ELEMENT ENGINEERING LABORATORY.

QUALITY, HEALTH, SAFETY, AND ENVIRONMENT SYSTEM

RISK MANAGEMENT PROCEDURE

	NAME	SIGNATURE
PREPARED BY	M. RAMEEZ	
APPROVED BY	SALMA SOHAIL	

CONTROLLED

1. REVISION AND APPROVAL

Rev.	Date	Nature of Changes	Approved By
00	05 Aug 2025	Original issue.	AUTHORIZED OFFICER

2. PURPOSE

CONTROLLED

The company has established, implemented and maintained this procedure for managing risks and opportunities throughout the ELEMENT ENGINEERING LABORATORY.

3. SCOPE

3.1. This procedure is applicable and its Responsibility and authority for this procedure are spread across various functions and defined within this procedure.

Note: This procedure has adopted definitions for key terms developed specifically by ELEMENT ENGINEERING LABORATORY. and determined appropriate for its use within the unique requirements of its management system. It does not adopt current ISO definitions, which ELEMENT ENGINEERING LABORATORY.

. has determined are not sufficient for its use.

4. DEFINITIONS

4.1. **Risk**: A negative effect of uncertainty.

4.2. **Opportunity**: A positive effective of uncertainty.

4.3. **Occupational Health and Safety (OH&S)**: conditions and factors that affect or could affect the health and safety of employees, temporary workers, contractor personnel, visitors and any other person in the workplace.

4.4. **HSE Hazard**: Source or situation, or act with a potential for harm in terms of human injury or ill health, potential damage to the environment or combination of these.

4.5. **Hazard Identification**: Process of recognizing that a Hazard exists and defining its characteristics.

4.6. **Risk Assessment**: a systematic investigation and analysis of HSE hazards and business risks combined with the assignment of severities of probabilities and consequences. These are used to rate risks in order to prioritize the mitigation of high risks.

4.7. **Risk Mitigation**: a plan developed with the intent of addressing all known or possible risks / hazards and preventing their occurrence.

4.8. **Management Program(s)**: Documents identifying the designated responsibility, means and timescale by which objectives are to be achieved.

5. PROCEDURE

5.1 GENERAL

Business Risk / HSE Hazard identification is the process of identifying all situations or events that could give rise to the potential business threat, injury / illness of interested parties and environment endangerment. Business Risk / HSE Hazard identification and risk assessment must also accompany any proposal for the introduction of new equipment or processes or the modification of equipment or processes.

CONTROLLED

HSE Hazards can be grouped as physical, chemical, ergonomic or psychological processes. Business Risks / HSE Hazards are documented in the Risk Assessment Register by the Cross Functional Team (CFT). This register is updated whenever there is any change/modification or new process is added. This register is reviewed minimum on annual basis by the CFT.

Business Risks / HSE Hazards can be identified through the following methods:

- SWOT Analysis
- Business Planning
- Direct report from employees
- Immediate Accident/Incident Report
- Industry Information
- Health & Safety Meetings
- Routine inspections which are recorded in Inspection Reports
- Material Safety Data Sheets

The following steps are to be taken for planning the risk assessment process:

• Identify the team (QHSE MR, Engineers and Supervisors)

• Identify the related Business Risks / HSE Hazards.

• Assessment

• Analyze the required control measures / mitigation action

• Identify Management Program(s) if required

5.2 IDENTIFICATION OF BUSINESS RISKS / HSE HAZARDS

The designated team shall conduct the Initial Review considering the following factors within company activities:

Business Risks

• From SWOT Analysis, the identified Strength / Weakness / Threats / Opportunities may raise potential effect to the company; these effects can then be translated into business risks.

HSE Hazards

• Routine and non-routine activities such as on duty activities, special assignments and staff accommodation.

• Activities of all personnel having access to the company facilities

• Relevant Legal and other requirements

• Facilities at the workplace, whether provided by company or others.

• Hazardous / Nonhazardous Waste Disposals

CONTROLLED

Any condition with the potential to cause illness, injury or death, property damage, business degradation, pollution shall identify as a HSE Hazard and the records for the same will be maintained in Risk Assessment Form.
QHSE MR shall identify the Hazards, assess the risk and ensure that control measures are identified prior to the initiation of the project and closely followed until the completion of the project.

