems, processes and procedures into the business daily rhythms and operations activities. [3.2]
- Implement and maintain approved systems/technologies to enable the execution of standardised SHEQ processes and activities. This includes the applied processes and procedures to enable the SHEQ Framework and to provide leaders with accurate information to support decision-making.
- Conduct management reviews and internal audits of the effectiveness of the SHEQ management system, processes and procedures, considering the business SHEQ risk profile and exposure as well as SHEQ performance. Implement improvement recommendations from these reviews.
 [3.4, 4.2]

ROLES AND RESPONSIBILITIES LEADERS

- Effectively apply and execute SHEQ processes by using the tools and systems provided.
- Provide appropriate resources (people, time and funding) to effectively implement and maintain the SHEQ Framework. [2.2]
- Conduct management reviews at least annually to assess system health and compliance. [3.4]

SHEQ PRACTITIONERS

- Assist leaders in implementing the SHEQ Framework.
- Facilitate the implementation of the prescribed international standards.
- Oversee SHEQ certification activities.
- Ensure that all SHEQ management systems, technology and processes are managed, maintained and continuously improved to support the SHEQ Framework. [4.2]
- Develop and review business-specific SHEQ procedures.
- > Use a management of change process when implementing new or updated SHEQ performance requirements that impact existing management systems.

GROUP SHEQ

- Provide guidance for the implementation of the SHEQ Framework, taking into account the complexity, risks and resource requirements.
- Provide guidance on SHEQ processes to be standardised and which to be enabled through technology or Group procedures.
- Develop, review, update, approve and endorse standardised SHEQ processes to ensure continued relevance. Ensure alignment with Group business processes.
- Enable chosen standardised SHEQ processes through SHEQ technology systems, procedures and tools and develop these to a level which supports implementation of the standardised SHEQ processes.
- Align SHEQ technology systems requirements with the Group IM strategy. Be involved in the design and implementation of standardised Group SHEQ technology systems.
- Define the minimum SHEQ system requirements and certifications.

TOOLS, PROCESSES AND PROCEDURES

- > SHEQ Framework
- > SHEQ systems, procedures and technologies
- Documents outlining the management standards for:
 - » ISO 9001
 - » ISO 14001
 - » ISO 22001/FSSC 22000
- » ISO 17025
- » ISO 45001
- » ISO 50001 (Energy)
- » SANAS/SANS Standards
- » Process Safety Standards
- » Responsible Care® and Product Stewardship
- » REACH
- » SEVESO
- » СОМАН
- » NOSA CMB 253
- » Global Harmonised System
- » EPA
- » NFPA standards
- » Relevant country and/or regional standards/legislation

MATURITY ASSESSMENT

OUTCOMES	REACTIVE	COMPLIANT	PROACTIVE	RESILIENT
46. Standardised SHEQ processes	SHEQ processes are not standardised.	Standardised SHEQ processes are defined, aligned with SHEQ performance requirements and consistently applied by teams.	Optimised SHEQ processes are driven by assigned owners and enable leaders to manage team-specific SHEQ risks effectively.	Integrated SHEQ processes enable the continuous improvement of SHEQ performance.
47. Documented SHEQ procedures	SHEQ procedures are inconsistently applied.	SHEQ procedures exist for all standardised SHEQ processes, are implemented and maintained. A formal document management process is in place for all procedures.	SHEQ procedures are reviewed at defined intervals considering changes in the SHEQ risk profile, control effectiveness trends and exposure as well as SHEQ performance.	SHEQ procedures and related training material are consistently updated with learnings from investigations, observations, findings and performance trends.
48. Enabling tools and technology	Some SHEQ processes are enabled by non- standardised tools.	The execution of standardised SHEQ processes are enabled with standardised tools.	The execution of standardised SHEQ processes are enabled by integrated technology systems.	SHEQ process tools and systems are used to enable SHEQ performance improvement through better integration, analysis and decision-making.
49. Effectiveness of SHEQ processes	The effectiveness of SHEQ processes is not assessed.	The effectiveness of SHEQ processes is assessed through external and internal audits.	The effectiveness of SHEQ processes is continuously assessed through team feedback and formally in management reviews. Improvement actions are continuously driven.	Resources and lessons learned are shared across the Group to improve the execution of SHEQ processes.

3.4 Governance

PURPOSE

To provide assurance that the SHEQ management system complies with legal and other requirements/commitments.

DEFINITION OF VICTORY

- SHEQ governance processes and structures are established to ensure compliance and proper oversight.
- Leaders provide assurance on the effectiveness of SHEQ management system and SHEQ risk management. [1.3]
- Clear reporting structures and accountabilities for SHEQ are defined and documented. [2.2]

PERFORMANCE REQUIREMENTS

AECI businesses:

- Have a SHEQ governance structure with the following:
 - » Clearly defined SHEQ legal roles and responsibilities and the necessary legal appointments. [2.2]
 - » Clear SHEQ reporting requirements and structure. [4.1]
 - » Coordinated SHEQ meeting structure with committees and other governance meeting structures mandated to review SHEQ performance and make decisions.
 - » Risk-based agendas for SHEQ meetings.
 - » Formal agreement of the authority for SHEQ decision making where required.
- Identify and implement business-specific controls that ensure compliance with all SHEQ legal requirements.
- Ensure that systems are in place to manage, control, create, review, approve, access, archive and dispose of all relevant SHEQ documentation. [3.3]
- Verify conformance and compliance with SHEQ requirements through integrated and optimised internal and external audits.

- Implement a SHEQ assurance
 Framework, as applicable, consisting of:
 - » 1st level assurance: internal checks and activities by management.
 - » 2nd level assurance: peer checks within the Group and Group-internal audits.
 - » 3rd level assurance: external party audits.
- > Provide assurance of the following:
 - » Relevant legal compliance.
 - » Effectiveness of the SHEQ management processes and systems in general.
 - » Effectiveness of critical controls and the SHEQ risk management process.
 - » SHEQ results and data integrity.
- Analyse assurance deviations to determine root causes and implement corrective and preventive actions and track action closure. Share and embed learnings from these findings across the Group to continuously improve SHEQ performance. [4.1, 4.2]

ROLES AND RESPONSIBILITIES LEADERS

- Act within the SHEQ governance and compliance structure.
- Implement corrective and preventive actions to rectify deviations from all assurance activities, audits and assessments.
- > Ensure that relevant personnel are legally appointed and aware of their duties. [2.2]
- Facilitate the implementation of Group and business-specific controls to ensure compliance with SHEQ legal and other requirements.

SHEQ PRACTITIONERS

- Establish and maintain the business SHEQ governance structure.
- Ensure that SHEQ governance and compliance processes are implemented and maintained.
- Ensure that applicable SHEQ legislation is identified, understood and the implications for the business are communicated to leaders. [2.4]
- > Issue relevant reports on gaps, non-compliance, assurance deviations and improvement opportunities.

- Support leaders with the implementation of corrective and preventive actions for assurance deviations and verify the effectiveness thereof.
- > Manage and control SHEQ documents.

GROUP SHEQ

- Establish and maintain the Group SHEQ governance structure.
- Establish an inclusive Group SHEQ Committee to have oversight on the SHEQ Strategy implementation and SHEQ governance issues.
- Establish processes to identify and understand Group-applicable SHEQ legislation. Monitor any new or amended legislation and ensure that compliance is well communicated, understood and acted upon.
- Support and assist with integration of sub-functions within SHEQ.
- > Manage Group SHEQ documentation.
- Assist in integrating and optimising the Group SHEQ assurance Framework.
 This includes assurance of top SHEQ risks and critical control effectiveness.

