RISK ASSESSMENT

(EXCAVATION AND BACKFILLING)

PROJECT / LOCATION:	DATE: 00-00-2024	DATE OF NEXT ASSESSMENT
Job No.		**00-00-2025**

TASK / ACTIVITY
EXCAVATION AND BACKFILLING

No.	Hazard	Risks	Consequence	Risk Level			Risk Control Measures	Residual Risk			Remarks
				PR	S	E/H/M/L/N		PR	S	E/H/M/L/N	
1.	Earth work Excavation; i.e. Detection of underground services, Access, regress and barricading, Provision of shoring, Disposal of excavated material, Dewatering, Use of machines for excavation, Transport of excavated materials.	Striking or damaging underground utilities (e.g., gas lines, electrical cables, water pipes). Inadequate access and egress routes leading to difficulty for workers entering/exiting excavations or emergency situations. Excavation collapse due to unstable ground or failure to shore the excavation. Accumulation of excavated material too close to the	Property damage, loss of assets, personnel injury, fatality, death, Accident, explosion, Environmental nuisance, Health impact, Soil & water contamination, Environmental pollution.	3	5	H	Work Permit shall be provided before work commencement. Appropriate PPE should be provided. Induction training and Tool Box Talk should be carried out regularly before the commencement of work. Proper engineering control should be carried out. Direct supervision of supervisor. Define and provide stable barricades. An exclusion zone should be provided. Safety Warning signs shall be in place. Provision of designed and approved shoring. Adequate sloping and benching of sides. Planned / Defined storage of equipment and safe routes for equipment. Post flagman / banksman to control vehicle movements. All equipment is to have reverse alarms. Provision of stand-by pump. A maintenance program should be implemented.	1	5	L	

		excavation edge leading to collapse. Water accumulation in excavation leading to ground instability or flooding. Machinery contact with workers or underground utilities. Spillage of materials during transport, improper loading or unloading, vehicle accidents.					Ensure Maintenance of equipment will be carried out regularly. Employ trained, competent and experienced operators. Operation manuals are in place. Avoid overloading of material. Define Obstruction free access and egress. Cover transported material. All personnel are to use dust masks and goggles.				

Risk Matrix

LIKELIHOOD	Insignificant	Minor	Moderate	Serious	Major	Catastrophic
1	1	2	3	4	5	6
2	2	4	6	8	10	12
3	3	6	9	12	15	18
4	4	8	12	16	20	24
5	5	10	15	20	25	30
6	6	12	18	24	30	36

SEVERITY

Consequences:

6 – Catastrophic – Multiple fatalities
5 – Major - Single Fatality
4 – Serious – Permanent disability
3 – Moderate – Lost Time Injury
2 – Minor – Medical Treatment
1 – Insignificant – First Aid Case

24 - 36	Extreme	Immediate action required, Activity should not to proceed in current form
15 - 20	High	Prompt action required, including interim actions. Activity should be modified to include remedial action and planning.

	8 - 12	Medium	Schedule action including any interim countermeasures e.g. implement safe work procedures, signage, instructions	
	4 - 6	Low	Activity can operate subject to management and or modification,	
	1 - 3	Very Low/ Negligible	Risk almost certainly acceptable, no action required unless escalation of risk is possible	

Likely Frequency:

Likelihood (of Adverse Event Occurring)			
	Description	**Health & safety**	**Environmental**
6	Almost certain or imminent	Occurs all the time	Continuous or will happen frequently
5	Highly likely	Common occurrence, Occurs multiple times in a year	Happens 5 – 10 times per year
4	Likely or could occur	Know to occur in the last 12 months	1 – 5 times per Year
3	Not likely, but possible	Has occurred in an industry worldwide	Once every 5 years
2	Unlikely	Has not occurred in over 10 years of the same activity	Not happened in over 10 years
1	Rare	Theoretically possible, but not expected to occur	theoretically possible, but not expected to occur

Prepared by: HSE Engineer		**Reviewed by: HSE Manager**		**Approved by:**	
Sign:	**Date:**	**Sign:**	**Date:**	**Sign:**	**Date:**