5.3 RISK / HAZARD ASSESSMENT AND RATING

The identified Risky / Hazardous event shall be assessed for risks based on a combination

Health & Safety Risk and Environmental Impact Matrix

Aspect/ Hazard Probability	Environment Significance/Hazard effect Severity				
	Insignificant (1)	Minor (2)	Moderate (3)	Major (4)	Catastrophic (5)
1- Rare	1	2	3	4	5
2- Possible	2	4	6	8	10
3- Likely	3	6	9	12	15
4-Often	4	8	12	16	20
5-Frequent	5	10	15	20	25

of the probability and severity of its occurrence which are as follows:

The following rating (**S X P**) shall be assigned for each level.
All ratings classified as high or above require an action and monitoring as appropriate. Legal requirements will be identified, evaluated & recorded in the form & all the risks will be considered extremely high if there is a legal requirement related to it.

5.4 CONTROL MEASURES / MITIGATING ACTION

Risk control requires actions to be taken to eliminate or reduce the likelihood to business risk / HSE hazard will result in business operation failure, injury/disease, environmental damage. When determining control solutions, consultation shall occur between competent persons undertaking the risk management process, employees affected managers, and top management.

Control measures shall be taken for the identified risks and recorded in Risk Assessment Form. Action taken for the risks shall be updated in the same.

5.5 MANAGEMENT PROGRAMME(S)

Management programs will be prepared for all risk control measures which requires management support / a period of time / resources for implementing the control measures.

The Designated responsibility/authority means and timescale shall be identified in the Management Program(s).

CONTROLLED

6. RECORDS

Risk Assessment	IMS-RMGT-F01

CONTROLLED

RISK ASSESSMENT

Effective Date: 05 Aug 2025	
Document Code: IMS-RMGT-F01	
Rev. No.**01**	Ref #: 00

Sl. No.	Activity	Hazards/ Impact Risks identified	Risk Rating			Control measures	Residual Risk			Risk Owner
			Probability	Severity	P X S		Probability	Severity	P X S	
1	**Shifting of Plant, Equipment and Materials**	• Manual Handling - Injury to Personnel • Collision/Collapse - Injury to Personnel / Damage to equipment	3 3	4 4	12 12	• Approved method statement must be in place prior to start the work activity • Ensure Job safety analysis (JSA) is completed. • Hazard identification and Specific Risk Assessment must be carried out prior to heavy work commencing. • Mechanical methods to be used where possible, or multiple people lifting.	1 1	4 4	4 4	Project Manager/ Construction Manager, Plant Manager, Project Engineer, Foremen Project Lead HSE Engineer for monitoring
2	**Use of Portable Electric Appliances**	• Electricity - Electric Shock Electrocution • Fire - Injury to Persons, Property Damage • Manual Handling - Back injury Strain/ Sprain	4 3 3	5 5 4	20 15 12	• Approved method statement must be in place prior to start the work activity • Ensure Job safety analysis (JSA) is completed. • Maintain register of inspection • All electrical tools must be tested in every 3months and tagged by a competent person. • Wear appropriate PPE (Gloves/Goggles/Hearing protection) • Manual Handling assessment prior to use of tools. • Use dust suppression vacuums or water suppression where applicable • Inspect tools prior to all operations.	1 1 1	5 5 4	5 5 4	Project Manager/ Construction Manager, Plant Manager, Project Engineer, Electrical dept. head, Foreman Project Lead HSE Engineer for monitoring
3	**Use of Hand Tools**	• Falls of materials - Bruising, cuts & sprains, puncturing, damage to property • Noise/Vibration - Hand Arm Vibration, Vibration White Finger (VWF), WRULD's Noise Induced Hearing Loss, Tinnitus	3 3	4 4	12 12	• Approved method statement must be in place prior to start the work activity • Ensure Job safety analysis (JSA) is completed • Provision of Tool bags or belts while working. • Inspecting tools for loose and deficient parts. Report and replace immediately. • If using tools at height, secure tool to you or scaffold. • Toe-boards and brick guards/netting in place to prevent accidental dropping of tools or materials. • Wear appropriate PPE (Gloves/Goggles/Hearing protection/Head Protection and safety Footwear) • Homemade tools are not to be used	1 1	4 4	4 4	Project Manager/ Construction Manager, Project Engineer, Foreman Project Lead HSE Engineer for monitoring
4	**Use of Ladders**	• Falls from Height - Back Injury, Fractures, Cuts, Bruises, Death. • Falls of Materials – Head Injury, Death, Fractures,	4 4	5 5	20 20	• Approved method statement must be in place prior to start the work activity • Ensure Job safety analysis (JSA) is completed. • Ladders must be inspected monthly and color coding must be in place. • Maintain Ladder register with inspection status.	1 1	5 5	5 5	Project Manager/ Construction Manager, Project Engineer, Foreman Project Lead HSE Engineer for