TOOLS, PROCESSES AND PROCEDURES

- Compliance management system
- > SHEQ Committee meetings
- > Risk Management meetings
- > Service Level Agreements (e.g. S37(2))
- › Legal Compliance Audits
- Group Assurance Audits
- > Letters of Assurance
- Internal policies and procedures
- Levels/scope of authority
- > Legal appointments
- > Legal registers where applicable
- > SHEQ legal compliance standards
- › Audit checklists

MATURITY ASSESSMENT

OUTCOMES	REACTIVE	COMPLIANT	PROACTIVE	RESILIENT
50. Governance structure and meetings	SHEQ governance roles and responsibilities are not always clear, meetings don't exist and/or are not held consistently.	SHEQ governance roles and responsibilities are well defined and applied. SHEQ governance meetings monitor compliance and SHEQ performance.	SHEQ governance meetings follow a risk-based agenda aligned with SHEQ performance requirements.	SHEQ governance meetings are used to monitor all assurance outcomes as well as the embedding of learnings from assurance deviations.
51. Updates to legislation and standards	No process/system is in place to keep up to date with new/amended legislation and standards.	A process exists to ensure new/amended legislation is communicated, understood and acted upon.	New/amended legislation is proactively incorporated into SHEQ processes and performance requirements.	Business actively plans for new/amended legislation well in advance of deadlines.
52. SHEQ documentation	No formal SHEQ document governance process exists for SHEQ legal requirements.	A formal document governance process exists for SHEQ legal requirements.	All SHEQ documentation is easily accessible across the business.	SHEQ document management is fully integrated into the Group document management system.
53. Assurance activities	Audits and assessments are not risk based and focus on management system compliance. Findings are not consistently actioned or shared.	Internal and external audits are in place and findings are actioned timeously.	Focused 1st level assurance activities monitor team specific critical controls for high risk areas. Findings are analysed to identify root causes and action is taken to improve effectiveness.	SHEQ assurance is integrated and optimised to reduce the resource burden and provide a combined view of SHEQ assurance results. Learnings from assurance deviations are embedded.



RESULTS

We achieve and sustain excellent SHEQ results that meet or exceed Zero Harm goals.

Supported by the SHEQ Fundamental **Continuous improvement**

We drive continuous improvement actions to achieve sustainable Zero Harm. We have a mindset of "beyond compliance to excellence".

4.1 Measurement

We measure, review and report our SHEQ performance.

4.2 Improvement

We analyse our SHEQ practices and performance and actively drive improvement plans to achieve Zero Harm.



4.1 Measurement

PURPOSE

To measure, review and report SHEQ performance, identify trends and confirm achievement of SHEQ objectives and targets.

DEFINITION OF VICTORY

- Performance measurement systems and programmes support the achievement of Zero Harm objectives and targets. [1.2]
- Internal and external stakeholders are aware of our SHEQ performance. [2.4]
- Factually correct and reliable information is used to assess performance and make operations and improvement decisions. [4.2]

PERFORMANCE REQUIREMENTS

AECI businesses:

- Track leading and lagging SHEQ measurements through standardised methodologies and reporting platforms to ensure results are consistently analysed and reported across the Group. [1.2]
- Ensure integrity of all SHEQ data generated and used for reporting by establishing a process for governing data integrity. [3.4]
- Monitor, measure, analyse and evaluate
 SHEQ performance and report results and top risks to leadership and external stakeholders as required. This includes assurance reporting.
 [2.4, 3.4]
- Understand the drivers of observed
 SHEQ trends and root causes of incidents, that appropriate corrective and preventive action can be taken. [3.1]
- Review SHEQ performance against
 objectives and targets using a risk-based
 perspective to identify improvement
 opportunities and provide inputs into
 management reviews, improvement plans,
 and future target setting and planning
 exercises. [1.2, 4.2]

ROLES AND RESPONSIBILITIES LEADERS

- Ensure relevant tools and technologies are available for effective SHEQ performance measurement and reporting.
- > Ensure employees are appropriately trained to measure and report SHEQ results.
- > Drive a culture of reporting.
- > Ensure correct data collection methods are used.
- Review SHEQ results and identify corrective or preventive action and improvement opportunities. [4.2]
- Report SHEQ results, provide assurance to the relevant governance structures and give assurance of SHEQ data integrity. [3.4]

SHEQ PRACTITIONERS

- > Provide guidance on data requirements.
- > Ensure correct measurement calculation methods are used for reporting.
- Govern and provide assurance on SHEQ data integrity.
- Enable SHEQ performance reporting by collating SHEQ data, reviewing SHEQ performance and analysing trends to provide management information to leadership.
- > Recommend appropriate improvement action.

GROUP SHEQ

- Define the minimum standardised leading and lagging SHEQ measurements and calculations to enable standardisation and comparability across the Group.
- > Set Group SHEQ reporting requirements.
- Evaluate and recommend the tools and technology used to measure, analyse and report SHEQ performance and assurance.
- Report and review Group SHEQ performance, analyse Group-wide trends and recommend improvement initiatives.
- > Enable external assurance of chosen SHEQ measurements for the Group.
- Consolidate Group SHEQ performance for external reporting.

TOOLS, PROCESSES AND PROCEDURES

- SHEQ management system
- Reporting templates
- > SHEQ dashboard
- > Group SHEQ measurement procedures
- > Data assurance Framework
- Internal and external reporting guidelines (incl. CAIA)
- > Legislation reporting requirements

MATURITY ASSESSMENT

OUTCOMES	REACTIVE	COMPLIANT	PROACTIVE	RESILIENT
54. SHEQ data capturing	SHEQ data is not reliable.	SHEQ data is captured according to procedure on a platform. The SHEQ team verifies data integrity.	Data capturing procedures are measured for effectiveness. Automated systems manage data input quality for lagging and leading measurements.	Automated systems allow real-time reporting and data mining which is used to improve decision making.
55. SHEQ reporting	Informal reporting focus on lagging measurements.	A formal reporting system is used to measure leading and lagging measurements against targets and historical trends.	A standardised reporting system enables comprehensive analysis of risk-based leading and lagging measurements.	There is only one source of truth for SHEQ results and leading measurements are used to forecast SHEQ performance gaps, exposure and proposed actions.
56. SHEQ performance review	Review of SHEQ results and identification of improvement opportunities happens very rarely.	SHEQ lagging measurement results are analysed and reviewed to identify improvement actions.	SHEQ performance gaps for leading measurements are analysed, root causes identified and used to inform management decisions and improvement plans.	Improvement actions drive achievement of SHEQ objectives and targets and reduce SHEQ risks.

4.2 Improvement

PURPOSE

To continuously improve our SHEQ practices to achieve Zero Harm.

DEFINITION OF VICTORY

- A continuous improvement mind-set is part of the Zero Harm culture.
- The value of SHEQ improvement plans and actions is evident in improved SHEQ results.
- Our people are included in new innovations and encouraged to suggest new ideas and improvement opportunities.

