



RISK ASSESSMENT

(PIPING ERECTION)

Document No: QHSE-RA-PE-00

Date of issue: 01-01-2025

Revision: 00

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PROJECT / LOCATION:

ABC

DATE OF ASSESSMENT:

01-01-2025

DATE OF NEXT ASSESSMENT

01-01-2026

TASK / ACTIVITY

Piping Erection

SR	What are / tasks / activity?	Who could be harmed and how?	Risk Level			Existing Risk Control Measures/Recovery Measures	What further measures are required?	Residual Risk			Remarks
			L	S	RR			L	S	RR	
1.	Transport of Piping material	☒ Traffic collision ☒ Fall of material				☒ Conduct PEP talk before loading/unloading. ☒ Only inspected vehicles found fit shall be engaged. ☒ Condition of vehicle shall be checked and approved before transport of units ☒ The piping material shall be firmly placed in the truck. ☒ Piping material shall be tightly secured using Nylon ropes. ☒ Vehicle with suitable platform & foldable side gates shall be engaged to prevent fall of items.	☒ Conduct real-time risk assessments before starting transportation, considering weather, road conditions, and visibility. ☒ Verify that the load is evenly distributed to avoid overloading axles or tipping hazards. ☒ Deploy trained spotters to assist drivers during reversing, turning, or navigating tight areas. ☒ Install GPS tracking and telematics to monitor vehicle speed, location, and driving behavior. ☒ Use barriers to segregate loading/unloading zones from other activities to prevent unauthorized access. ☒ Suspend transportation during extreme weather conditions (e.g., heavy rain, fog, sandstorms) to avoid accidents.	1	3	L	Site engineer / Section In- charge



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					☑ Develop and train teams on emergency response protocols in case of accidents, including material spills. ☑ Inspect piping materials for any signs of damage or instability before commencing unloading activities. ☑ Use forklifts, cranes, or trolleys for handling heavy or awkwardly shaped piping materials instead of manual lifting. ☑ Conduct regular awareness sessions for drivers and workers about hazards and safe practices related to material transportation. ☑ Equip vehicles with additional lighting for nighttime operations and ensure reflective markings on piping materials. ☑ Plan for safe disposal or containment of materials in case of accidental spills or leaks.		
2.	Piping support work	☑ Fall of men from Ladder/scaffold. ☑ Fall of material from Height. ☑ Injury from using drilling machine etc. ☑ Dust, debris and Splinters.		☑ All Personnel equipments shall be worn by workmen. ☑ Ladders used to drill anchor fasteners ☑ Should be in good condition. Use of safety helmets, Shoes, safety belts, safety goggles and other relevant PPE's ensured for all workers. ☑ Tools and material shall not be scattered around the work place and shall be neatly ☑ Stacked in a convenient location.	☑ Conduct a task-specific risk assessment before every transportation activity to identify potential hazards and implement tailored controls. ☑ Ensure all workers handling the material wear appropriate PPE, such as gloves, safety boots, helmets, and reflective vests.		Site engineer / Section In- charge



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					❑ Equip vehicles with anti-rollover devices and load-sensing brakes for enhanced stability. ❑ Assign a supervisor to oversee loading, transportation, and unloading operations. ❑ Provide drivers with emergency response procedures and contact numbers in case of accidents or spills. ❑ Conduct regular inspections of securing tools (chains, straps) for wear and tear and replace them as needed. ❑ Use two-way radios or other communication devices to maintain constant contact between drivers and the site team. ❑ Designate specific areas for loading/unloading away from operational zones. ❑ Develop a system for reporting near-misses or incidents during transportation to enhance future safety practices. ❑ Enforce speed limits for vehicles carrying piping material, especially in site areas or sharp turns. ❑ Equip vehicles with adequate lighting and reflective materials for night transport. ❑ Maintain a record of transported materials, including weight,			
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					☐ Conduct toolbox talks with the transport and erection teams before commencing the activity. ☐ Highlight site-specific hazards and control measures. ☐ Ensure ground conditions at the unloading site are stable and free from obstructions. ☐ Verify lifting equipment is certified and capable of handling the load. ☐ Require third-party certification for lifting slings, hooks, and other securing devices used during loading and unloading. ☐ Establish a reporting system for near-misses or incidents during transport to ensure corrective actions.			
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Risk Matrix

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
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	
	24 - 36	Extreme	Immediate action required, Activity should not to proceed in current form					



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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	Known 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:
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Sign:	Date:	Sign:	Date:	Sign:	Date:

