	RISK ASSESSMENT			Page **1** of **9**
	Maintenance, Testing and Commissioning of Fire Alarm System			
	Department	**Document Ref. No.**	**Issue Date**	**Revision**
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Company Name:	ABC	**Prepared by:**	XYZ
Activity:	Maintenance, Testing and Commissioning of Fire Alarm System	**Approved by:**	DEF

SR.	Activities	Hazard Identified	Who Might Be harmed?	Risk Level			Control Measures	Residual Risk			Responsible Person
				L	S	R		L	S	R	
1.	Pre-Task briefing	● Personal injury, fatality resulting from working with hand tools and lines under pressure, and electrocution	Project Engineer Supervisors Labourers Operators Environment Adjacent community Asset/Machinery Structure	3	3	9	● Permit to be obtained and the activity from the Main contractor should be communicated in advance. ● Arrange toolbox meetings with the workforce, in which people are involved in testing and commissioning activity before starting the work and keep the proper record. ● Appropriate tools to be used. ● All work is carried out according to the method statement and risk assessment. ● The area should be barricaded and sign in multi-language are to be posted. ● All the test equipment and pressure gauges are to be calibrated. ● Wear appropriate PPE. ● Check all the installations are done as per the approved drawings. ● The drainage system/drain line is to be connected at least in test to avoid water flooding and connected to the nearest drain/trench. ● Proper supervision is maintained all the time	2	2	4	

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2.	Access And Egress	● Slip, Trip and Falls	Project Engineer Supervisors Labourers Operators Environment Adjacent community Asset/Machinery Structure	3	3	9	● Permit to be obtained and communicated to other services in advance. ● Proper Access to be provided to the maintenance and testing area ● Access to the area is made clean and free from obstacles. ● No unnecessary material is kept in the vicinity of the Maintenance and test area.	2	2	4	
3.	Prestart Checks	● Personal injury resulting from incorrect work methods and incorrect fittings. ● Personal injury resulting from Faulty Equipment, and incorrect work methods. ● Equipment damage, a personal injury resulting from the blow out of equipment under test	Project Engineer Supervisors Labourers Operators Environment Adjacent community Asset/Machinery Structure	3	3	9	● Obtain the correct PTW. (Testing & Commissioning permit from the Main contractor) ● Inspect all the testing equipment for compatibility before starting the work. ● The Engineer must give proper instructions about the testing & Commissioning procedures. ● Lock out Tag out procedures are to be followed. ● Barricade the area and keep proper signage. ● Close supervision is to be maintained. ● Must be wearing Proper PPEs. ● Critical Areas must be adequately provided with lighting arrangements if the testing and maintenance continue during the night shift. ● Notify them about the testing and Commissioning of the concerned people.	2	2	4	

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							● No unauthorized personnel should be allowed to remain in the vicinity of the testing area.				
4.	Poor lighting in the testing & Commissioning area	Personal injury Slip and trip	Project Engineer Supervisors Labourers Operators Environment Adjacent community Asset/Machinery Structure	3	3	9	● Task area lighting should be provided wherever area lighting is obstructed, or illumination found adequate. ● Toolboxes talk to be conducted and informed about the procedure to be followed during power cut/failure timing.	2	2	4	
5.	Manual Handling	● Back pain ● Limb injuries ● Strains & Sprains ● Cuts & Bruises ● Property damage. ● Risk of injury or fatality to operatives or other human beings nearby.	Project Engineer Supervisors Labourers Operators Environment Adjacent community Asset/Machinery Structure	3	9	9	● Proper access and egress should be provided. ● Secure the load before lifting. ● All operatives must be aware of manual handling hazards. ● Proper information and training are required. ● Proper lighting arrangements (If the area is dark or working at night-time). ● Proper PPE must be always worn (including gloves) ● If the manual is unavoidable then the physical capabilities of the persons involved must be taken into consideration and adequate numbers to be in place and kinetic lifting technique to be always used. The area where the lifting is taking place	2	2	4	

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							must be firm / level and free from slip /trip hazards. ● When manual handling then the load must be evenly distributed amongst all of those involved in the lifting activity and makeshift lifting devices (such as scaffold tubes) should not be used. ● The physical capabilities of all persons involved in manual handling are to be assessed.				
6.	Working with electrical panel	● Electrocution ● Sparks ● Electric shock ● Fire fatality	Project Engineer Supervisors Labourers Operators Environment Adjacent community Asset/Machinery Structure	3	5	15	● Isolation certificates shall be obtained from (client-main contractor). ● The system module should be isolated through (the client-main contractor). ● All the Electrical Equipment must be properly checked before starting work. ● Lock out Tag out procedures are to be followed! ● Only skilled and competent electricians are allowed to work and handle the Electrical panel. ● The cable should be properly secured. ● Only authorised persons with a permit to work should be engaged for testing work. ● Proper supervision is to be maintained during the testing activity. ● Use electrical gloves while working on electrical equipment and panels	2	2	4	