PERFORMANCE REQUIREMENTS

AECI businesses:

- > Use a "plan, do, review, improve" continuous improvement approach to improve SHEQ performance and practices.
- Conduct SHEQ Maturity Assessments at planned intervals to determine the maturity of SHEQ performance and related SHEQ practices of a team. Desired maturity levels, resulting gaps and improvement focus areas are identified.
- Conduct management reviews to determine the suitability, adequacy and effectiveness of the SHEQ Framework, systems, processes and tools.
- Interpret, adopt, implement and embed SHEQ lessons learned from incidents, non-conformances, audits, projects, control failures and best practices.
- Develop improvement plans based on SHEQ risk assessments, operations (daily/weekly) reviews, performance measurement, lessons learned from incidents, Maturity Assessments, internal and external audits, management reviews and benchmarking studies.
- Prioritise improvement plan actions to ensure top SHEQ risks are addressed and cascade improvement plans into team plans. [2.2, 3.1]

- Assign responsibility for SHEQ improvement actions to individuals, empower them to complete the actions and give recognition where appropriate. [2.2]
- Track completion of SHEQ improvement plans to ensure benefits are realised.
- Share and embed SHEQ best practices and lessons learned from incidents, investigations and audits to ensure knowledge is retained. [2.4]
- Embed SHEQ improvements through systems, processes, tools, training, change management and behaviour programmes. [2.1, 2.3, 2.4, 3.2, 3.3]
- Integrate the SHEQ improvement process into business improvement processes and rhythms.
- Utilise and retain organisational SHEQ knowledge through a suitable platform.
- Enhance the drive for SHEQ innovation and with specific focus on risk reduction and the design effectiveness of critical controls. [3.1]

ROLES AND RESPONSIBILITIES LEADERS

- Encourage and drive continuous improvement by promoting Zero Harm and SHEQ Fundamentals.
- Conduct Maturity Assessments and chair management reviews.
- Identify SHEQ improvement opportunities and implement improvement actions.

SHEQ PRACTITIONERS

- Analyse and report on SHEQ performance and lessons learned to ensure appropriate improvement actions are developed.
- Support continuous improvement initiatives.
- Measure the SHEQ Framework effectiveness through facilitating and/or co-ordinating management reviews and Maturity Assessments.

GROUP SHEQ

- Review Group SHEQ performance to develop Group-wide improvement initiatives that address the Group top SHEQ risks and performance gaps.
- Create a platform for sharing best practices and share Group-wide best practices.
 [2.4, 3.3]
- Develop a standardised methodology of measuring and improving the effectiveness of the SHEQ Framework.
- Review the SHEQ Framework and make changes to ensure it remains suitable, adequate and effective.
- Analyse Group SHEQ statistics, audit findings and incident investigation reports to share learnings and promote continuous improvement.
- Conduct benchmarking against external SHEQ best practices and performance.
 Ensure that related webinars, seminars and conferences are attended.
- > Monitor the external SHEQ landscape.

TOOLS, PROCESSES AND PROCEDURES

- Maturity Assessment guidelines
 (Appendix F)
- Root Cause Analysis
- ISO 19011 guidelines for auditing management systems
- › Management Review
- > Internal and external audits
- > Flash learning notifications
- › Bigger Idea Innovation platform
- Business improvement projects related to SHEQ
- > SHEQ strategy review meetings

MATURITY ASSESSMENT

OUTCOMES	REACTIVE	COMPLIANT	PROACTIVE	RESILIENT
57. Review SHEQ performance and practices	Performance gaps not always understood.	A plan, do, review, improve cycle is followed to understand current SHEQ performance and practices to identify gaps.	A process is in place to monitor and improve SHEQ performance and practices.	Teams own their SHEQ performance and practice review and systems enable continuous improvement thereof.
58. Develop and prioritise SHEQ improvement plans	Not all teams have improvement plans and/or plans are not prioritised.	Improvement plans exist and are prioritised based on top SHEQ risks, legal compliance, urgency and resource availability.	Leaders set the tone by prioritising improvement plans based on SHEQ risk reduction and individuals are actively engaged in developing practical solutions.	Cross-functional teams work together to develop and embed industry- leading SHEQ improvement solutions.
59. Implement and embed improvement actions	Improvement plans are driven by the SHEQ team. Improvement actions and benefits are not formally tracked.	Individuals are assigned personal responsibility for improvement actions and are empowered to execute it. Actions are tracked to completion.	SHEQ improvements are implemented as a priority and embedded by developing enabling processes and tools which ensure sustainability of the solution. Improvement action effectiveness is measured.	SHEQ improvements are embedded through training, change management and behaviour programmes. Innovative ideas are considered and implemented where possible.
60. Management review	The effectiveness of the SHEQ Framework is not measured.	The suitability, adequacy and effectiveness of the SHEQ Framework is formally reviewed.	Learnings from audits and assessments are used to proactively identify improvement areas for the SHEQ Framework.	Employees on all levels contribute to the improvement of the SHEQ Framework.

APPENDICES



APPENDIX A: Sub-function Positioning

A1. OCCUPATIONAL SAFETY

ROLE

Create a safe workplace for our people and service providers by preventing exposure to hazards and mitigating the impact of any exposure that has occurred to eliminate injuries.



SCOPE

- Manage hazards to ensure the workplace is safe
- Protective clothing and equipment
- > Ensure safe task execution

Occupational Safety is concerned with the health and safety of persons in the workplace and has a strong focus on primary management of hazards. We aim to eliminate all injuries to our workforce with specific focus on the prevention of high severity injuries.

As part of our commitment to keeping workers as safe as possible, AECI has embarked on a journey of establishing and implementing flexible, systematic and comprehensive methods that will continuously improve workplace safety. AECI subscribes to all country-specific legislation, which includes the following:

- Onited States Occupational Safety and Health Administration (US OSHA), Regulation 29 CFR 1904.
- Occupational Health and Safety Act, No. 85 Of 1993 and its regulations.
- Compensation for Occupational Injuries and Diseases Amendment Act, No 61 of 1997.
- South African National Standards (SANS).

Occupational Safety focuses specifically on the following processes to enhance compliance and a pro-active approach to improve safety performance:

OCCUPATIONAL RISK ASSESSMENT	SAFE WORK EXECUTION	CONTRACTOR SAFETY MANAGEMENT	CONTROL MANAGEMENT	INCIDENT MANAGEMENT
P Baseline risk assessments P Material Unwanted	 SOPs and safe work standards Work instructions 	 Group procedure for contractor safety management 	 > First level assurance of critical controls > Inspections 	 Group procedure for SHEQ Incident management Root cause analysis
Events	> Lock-out/Tag-out	SHEQ specifications	• Audits	> Embedding of
Bowtie assessments Issue-based risk assessments Pre-task risk assessments	 > Life saving behaviours > Behaviour-based safety > PPE 	Regional and area specifications	* Emergency preparedness and first aid response	learnings
Hazard identification	 Planned task observations 			

A2. PROCESS SAFETY

ROLE

Achieve process integrity through inherently safe design, asset management and chemical operations discipline.



SCOPE

- Inherently safe design
- Safe operation and maintenance
- Hazard identification, classification and mitigation
- Asset integrity and management of change

Risk-based Process Safety Management (PSM) is required in operations to prevent fires, explosions and accidental releases of chemicals or energy (FER). The AECI PSM system comprises a series of management practices that reflect this goal, with the expectation of continuous performance improvement for each management practice. The practices are based on the principle that facilities will be safe if they are designed and built according to sound engineering practices, operated and maintained properly and periodically reviewed for conformance. All changes to such facilities should be appropriately managed to maintain the design intent.