CONTROLLED

		Cuts, Bruises • Slipping/Collapse - Back Injury, Fractures, Cuts, Bruises, Death.	4	5	20	• Ladders must only be used for short duration light work and inspection, with one hand on the ladder as a minimum at all times. If this cannot be done another work platform is required • Live Electrical work: Wooden Ladders only • Ladder must extend 1m beyond platform, at 75o angle or 4:1 Height to Base ratio. • Ladder must be placed on firm level base. • All ladders must be adequately tied (not by styles) to a fixed sound structure. • Tools should be secured to worker by tool bag/tool belt or lanyard. • Damaged ladders must be destroyed. • Hard Hats worn especially below ladder. • If over 9m platform must be provided. • Only one person on ladder at one time. • Materials to be hoisted up or carried in tool bag. • Working position should be not less than 5 rungs from top.	1	5	5	monitoring
5	**Use of PPE** (Personal protective Equipment), **RPE,** (Respiratory Protective Equipment), **Safety Equipment** Hard Hats Harnesses Respirator Masks Breathing Apparatus Ear Protection	• Poor operation - Injury to person • Poor seal - Death, or serious injury • Failure of Equipment - Death or serious injury	3 3 3	4 5 5	12 15 15	• Employers must provide PPE, RPE, safety equipment at all times when necessary. • Ensure that all PPE, RPE is assessed for suitability for job, limitations, capability, compatibility with other PPE. additional hazards. • Read manufacturer's instructions for weaknesses and correct installation or wear. • Training or information/instruction should be given on use, storage and maintenance theoretically and practically. • Ensure that PPE is adequate for job activity, and all operatives exposed are warned by signage and toolbox talk. • Ensure that suitable storage is available for safety equipment on site.	1 1 1	4 5 5	4 5 5	Project Manager/ Construction Manager Project Engineer, Foremen Project Lead HSE Engineer for monitoring
6	**Office Work**	• Visual Display Unit (VDU)/ Display Screen Equipment (DSE)-Work Related Upper Limb Disorders (WRULD's), Repetitive strain injury (RSI), Eye Damage, Stress, Headaches • Electricity - Death, Serious injury, burns	3 3	4 5	12 15	• Ensure Job safety analysis (JSA) is completed • All computer workstations must have DSE Assessment carried out. • Regular breaks per hour from screen. • No overloading of power circuits, with testing carried out on all mobile equipment. • Never use equipment unless given instruction to do so. • Firefighting equipment, evacuation plan and regular inspection of both carried out. • Hazard Identification /Risk assessment required for office area relating to fire.	1 1	4 5	4 5	Project Manager/ Construction Manager, Administration Manager, Project Lead HSE Engineer for monitoring

CONTROLLED COPY

		Slips • Trips and Falls - Sprains, strains, fractures • Passive smoking, Fire - Death, serious injury, burns, cancer.	3 3	4 5	12 15	• Audible alarms suitably located in office • Fire wardens and suitable assembly points nominated and signs erected to inform. • Emergency lighting required and checked monthly. • All staff and appointed persons must receive regular training and this must be recorded • Fire drills must be carried out and recorded • All trailing cables must be protected by trip mat. • Good housekeeping required not to block exits. • No smoking or naked flames allowed in office, smoking only permitted in designated areas. • Any subcontractor working in offices must be controlled and monitored. • All office staff and visitors must sign in and out of the building. • COSHH assessment for materials used in office must be carried out and maintain the register.	1 1	4 5	4 5	
7	**Maintenance of plant/ equipment**	• Leakage of oil, Disposal of used oil, oil filters, Emission of smoke consisting of greenhouse gases like CO2, oxides of Nitrogen & Sulphur. • Effect soil, underground water or water bodies / marine environment, air	4 4	4 4	16 16	• Approved method statement must be in place prior to start the work activity • Ensure Job safety analysis (JSA) is completed • Construction equipment and vehicles will be adequately maintained to minimize excess emissions and potential spillage of engine fluids. • Proper decanting practices for filling the drums or tank or equipment/ vehicles at site • Metal drip trays will be provided for collecting oil spillage or leakage during activities like maintenance, refueling etc. • Machinery which is leaking hazardous substance like fuel should be repaired immediately. • Do not burn waste oil on a bonfire as this pollutes the air.	1 1	4 4	4 4	Project Manager/ Construction Manager project Engineer, Foremen Project Lead HSE Engineer for monitoring
8	**Waste Management** (Construction Waste and Domestic Waste – Storage, Handling)	• Collection, separation, storage and disposal of various categories of waste may result in the pollution of soil, groundwater and the marine environment. • Without an effective waste reduction program, there exists a potential for large quantities of waste to be generated, with a small quantity being hazardous.	3 3	4 4	12 12	• Ensure Job safety analysis (JSA) is completed • On site waste will be segregated & stored appropriately as requirements within the CEMP – Signage must be clear and waste segregation enforced. • Waste to be removed from site by a third-party contractor • Where necessary waste containers will be covered to prevent being blown away. • Waste will be transported to an EAD approved disposal facility. • Vehicles delivering waste to the disposal area will be covered to prevent dropping, leaking, sifting or blowing of solid waste from the vehicle. • Any spillages or waste lost from disposal vehicle end route to the disposal site shall be promptly cleaned up.	1 1	4 4	4 4	Project Manager/ Construction Manager project Engineer, Foremen Project Lead HSE Engineer for monitoring

CONTROLLED

		• Risks for ground and water contamination from incorrect disposal. • Potential impact on overall aesthetics of the region and increase of odor levels may cause nuisance to nearby Residents, on-site labors and even fauna residing in the vicinity.	3 3	4 4	12 12	• LDN will impart to their drivers an awareness related to the handling and disposal of their cargo. • LDN will maintain a working file keeping a record of the waste being disposed of. This shall include date, time, type of waste, approx. volume of waste, and disposal method. • Covers/lids will be used for skips and bins during waste storage. Waste will not be stored within 30 meters of water edge. • All Hazardous materials shall be stored in an appropriate container to prevent leakage or spills as per EAD regulations and as well as per Material Safety Data Sheet (MSDS) of each specific material. No cement, grout, petroleum product, or any other hazardous material shall be placed or allowed to disperse into the marine environment. • All fuels and hazardous chemicals shall be stored and secured in designated bunded areas and inside appropriate containers at least 100 m from any water body. • Refueling or maintenance will not occur within 30 m of any water body • For on-site refueling and maintenance, a mobile fuel truck will be used • All contaminated materials will be stored at the temporary waste transfer facility at site. Then it will be removed from the site by approved hazardous waste transfer trucks as per EAD regulations. Waste Transfer Note (WTN) shall accompany each shipment of Hazardous waste and copy of such WTN shall be kept by LDN. • Routine inspections of containment structures and surrounding storage locations will be performed. • Crews shall receive training on the use of MSDS. • Environmental incident report shall be produced and submitted to HSE Lead Engineer. • The site shall undergo a daily clean up including removal of general litter and construction waste • Construction waste shall be disposed of at designated disposal waste site approved by EAD. • No waste will be buried or disposed of on-site • Lessons drawn from the incident shall be communicated to construction crew through a tool box talk.	1 1	4 4	4 4	

CONTROLLED

Reviewed By:	Sarath Nair	Approved By:	Vilas R Nair
Signature:		Signature	
Date:	07.09.2026	Date:	07.09.2026

CONTROLLED