



NBT Innovative India Pvt. Ltd.
Hazard Identification and Risk Assessment (HIRA)

Document No:

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ACTIVITY SERIAL NUMBER

NAME OF ACTIVITY: Excavation

Risk Level = RL, Severity rating = S, Probability Rating = P | Categories of Hazards : Physical/ Chemical/ Ergonomic/ Biological/ Psychosocial/ Mechanical/ Electrical

SI. No	Hazard	Categories of Hazards	Risk	Consequence	Pre Risk Evaluation			Condition			Control Measures	Post Risk Evaluation			Action By	Residual Risk	Remark
					(S)	(P)	RL=(S×P)	Low Risk	Medium Risk	High Risk		(S)	(P)	RL=(S×P)			
1.	Shop Floor Activity	Physical	Low	Low	2	1	2	Y			.	2	1	2	Site Engineer	Low Risk	
2.	Lathe Machine, Grinder, M1TR	Physical	Moderate	Low	2	2	4	Y				2	1	2	Site Engineer	Low Risk	
3.	Water & Oil logging	Physical	Low	Low	1	3	3	Y				1	1	1	Site Engineer	Low Risk	
4.	Movement of vehicle / equipment	Physical	Low	Low	2	1	3	Y				2	2	4	Site Engineer	Low Risk	
5.	Fall of tools & material.	Physical	Low	Low	1	2	2	Y			<ul style="list-style-type: none"> • Dump excavated soil at least 1m distance. • Conduct daily pep talk for site safety awareness. • Don't keep tools near excavated cut. • Provide all mandatory PPEs. 	3	1	3	Site Engineer	Low risk	

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					(S)	(P)	RL=(S×P)	Low Risk	Medium Risk	High Risk		(S)	(P)	RL=(S×P)			
6.	Contact with buried electric cable, gas,/oil pipelines.	Electrical	Low	No	1	2	2	Y			<ul style="list-style-type: none"> Before excavation check out all underground utilities and if possible remove it. 	2	1	2	Site Engineer	Low Risk	
7.	Overhead crane & electric power lines.	Electrical	Low	Electrocution	1	2	2	Y			<ul style="list-style-type: none"> Maintain safe distance by overhead power lines. Maintenance & Repairing 	2	1	2	Site Engineer	Low Risk	
8	Unauthorised / untrained worker.	Psychological	Low	Cause of accident at work site - No.	1	2	3	Y			<ul style="list-style-type: none"> Engage only authorize and trained worker for a specific work. Don't engage workers without screening, medical checkup and safety induction. 	1	2	2	Site Engineer	Low Risk	

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RISK MATRIX						
PROBABILITY →	Very Likely - 5	4	10	15	20	25
	Likely - 4	4	8	12	16	20
	Possible - 3	3	6	9	12	15
	Unlikely - 2	2	4	6	8	10
	Very Likely - 1	1	2	3	4	5
		1	2	3	4	5
		Negligible	Slightly	Moderate	High	Very High
		SEVERITY →				
	Risk	Risk level	Condition			
	1 to 6	Low Risk	<i>May be acceptable but review task to see if risk can be reduced further.</i>			
	8 to 12	Medium Risk	<i>Task should only be executing with appropriate management authorization after consulting with specialist personal.</i>			
	15 to 25	High Risk	<i>Task must not proceed, until adequate action taken to minimize the risk.</i>			

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