Causes of process safety incidents (releases of toxic, flammable, highly reactive, and explosive substances, fires and explosions) can be grouped in one or more of the following categories:

- Technology or equipment failures;
- ' Human failures;
- ' Management system failures; or
- > External circumstances and natural phenomena.

The approach to be followed in AECI is based on the Centre for Chemical Process Safety's (CCPS) Risk Based Process Safety Management (RBPSM), which was developed from the OSHA Process Safety Management system. Collectively, the management practices encompass Process Safety Management from the design stage, through operation, maintenance and training. The intent of RBPSM is that the management system applied is aligned with the risk of the facility. Some elements may therefore have higher emphasis than others as determined by the potential risk of the site.

The AECI PSM system is based on the PSM standard S1 and incorporates four main pillars or foundational blocks encompassing a total of 17 Process Safety Management elements:

	SAFETY (LEADERSHIP ANI) CULTURE)	LEARNING FROM EXPERIENCE
Leadership, operations discipline and culture	Workforce involvement and stakeholder engagement	Compliance to legal standards and codes	Incident management
UNDERSTAND THE	RISK	l	Performance matrices
Process safety information	Process hazard analysis		Management review and
MANAGE THE RISK	(continuous improvement
Standard operating procedure	Safe work practices	Asset integrity	Process safety auditing
Contractor management	Training and performance assurance	Management of change	
Prestart up safety reviews	Emergency preparedness and response		

A3. OCCUPATIONAL HEALTH

ROLE

To protect our workforce against potential occupational health hazards which may be detrimental to their health.



SCOPE

- To protect employees against occupational stressors (Occupational Hygiene)
- Ensure employees' physical, mental and psycho-social wellbeing and suitability

Occupational health is a specialist branch of medicine that focuses on the physical and mental wellbeing of employees in the workplace, with the aim to prevent work-related illness and injury to the workforce.

AECI subscribes to the international best practice as promulgated by the Congress of the International Commission for Occupational Health (CICOH) and other relevant country-specific legislation that requires occupational health at the workplace to include:

- Prevention and management of physical, chemical, biological and ergonomic, occupational stressors;
- Prevention of occupational diseases and injuries;
- > Prevention of excessive work load and work life constraints; and
- Promotion of health and workability, rehabilitation and return to work as well as first aid and curative services.

Occupational health consists of the following sub-functional processes and components:

|--|

A4. ENVIRONMENT

ROLE

Responsibly manage and minimise the environmental impact of our operations.



SCOPE

- Minimise the negative impact of pollution on people and the environment
- Support environmental compliance, transparent reporting and stakeholder engagement for environmental performance

AECI acknowledges that its operations have an impact on the environment and is therefore committed to the diligent management of the environmental footprint. Being able to manage environmental issues is becoming increasingly important as knowledge and understanding of the changing global environment becomes more and more pronounced. AECI bases its business practices on its values, which include those of Responsibility and Going Green.

The legal environment in which the Group operates is increasingly complex owing to the ever-changing environmental-related legislative requirements in South Africa and the diversity of environmental legislation in countries in the Group's geographic footprint. Environmental compliance in the Group is currently managed by conducting environmental legal compliance reviews and audits which forms part of each business's environmental management system (e.g. ISO 14001). The Group has recently introduced the compliance management tool geared at assisting with the process of ensuring compliance in a diverse and large footprint. Another key component of sound environmental management is the setting, measurement and reporting of achievement of targets. To manage and communicate environmental performance effectively, it is therefore essential to measure what is managed. This measurement is be based on quantifiable key performance indicators (KPIs) which are used to track performance. For example, AECI reports on minor, moderate, serious and major environmental incidents and the aim is to prevent all environmental incidents, with a short term target to prevent all major and serious environmental incidents by 2020.

AECI is supportive of the Global Reporting Initiative (GRI) G3 Guidelines for its reporting, and this Framework is based on the requirements of the G3 Guidelines, where applicable. Note that this Framework does not address every indicator in the G3 Guidelines, but only those KPIs which are deemed to be material and significant to AECI's operations.

The environmental performance areas which are tracked and managed are listed below:

ENERGY	WATER AND EFFLUENT	WASTE AND EMISSIONS	EXPLOSIVES	OTHER
ENERGY PURCHASED > Electricity > Steam > Coal > Natural gas > Diesel ENERGY SELF- GENERATED AND EXPORTED > Electricity > Steam	 WATER Total freshwater withdrawal Total recycled/reused water Total non-fresh water withdrawal Other sources of water EFFLUENT Process effluent 	 WASTE Hazardous waste Waste to recyclers Non-hazardous waste EMISSIONS SO2 NO2 CO2 	 Ammonium Nitrate Emulsion ANFO/Anfex 	 Refrigerants Production

APPENDIX A: Sub-function Positioning continued

A5. GOING GREEN

ROLE

Drive environmental solutions towards a sustainable future.



SCOPE

- Reduce current environmental footprint
- > Use natural resources responsibly
- Explore innovative solutions to environmental challenges

Going Green is a key value of AECI's BIGGER brand values. The aim is to minimise environmental impact and drive a beyond compliance mind-set within AECI's own operations and across the value chain enabling AECI to be seen as the business of choice.

The purpose is outlined further below:

- To drive innovative environmental solutions in current operations and the business of tomorrow.
- To create awareness on Going Green to internal and external stakeholders.
- To drive a culture of good environmental practice and a beyond compliance mind-set in the workplace.
- To improve market competitiveness through Green Chemistry and best available technology in AECI's products and services.
- To reduce AECI's environmental impact through measurement and target setting.
- To improve visibility on AECI's Going Green programme to external stakeholders.

The Going Green Five Key Focus Areas (KFAs), depicted below, have been developed to assist businesses to implement the Going Green Programme within their operations.

WATER • Water and effluent optimisation (recycling, reuse, treatment)	GREENSTRY • Innovation • Research and development • Value chain	ENERGY • Energy efficiency • Renewable energy • Alternative fuels	CO2 • Reduce CO2 emissions • Carbon credits	WASTE Reduce, reuse, recycle Waste innovation
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A6. PRODUCT TRANSPORT

ROLE

To ensure that our products are transported in a responsible manner and without causing harm to any person, the environment, equipment, infrastructure or the product itself.



SCOPE

- Safe inbound and outbound transportation of dangerous and non-dangerous goods by road, rail, marine and air
- Compliance to international chemicals management regulations and best practices
- Give effect to our Product Stewardship commitment and obligations

AECI, as a manufacturer of a wide range of explosives and specialty chemicals, purchases and sells high volumes of both dangerous and non-dangerous goods, all of which need to be transported inbound or outbound, via road, rail, marine or air.

As a global signatory to Responsible Care®, AECI has a duty defined in terms of Product Stewardship to ensure the safe handling, loading, off-loading, transportation, use and disposal of its products.

While most of these goods are transported by third-party independent transport companies, the accountability for the product is not transferred until it reaches a defined destination such as the customer's storage facilities.

AECI has chosen to track Transportation incidents, in relation to distances travelled as a key measurement even though they are often not transporting the product with its own fleet and the causes of such incidents are often difficult to avoid, especially on roads.