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7	Use of Power and Hand Tools	● Injury to the person ● Eye & Face risk ● Bruises and Cuts ● Electrocution ● fire ● Property damage. ● Risk of injury or fatality to operatives or another human being nearby.	Project Engineer Supervisors Labourers Operators Environment Adjacent community Asset/Machinery Structure	3	5	15	● All power tools must be insulated and guarded, and PAT tested. ● All electronic measuring devices should be calibrated. ● Regular maintenance and check-up must be carried out. ● Hand tools must be maintained. ● Continuous training and education to workers. ● Right tools for the right job. ● Trained operatives and supervisors. ● Defective tools must be tagged out and removed from the site. ● Inspection should be carried out on all tools in use. ● Proper supervision must be maintained. ● Correct PPE must be worn as required. ● Must check tools before each use. ● Must use only 110 volts for power tools. ● All tools are to have Gloves & Handles fitted where applicable. ● Ensure guards or auxiliary grips must not be removed from the power hand tool. ● Ensure appropriate electrical cable management, i.e., the electric cable should not be laid into access or hung on face or neck level.	2	3	6	

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8	Working on electrical systems (contact with electricity).	Electrocution, fatality, serious burn injuries etc.		3	5	15	● PTW system should be followed. ● Isolate the system before carrying out the job to mitigate the hazards. ● Isolation certificates shall be obtained from (client-main contractor). ● Follow the Lockout & Tag out procedures	2	3	6	
9	Use Of Step Ladder	● Personal Injury ● Fall from height. ● Falling Materials Slip, Trip and Fall		3	9	9	● All step Ladder must be inspected periodically and recorded. ● The step ladder must be used according to SPI. ● The tag must be provided after the inspection is made and colour coding must be given accordingly. ● Ensure stepladders are Positioned on level ground and used following the safety instructions. ● Only one person is to use the ladder at one time and one operative must be held the ladder from the ground be sure to clear the ground area around the ladder before climbing. ● Do not carry any material while climbing the ladder. ● Do not stand on the top three steps of the ladder. ● Safety harnesses must be worn and hocked properly at above shoulder Heights at the strong anchor point.	2	2	4	

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							● Do use a ladder at openings and edges and never live electrical cable.				
10	In case Emergency	● Slip, trip ● Fall ● Struck by		2	3	6	● In case of emergency the Proper access and egress to be maintained ● Emergency No. are to be posted. ● Toolboxes talk to be given to all the team members I and procedures are to be explained in case of any emergency. ● The spill control team shall be ready and available for cleaning the spill in the event of leakage in the network or during the activation of the system. ● Fire extinguishers are to be placed in the activity area	2	2	4	
11	House Keeping at the workplace before and after the task.	Housekeeping, Fire, Slips, trips, and falls.		2	3	6	● Remove all waste from the work area during and after completing the activity. ● Provide a proper Spill kit from the testing area. ● Supervisors to check work areas should be clean before and after the activity.	2	2	4	

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Risk Rating Matrix

Likelihood		Consequences				
		Rare (1)	Minor (2)	Moderate (3)	Major (4)	Catastrophic (5)
5	Almost Certain	5	10	15	20	25
4	Likely	4	8	12	16	20
3	Possible	3	6	9	12	15
2	Unlikely	2	4	6	8	10
1	Rare	1	2	3	4	5

Low Risk	Medium Risk	High Risk

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1-3 *Acceptable*	4-12 *Tolerable*	15-25 *Not Acceptable*

Risk Likelihood Description		
Rating	**Description**	**Likelihood of Occurrence**
1	Rare	Highly unlikely, but it may occur in exceptional circumstances. It could happen, but probably never will.
2	Unlikely	Not expected, but there is a slight possibility it may occur at some time.
3	Possible	The event might occur at some time as there is a history of frequent occurrence at the site/project/or similar institutions.
4	Likely	There is a strong possibility the event will occur as there is a history of frequent occurrence at the site/project/or similar institutions.
5	Almost Certain	Very Likely. The event is expected to occur in most circumstances as there is a history of regular occurrence at the site/project/or similar institutions.