The key elements of an effective Product Transportation Management System are:

SUPPLY CHAIN MANAGEMENT • Evaluation and accreditation of Transport companies • Strong commercial agreements	 PEOPLE MANAGEMENT Driver/Staff training, competency, fitness and wellness Fatigue management 	EQUIPMENT AND OPERATIONS MANAGEMENT • Fleet, vehicle and equipment integrity • Route assessment and selection • Intelligent monitoring systems	GOVERNANCE AND ASSURANCE ' Transporter auditing and assurance ' Compliance and performance management	 INCIDENT MANAGEMENT Group procedure for incident management Emergency response Environmental clean-up Stakeholder engagement

APPENDIX A: Sub-function Positioning continued

A7. QUALITY

ROLE

Achieve product and service quality in terms of performance, reliability and durability to give AECI a competitive edge.



SCOPE

- Lead quality assurance programmes
- Quantitative and qualitative measurement of product and/or service quality
- Collaborate with Marketing teams to understand customer requirements

Quality management enables AECI to consistently deliver products and services that meet stakeholder needs and expectations as well as applicable statutory and regulatory requirements. We implement and maintain quality management systems based on international standards and models to manage the quality of our products and services efficiently and effectively, without compromising ethical values. At AECI, we embrace the 7 Principles for Quality Management to ensure that we not only meet customer requirements, but reinforce sustainability, focused on continuous improvement, risk management and innovation.

Sustained success is achieved when confidence of customers and other interested parties are retained through understanding of current and future needs.

ENGAGED PEOPLE

involve all people at all

enhancement of competence facilitate the

engagement of people in achieving the objectives.

levels and to respect

them. Recognition

empowerment and

It is important to

APPROACH Consistent and predictable

PROCESS

results are achieved more effectively and efficiently when activities are understood and managed as interrelated processes that function as a coherent system.

7 PRINCIPLES FOR QUALITY MANAGEMENT

RELATIONSHIP

MANAGEMENT Sustained success is more likely to be achieved when relationships with all interested parties are maintained to optimise their impact on the performance.

LEADERSHIP

Leaders at all levels establish unity of purpose and direction and create conditions in which people are engaged in achieving the objectives.

IMPROVEMENT

Improvement is essential to maintain current levels of performance, to react to changes in its internal and external conditions and to create new opportunities.

EVIDENCE-BASED DECISION MAKING

It is important to understand cause-and-effect relationships and potential unintended consequences. Facts, evidence and data analysis lead to greater objectivity and confidence in decision making.

APPENDIX B: Life Saving Behaviours (LSBs)

The AECI Life Saving Behaviours strengthen our focus on the prevention of high severity incidents, behaviours and consequences, and was informed by an analysis of the behaviours related to historic fatalities that had occurred within AECI. Our Life Saving Behaviours empower our workforce and management alike to take responsibility and accountability for their own and their teams' behavioural contribution towards Zero Harm.



All sites must identify work that requires a work permit and ensure no work starts without a permit being issued.



• Hot work can create heat, sparks or flames and can be a source of ignition.



Competence means using your knowledge and skills to reach intended results, allowing you to work efficiently, productively and safely.



AVOID SUSPENDED LOADS AND MOVING EQUIPMENT/VEHICLES Suspended loads are objects temporarily raised off the ground. Do not walk under suspended loads: they can fall, causing serious life threatening injuries or death.



A confined space is any enclosed, restricted, or limited space which is not for continuous human occupancy.



SECURE YOURSELF WHEN WORKING AT HEIGHTS Work at heights means working in any place where you can fall a distance causing serious life threatening injuries or death.



> Use personal protective equipment (PPE) at work to protect your body including your eyes, face, head, hands, feet and torso – keeping you healthy, safe and risk-free.



Safety belts can save lives and reduce injuries in vehicle accidents. Driving at high speed increases the risk of accident. Distracted drivers are a major cause of accidents – stay focused and "just drive".

CONCENTRATE WHILE DRIVING AND EVERYONE MUST BUCKLE UP



ISOLATION AND ZERO ENERGY TESTING

Isolation and zero energy testing prevents injury from or exposure to moving machinery, electricity, high pressure fluids, hot/toxic materials/chemicals, poisonous gas and/or radiation.



> Follow your journey management plan for emergency assistance in the event of any incident and to stay fresh when behind the wheel, guaranteeing the safety of yourself and others.

APPENDIX C: SHEQ Risk Management Process

The AECI SHEQ risk management process is summarised in the diagram below and follows the continuous improvement logic of Plan – Do – Review – Improve to ensure that all risks are managed effectively and that we continuously improve our risk profile, exposure and effectiveness of controls.

ANALYSE AND IMPROVE

- **1** Analyse trends
- **2** Identify gaps
- **3** Develop improvement plans
- **4** Share lessons learned

IMPROVE

GOVERN AND ASSURE

1 Perform audits

- 2 Give assurance on critical control effectiveness
- **3** Update risk profile

REVIEW

SHEQ RISK MANAGEMENT PROCESS

MANAGE AND

1 Implement controls

2 Monitor controls for effectiveness3 Ensure consistent application of controls

MONITOR CONTROLS

DO

IDENTIFY THE RISK

- **1** Understand the context
- **2** Perform risk assessments
- **3** Identify the hazards, undesirable events, causes and consequences
- **4** Create a risk profile

PLAN

UNDERSTAND THE RISK

- **1** Prioritise unwanted events
- **2** Analyse controls
- **3** Develop a control improvement plan
- **4** Develop a control assurance plan

PLAN

[Refer to the Group SHEQ Risk Management procedure for further details]

APPENDIX D: Bow-tie Methodology and Critical Control Management

A bow-tie is a diagram that visualises the risk you are dealing with in one, easy-to-understand picture. The diagram is shaped like a bow-tie, creating a clear differentiation between preventive and corrective risk management. The power of a bow-tie diagram is that it gives leaders

an overview of multiple plausible scenarios, in a single picture. In short, it provides a simple, visual explanation of a risk that would be much more difficult to explain otherwise.



TO UNDERSTAND AND MANAGE THE EFFECTIVENESS OF CRITICAL CONTROLS

DESIGN EFFECTIVENESS (choice of controls) Engineering controls are more effective than administrative and behaviour controls

OPERATING EFFECTIVENESS (operating as per design) First level assurance by line

USING THE BOW-TIE FOR RISK-BASED SHEQ MANAGEMENT



Risk-based SHEQ management means that leaders prioritise their actions, time and effort based on a thorough understanding of the operation's risk profile. control effectiveness and exposure (i.e. red flags).

Lagging indicators align with consequences, while leading indicators are defined to track the effectiveness of critical controls or incidents happening to the left of the consequences on the Bow-tie, such as the Unwanted Event materialising without resulting in a consequence (High Potential Incidents) or Near Misses.

APPENDIX E: Incident Management Process

The purpose of the Incident Management process is to ensure that SHEQ incidents are managed consistently, that prompt and high quality investigations are undertaken into incidents and that appropriate root causes are identified along with associated learning to prevent recurrence.



[Refer to the **Group Incident Management** procedure for further details]

INCIDENT OWNER PER INCIDENT SEVERITY LEVEL

	LEVEL 1 MAJOR	LEVEL 2 SERIOUS	LEVEL 3 MODERATE	LEVEL 4 MINOR
INVESTIGATION CHAIR	Managing Director	Operations Manager	Line Manager	Plant Superintendent OR Plant Foreman
INCIDENT OWNER	Operations Director	Operations Manager OR Production Manager OR Engineering Manager	Plant Superintendent OR Plant Foreman OR Maintenance Manager	Supervisor OR Team Leader OR Senior Operator

Refer to the detailed Group Incident severity classification matrix for incident severity definitions per sub-functional area: Occupational Safety, Process Safety, Occupational Health, Environment, Product Transportation, Security and Quality.

APPENDIX F: Maturity Assessment

A SHEQ maturity assessment assists leadership teams in identifying gaps and improvement opportunities on their journey to Zero Harm [4.2]. The outcome from a maturity self-assessment is that the team align on improvement focus areas for the next 12 to 18 months.

The maturity assessment is intended for leadership teams to use as part of strategic improvement planning. Self-assessments are a perceptionbased qualitative process, designed to **facilitate discussion and alignment in the leadership team.** The value and quality of these maturity assessments will improve if it is informed by a thorough overview of the team's actual SHEQ performance and actual SHEQ practices.

The SHEQ maturity of a team is determined through a self-assessment workshop which includes the following:

- > The team's SHEQ performance, i.e. y-axis (refer to the table below).
- The team's SHEQ practices, i.e. x-axis (refer to each element in this Framework for the practices maturity assessment tables).

FIGURE 3: Maturity matrix for sustainable performance



SHEQ Performance Assessment

Every sub-functional performance area is assessed based on the relevant leading and lagging measurements for that specific operation or business. The relevant measurements must be agreed and prepared before the assessment workshop. These measurements could include some or all of the following, depending on the applicability. [Refer to the **Group SHEQ lagging indicators procedure** and **Group SHEQ leading indicators guideline**.]

The maturity of every sub-functional performance area is assessed against the following criteria:

PERFORMANCE against target.

TREND of the performance against target.

COMPARISON: How good is the target?

CONFIDENCE: Will the performance continue its trend or improve in future?

ASSESSMENT CRITERIA	POOR	MEDIOCRE	GOOD	EXCELLENT
PERFORMANCE: actual performance against target	Usually more than 10% outside the target.	Usually within 10% of the target.	Consistently within 2% of the target.	Target exceeded consistently.
TREND: Positive, sustained >3 years	Trend is negative.	No improvement in trend over past 3 years.	Positive trend, sustained performance over 3 years.	Trend consistently remain ahead of industry norm.
COMPARISON: Target setting, benchmarking and strategic alignment	Targets are stagnant and/ or lags industry norms, no/limited comparison or benchmarking.	Target are set top-down based on entity average performance, relevant internal comparisons are done and results are on par.	Stretched targets are set and owned by the team over and above the Group target, relevant external comparisons are made and are favourable, performance is favourable compared to strategic objectives.	Targets are industry leading, relevant external comparisons indicate industry leaders, strategic objectives achieved and revised.
CONFIDENCE: Confidence that performance can be sustained, specific improvement actions, correct lead indicators	Improvement actions are mainly reactive to performance, limited view on lead indicators, non- conformance process play a big role in addressing negative trends.	Identification of specific actions to improve performance is done by management teams and operational teams are instructed, lead indicators for compliance are tracked.	Teams take ownership of the trend and drive improvement actions, focussing more on systems, processes and preventive controls, lead indicators for critical control effectiveness are tracked.	Improvement actions focus on embedding behaviour. Improvement actions become a way of doing business. Lead indicators for risk reduction are tracked.

Every element in the SHEQ Framework is applicable to each sub-function within SHEQ, the performance requirements might be applied slightly differently in each area. The sub-functions and their summarised role and scope are described below.

ENVIRONMENT

LAGGING

GOING

GREEN

LAGGING

LEADING

Environmental incidents

LEADING

- Critical control effectiveness related to environmental unwanted events (e.g. levels of emissions/releases)
- > Schedule compliance for environmental compliance projects
- Close out of environmental audit findings
- > Number of repeat environmental audit findings

OCCUPATIONAL SAFETY

LAGGING Trir

LEADING

- Incident actions closure
- > SHEQ training schedule compliance
- Inspection compliance
- Critical control effectiveness
- Near misses
- Repeat inspection findings
- People engagement levels/climate

PROCESS SAFETY

LAGGING

PSTIR, FER

LEADING

- > PSCE maintenance schedule adherence
- > PHA schedule adherence
- PHA action status
- PSI status







LAGGING

Incident rate

LEADING

- > % SQAS accredited service providers
- > % valid transport route risk assessments
- Incidents and action closure from fatigue management process

OCCUPATIONAL HEALTH

LAGGING

Illness cases

LEADING

- Source level of exposure (e.g. noise level, hazardous chemica exposure level) as compared to the exposure limit
- Medical surveillance %
- Illness case management
- Action closure from hygiene reports

QUALITY



LAGGING

% quality compliance

LEADING

- > Statistical Process Control/OWAP (operating within agreed parameters)
- Closeout of actions from quality incidents
- > Customer feedback
- > Supplier performance (source material within specification)
- Number of manufacturing defects (in process)
- Sampling schedule compliance



SHEQ Practices Assessment

The table below describes the four maturity stages for practices (x-axis) and assists teams in identifying gaps and improvement opportunities.

Each element of the SHEQ Framework has a maturity assessment table which should be assessed within the following context:

			RESILIENT (ZERO HARM)
		PROACTIVE (DELIVER VALUE)	
	COMPLIANT (BUILD A SOLID FOUR	NDATION)	
REACTIVE (STOP DOING)	 Basic understanding of the practice. 	 Processes and tools are seen as enablers. 	 Zero Harm is a fundamental belief and part of our strategy.
 General awareness without commitment. 	 Standardised processes and tools. 	 Effective management of SHEQ risks. 	 Teams take ownership to ensure the right things are
 Acting on natural instincts rather than following procedure 	 Rule-based prevention of incidents. 	 Continuous on the job risk assessment is a way of life. 	 done to reduce risks. Behaviour-based prevention of incidents (internalised ownership). Risk controls are embedded in the way we do business.
 Reactively respond when incidents occur 	 Compliance culture which requires supervision. 	 Culture of ownership and individual accountability. 	
	 Meeting minimum requirements. 	 Exceeding minimum requirements. 	
		 Risk-based prioritisation of actions. 	

Interpreting the maturity assessment

The following interpretation guidelines will assist you to interpret the maturity matrix once the team's performance and practices assessment ratings are plotted. Three common scenarios are given: On the edge

(Poor performance and Reactive practices), Sustain SHEQ performance (Good performance and Reactive-Compliant practices) and Scattered (varied) performance and practices assessments:



PRACTICES







Identify and execute improvement focus areas

The final step in the SHEQ maturity assessment is the identification, execution and tracking of SHEQ improvement focus areas. It is critical that the leadership team aligns on and owns the focus areas. [4.2]

THREE

APPENDIX G:

Key Concepts

CONCEPT	DESCRIPTION
Accountability	The obligation to accept responsibility and exercise authority in conformance to performance standards.
Assurance	SHEQ assurance is a means to provide confidence that management systematically and continuously ensures compliance to relevant SHEQ legislation, that the SHEQ Framework is effective and that SHEQ risks are managed effectively.
Authority	The sum of the rights and powers assigned to a position to give orders, make decisions and enforce conformance.
Behaviour	The way in which one acts or conducts oneself, especially in specified situations or towards others.
Bow-tie methodology	The bow-tie methodology is a way of assessing risk by identifying an unwanted event, the potential causes and consequences of the event, and the preventive and corrective controls to avert or mitigate the risk of the event occurring.
CAIA	Chemical Allied & Industries Association.
Causes	Threats which can potentially result in the unwanted event materialising.
Coaching and mentoring	Leaders guide and support employees with the SHEQ challenges that they face by sharing knowledge and experience.
Business culture	"The way we do things around here". Culture is the way of life, especially the general customs and beliefs, of and the way of thinking, behaving, or working that exists in an organisation.
Competence	Competence is the ability of an individual to perform a job according to specified requirements. An employee is declared competent after undergoing training and successfully completing a training assessment.
Consequences	The effect, result or outcome of the unwanted event.
Contractor	Contractor means any person who provides services to the business but is not directly employed – including trainees and apprentices of the contractor as well as persons providing incidental services to the business. This includes directly managed or full-time contracted transport operations, persons providing services to a business's own site, on property which has been leased or where rights are held by the business to undertake its operations.
Controls	Acts, objects (engineered) or system (act and object) intended to prevent and/or mitigate an unwanted event.
	 Preventive controls are implemented to reduce the probability of an unwanted event materialising.
	Corrective controls are implemented to limit/reduce the severity of the unwanted event's impact and resulting consequences.
	 Critical controls are controls which are crucial to preventing a Material Unwanted Event (MUE) or mitigating the consequences.
Control effectiveness	Systematic review of processes that ensures that controls are effective and appropriate (Design effectiveness and Operating effectiveness).
Control executor	A person responsible for the execution of a control or portion of a control.
Control owner	Individual who has the responsibility to manage actions and/or measures to ensure that a specific control is implemented, operating effectively, and has the responsibility to monitor and report on the effectiveness of the specific control.
Customer Relationship Management (CRM)	The approach used to manage interactions with current and potential customers, with the aim of improving customer relationships and increasing sales.
Employee	"Employee" means any person for which the business is legally responsible under the Occupational Health and Safety Act.

APPENDIX G: Key Concepts continued

CONCEPT	DESCRIPTION
Environment	The surroundings in which an organisation operates which includes people, land, water, atmosphere, micro-organisms, plant life, animal life, natural resources or any part/ combination thereof.
Fire, explosions and releases (FER)	Relating to chemicals or energy in our operations.
Governance structure	A combination of the decision-making bodies, decision making authorities, processes, rules, and mechanisms by which SHEQ decisions are taken and implemented.
Hazard	A situation that has the potential for causing harm to people, property, profits, or the environment.
High Severity Incident	A work-related SHEQ incident which is rated as an actual major incident on the SHEQ incident classification matrix, or had the reasonable potential to have been a major incident.
Impact	Potential amount or severity of loss that is sustained from the consequence of a materialised unwanted event.
Incident	An undesired event that has the potential for causing harm to people, property, profits, or the environment.
Inherent risk	This is the level of risk without considering the effect of any relevant risk control measures.
Key Performance Indicator (KPI)	In AECI, the term KPI is a measurement used for evaluating individual performance and is linked to the performance management system (Khula Nathi).
Lagging indicators	Post-event measurements indicating the outcome of actions/approaches/initiatives implemented by the organisation.
Leaders	Executives, business directors and all management levels.
Leading indicators	Proactive measurements focused on preventing losses by taking action that will timeously affect the approach followed in executing work.
Managed Integrity Evaluation (MIE)	Security clearance system.
Management of Change (MOC)	Management of Change is a process to evaluate and properly manage any modifications to the design, control, or operations (including personnel) which comprise of a systematic approach to deal with change.
Management review	Management review is the routine evaluation of whether management systems are performing as intended and producing the desired results as efficiently as possible.
Measurement	SHEQ measurements consists of leading and lagging indicators which provide an indication of the SHEQ performance of a specific area/team. A summary of SHEQ measures are typically displayed in the SHEQ dashboard.
Milestone	The sub-objectives or stages of a programme or project that measure work performance.
Mitigation	The measures that are put in place to prevent or reduce the likelihood and/or severity of an event that can cause damage to the business, people or environment.
Monitor	To check, supervise, observe critically or measure the progress of an activity, action or system on a regular basis to identify changes from the desired performance level.
Objectives	Overall business goal, arising from customer, statutory, or other requirements, strategic business intent, SHEQ policies, or other sources, that a business sets itself to achieve, and which are quantified where practicable.
Operating Envelope	The set of limits and conditions within which equipment can be safely, reliably and sustainably operated.
Our People	Our People includes any person who works for AECI whether an employee, service provider or contractor.
Performance Assurance	Performance assurance is how workers demonstrate that they have understood the training and can apply it in practical situations.

CONCEPT	DESCRIPTION
Planned task observations (PTO)	An opportunity to review a work activity for identifying safe and unsafe behaviours and to improve safety practices.
Plans	A detailed plan of action specifying the responsibility, action plans, time frame and human, financial and technological resource requirements.
Policy	Intentions and direction of an organisation as formally expressed by its top management.
Probability	Likelihood that an unwanted event can occur.
Process Hazard Analysis (PHA)	Process Hazard Analysis (PHA) is an organised, methodical approach to identify, evaluate, and control the process safety hazards and risks associated with process facilities. It includes the following activities:
	 hazard identification, risk assessment and treatment, human factors and facility siting evaluation, a final report and recommendations, aimed at reducing the process safety risk.
Process safety critical equipment	A subset of equipment that is divided into three categories:
(PSCE)	 Instrumentation loops or Safety Instrumented Functions that have been SIL rated for safety reasons, i.e. where the SIL review risk assessment process has identified it as critical by assigning a SIL rating,
	Process containing equipment, (i.e. equipment such pipes, vessels, tanks, pumps, containing hazardous chemicals) that has the potential to cause a catastrophic process safety incident if it fails and hazardous chemicals are released and where there is a known mechanism of failure, and
	 Equipment that is designed to mitigate the impact of failure of the above two groups, i.e. mitigating equipment that protects process containing equipment identified as PSCE such as deluge systems.
Process Safety Incident (PSI)	An incident that resulted in a fire, or an explosion, or an episodic, unintended release of a hazardous chemical from primary containment, or an excursion of pressure energy that causes harm, and in all cases where chemicals and a chemical process were involved.
Process Safety Information (PSI)	Process Safety Information (PSI) is the compilation and maintenance of technical documents and data needed to generate an accurate Process Hazard Analysis (PHA) and ensure that MOCs are based on correct information.
Process Safety Management (PSM)	A disciplined Framework for managing the integrity of hazardous operating systems and processes by applying good design principles, engineering, and operating and maintenance practices. The purpose of the process safety management Framework (PSM S1) is to set minimum requirements required to design and implement a risk-based PSM system.
Process Safety Total Incident Rate (PSTIR)	This index expresses the number of process safety incidents against the total number of hours worked during a given time period. The incident rate used includes Minor, Moderate, Significant and Major Incidents.
Rehabilitation	The process of restoring an area of land back to its original state following use for AECI operations.
Remediation	The removal of pollution/contaminants from soil, groundwater, or surface water.
Residual risk	This is the level of risk remaining after considering the effect of all relevant risk control measures (preventive and corrective measures).
Resources	Include people, materials, assets, financial, technology and/or other resources.
Risk	An uncertain future event that could negatively influence the achievement of objectives. Risk can be defined as the combination of the likelihood of an event and severity of its consequences.
Risk analysis	Systematic process for understanding the nature of and level of risk by considering the impact and the probability of occurrence.

CONCEPT	DESCRIPTION				
Risk assessment	The overall process of risk identification, risk quantification and risk evaluation to identify potential opportunities or minimise loss. The risk assessment process considers risks that are significant to the achievement of the business's objectives. This is a continuous process, requiring regular reviews, as and when internal and external changes influence the organisation's strategies and objectives. There are different types of risk assessments:				
	Baseline risk assessments: Performed to obtain a benchmark of the types and size of potential hazards, which could have a significant impact. Identify and document all potential hazards/risks. Examples of baseline risk assessments. Hygiene and Health Surveys (Noise, Lighting, Ventilation, Temperature Extremes); Environmental Impact and Aspect Registers; Fire Risk Assessments				
	 Issue-based risk assessments: Address specific workplace SHEQ issues. Used to conduct a detailed assessment study that will result in the development of action plans. Examples Process hazard analysis (PHA); Impact assessments; Major hazardous installations risk assessments; Incidents and Near misses/Close calls; Task Risk assessments; HAZOP (Hazard And Operability Study) 				
	Continuous risk assessments: Identification of the day-to-day operational SHEQ risks. The system, process and activities are monitored on a continuous day to day basis by the operational floor management and SHEQ Risks are identified. Examples: Inspections; Critical task observations; OHS audits; Work permits; Planned maintenance systems				
Risk controls	Risk reduction measures taken to reduce either the likelihood and/or severity of an unwanted event and to make provision for the losses that can occur.				
Risk exposure	The amount of or the extent to which an organisation could be negatively impacted by unwanted events.				
Risk management	Risk management is the identification and evaluation of actual and potential risk areas as they pertain to AECI, followed by a process of either avoidance, termination, transfer, tolerance (acceptance), exploitation, sharing, maximising, enhancing or mitigation (treatment or control) of each risk, or a risk response that is a combination or integration.				
Risk owner	Person with the accountability and authority to manage an unwanted event and its related controls. This person appoints control owners to ensure that all controls are implemented and monitored for effectiveness. This is the person assigned to ensure that all requirements of a procedure will be complied with when a risk assessment is initiated and executed. This person will typically be the manager of a specific area.				
Risk profile	A view of all top risks and associated material unwanted events (MUEs) for a business or part of a business visualising the inherent and/or the residual risk level of these risks and/or unwanted events.				
Risk study	Includes various risk assessments and process hazard analysis (PHA), e.g. HAZOP, TACCP.				
Safety culture	The safety culture of an organisation is the product of individual and Group values, attitudes, perceptions, competencies, and patterns of behaviour that determine the commitment to, and the style and proficiency of, an organisation's SHEQ management.				
Service level agreement (SLA)	A contract between a service provider and AECI that defines the level of service expected from the service provider.				
Stakeholders	Include internal and external parties with any interest in the organisation.				
Stop work authority	Any employee has the power to stop any work activity if it is unsafe.				
Sustainability	The responsible conduct of all activities to ensure that AECI can remain effective, efficient and competitive in the long term, as measured in terms of financial, environmental and people related measures.				
Total Recordable Incident Rate (TRIR)	This index expresses the number of injuries or illnesses sustained against the total number of hours worked during a given time period. The incident rates used are Fatality Incident Rate (FIR), Lost Time Incident Rate (LTIR), and Non-Lost Time Incident Rate (NLTIR).				
Training matrix	A matrix of required training for each employee which is defined by the job function of the employee and any management system requirements.				
CONCEPT	DESCRIPTION				
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Training records	The written sign-off, detailing the specific training and activities that the trainee was trained on, which is to be retained and archived as documented evidence.				
Unwanted event	Situations where the hazard has or could be released, or control over the hazard has or could be lost, in an unplanned way with the potential for negative consequences.				
	Material Unwanted Event (MUE): Those unwanted events associated with the AECI top SHEQ risks, i.e. with the highest potential for material consequences.				
Visible felt leadership (VFL)	Leaders care about people and get personally involved in the drive towards zero-harm so that employees hear and see their leaders living safe practices every day.				
Zero Harm	No hurt, damage, injury, or impairment to any people, property or the environment under AECI's control. Specifically:				
	· Zero harm to our people's health				
	Zero transportation incidents				
	· Zero potential high severity incidents				
	Yero quality disruptions				
	Zero harm to our communities				
	> Zero harm to the environment				
	· Zero wasteful use of our resources				
	>Zero Responsible Care [®] incidents				
	> Zero injuries				
	>Zero process safety incidents				

APPENDIX H: References

MATRIX FOR REFERENCING INDUSTRY STANDARDS AGAINST THE AECI SHEQ FRAMEWORK:

STANDARD	1.1 STRATEGY	1.2 TARGETS AND PLANS	1.3 LEADERSHIP	2.1 TRAINING AND SKILLS	2.2 HUMAN CAPITAL	2.3 CULTURE AND BEHAVIOUR	2.4 ENGAGEMENT
ISO 9001	4.1, 5.2	6.1, 6.2	5.1	5.1, 7.2, 7.3	7.1	5.3	
ISO 14001	4.1, 5.2	6.1, 6.2	5.1	7.2, 7.3		5.3	
ISO 31000			5.2		5.4		5.4, 6.2
ISO 22001	5.2	5.3	5.1, 5.5	6.2	5.4, 6.2		5.6
ISO 45001	4.1, 5.2	6.1, 6.2	5.1	7.2, 7.3	5	5.3, 5.4, 6, 7, 8, 9, 10	5.2, 5.3, 5.4
ISO 17025				5.2, 6.1, 6.2	4.1		
PSM			1.1 AECI GPS iCheme 2012 – 158.551	pg15	CAIA pg1 definitions	1.1, 5.2, 6.1	
Responsible Care®				4.4.3, 4.4.7			

STANDARD	3.1 RISK MANAGEMENT	3.2 OPERATIONS CONTROL	3.3 Systems	3.4 GOVERNANCE	4.1 MEASUREMENT	4.2 IMPROVEMENT
ISO 9001	6.1	8.1-7	4.4	7.5, 9.2	9.1, 9.3	10.2, 10.3
ISO 14001	6.1	8.1	4.4	7.5, 9.2	9.1, 9.3	10.2, 10.3
ISO 31000	6.4, 6.5	5.5		6.7	5.6, 6.6	5.7
ISO 22001	7.3-4	7.1, 7.5	7.9, 8.4	4.2, 7.8	5.8, 8.2-3	7.10, 8.1, 8.5
ISO 45001	6.1	8.1-6	4.4	7.5, 9.2	9.1, 9.3	10.2, 10.3
ISO 17025		4.5, 4.6, 5	4.2	4.3, 4, 14-15	4.9, 5.10	4.10-12
PSM		CAIA management standard				
Responsible Care®		6				

AECI AND INDUSTRY DOCUMENT REFERENCES DURING THE DEVELOPMENT OF THE AECI SHEQ FRAMEWORK:

- › AECI ERM
- › AECI PSM Framework
- › AEL Australia
- Anglo American Way
- 'BP OMS
- Chevron OEMS
- › CSL Manual
- **>** Du Pont
- $\ensuremath{\mathsf{^{\mathsf{S}}}}$ European Foundation for Quality Management (EFQM)
- 'Exxon Mobil OEMS
- Sasol ERM and One Sasol SHEQ Excellence approach

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