	Health & Safety			RLR JV	ELE-RA-00014
	RISK ASSESSMENT			QRC	M002-RLR-ELE-MES-00014

					Type	Code	Rev.	Lang.	Date	Description of modifications
Prepared	Method Engineer	Saqib Hussain								
Reviewed	HS Manager	Johann Brinks			RA		1	Eng.	6/12/2016	
Approved	Contractor's Representative	Danilo Bernasconi								

Description of activities:	Installation of MCC-Panels
Plants and Equipment used :	Hand Tools, Power Tools, Scaffolds
Chemicals used :	
Personnel involved:	Site Engineer / HSE Representative / Foreman/ General labors.

Description	Hazard identification	Exposed persons	Injury	Occup. Illness	Initial Risk Evaluation P	G	R= PxG	Prevention and protection measures to be implemented	Residual Risk Evaluation P	G	R= PxG	Responsible of implementation	Time of implementation
Enter to Site.	Vehicle impact, struck by moving machinery, suspended load, fall into excavation, slip and trip, leading edges	All workers	X		2	4	**8**	•.All visitors to site must undertake site induction •.Banksman to control access around operating plant or vehicle •. stay within clear and defined routes •. Compliance of speed limits on site. •. Do not stand under suspended load. • Keep away from leading edges and excavations.	1	3	**3**	Site Engineer / HSE Representative / Foreman	Prior execution
Transportation of materials.	Unlicensed driver, no maintenance, over speeding, failure to follow traffic rules, blind spots, reversing, collide with other vehicles, unbalanced load, unsecured load, load fall off,	All workers	X		2	3	**6**	• Ensure trained driver with valid Qatar driving license. • Ensure vehicle is in good working condition. Regular inspection and maintenance carried out. Tyre to be in good condition and air pressure checked. • Do not over load. • Ensure materials are not protruding from the loading bed of the truck. • Ensure load is properly secured. • Ensure traffic rules are strictly followed. • Follow speed limit. At site speed limit is 15 kmph. • Ensure becon lights and reverse alarm is working. • Ensure banks man is provided when reversing and at blind spots.	1	2	**2**	Site Engineer / HSE Representative / Foreman	Prior & during execution of works
Loading and unloading of materials.	Using mobile crane Untrained operative, using damaged slings, outriggers not fully extended, crane not set up on level/compacted surface, improper slinging, lifting over persons, load swinging, striking nearby structure, high winds, poor visibility, poor communication, Incorrect lashing	All workers	X		2	3	**6**	• STARRT briefing to operatives prior to start work. • Ensure lift plan is prepared before lifting is carried out. • Ensure operator is licensed and has valid training certificate. • Equipment documents inspected and up to date. • Ensure crane is set up on compacted and level ground. • Outriggers fully extended and outrigger pads used. • Lifting gears has valid 3rd party certificate and is inspected for damage prior to use. • Ensure load is properly slinged and tagline used for controlling the load. • Ensure lifting area is cordoned off. • Establish good communication between rigger and crane operator e.g. hand signal, walkie-talkie.	1	3	**3**	Site Engineer / HSE Representative / Foreman	Prior and during execution

Stacking and storage of materials								• Ensure correct lashing to secure the Distribution board while lifting. • Do not lift over persons. • Follow manufacturers instructions and no not exceed the SWL (of boom length to radius configuration).						
	• Improper stacking, slip and trip, walking over pipes, no access & egress, manual handling, sharp edges, load slip off from hand, hot & humid climate, storing at improper height	All workers	X		2	3	**6**	• Ensure access and egress is provided between stacked materials. • Do not stack materials at unsafe height • Ensure loose materials are properly secured. • Ensure proper housekeeping in the area. • Proper cable management. • Ensure adequate illumination for night time. • Do not mix flammable materials chemicals with other materials • Store chemicals in COSHH store • Ensure MSDS is available for any chemicals stored. • No smoking in the area. • Ensure no hot works shall be permitted in the area.	1	3	**3**	Site Engineer / HSE Representative / Foreman	Prior and during execution
Workplace Clearance	Material obstructions. Pedestrians Involvement. Walk Ways not clear. Unsafe Access. Signs missing, slip & trip. Fire	All workers	X		2	3	**6**	• STARRT briefing for operatives prior to start work. •Proper Supervision. •Keep the work place free of obstructions by carrying out regular housekeeping. • Do not block access by storing materials. • Signs must be displayed to indicate the routes to be taken by persons, changes in routes must be clearly communicated. • If mechanical lifting equipment is used, ensure no metallic slings, hooks or chains will be used in direct contact with the pipe. Rope or nylon belt sling will be preferred which will not damage or cut the pipe surface. • Working area should be illuminated • Proper routing of cables. • Ensure good housekeeping always. • Workshop station must equip with fire extinguisher, fire blanker and mechanical ventilation (fans);	1	3	**3**	Site Engineer / HSE Representative / Foreman	Prior and during execution
Cutting Cable	Hand Tools Using damaged tools, wrong use of tools, cramped work space, Repetitive work, Hot & humid climate, slipping, tools fall on person below	All workers	X		2	4	**8**	• STARRT briefing to operatives • Do not use damaged tools • Inspect tools for damage prior to use. • Do not use homemade tools • Do not throw tools on persons below or above. • Use tool lanyard when using tools at height. • Carry tools in holster or in tool box when working at height. • Use task specific PPE such as face shields, goggles, hand gloves, ear protection, dust masks etc. Supervisors to monitor their own and their workers' physical condition	1	3	**3**	Site Engineer / HSE Representative / Foreman	During operations

	Using Power Tools Using faulty/damaged equipment, Untrained operative, Electrocution, Flying objects, Vibration, Flying objects, Using wrong disk, Slip & trip, Dust, Noise, Fire.	All workers	X		3	4	**12**	• STARRT briefing to operatives prior to start work. • Only trained person shall be allowed to use power tools. • Ensure power tool is inspected and color coded. • Use power tool with Deadman switch. Do not use damaged power tool • Ensure that only correct disk or attachments recommended by the manufacturer is used. • Machine guards & handles to be ensured in machines e.g. cutting machine, angle grinder, circular saw etc. • Unplug power tools before cleaning or replacing any attachments. • Use power tools with dead man's switch only. • Do not use loose fitting clothes whilst using power tools. • Ensure proper cable management. • Ensure daily housekeeping and rubbish removal. • Ensure rotation of work and adequate rest time for workers. • Choose power tools that produce less vibration and noise. • Carry out wetting or other mechanical exhaust arrangement to remove dust. • Wear task specific PPE i.e. face shield, ear protection, dust masks, gloves etc.	1	3	**3**	General operatives/ Supervisor	Prior and during execution
Installation of MCC-Panels	Use of Scaffold Persons/tools fall from height, incomplete working platform, rails missing, unsafe access, bracing missing, wheels damaged/not locked, missing outriggers, leaning/ swaying scaffolds, uneven surface or slop, using damaged components, moving scaffold when persons are on platform equipment/gauge, •insufficient Duct support, • activity, poor communication etc.	All workers	X		2	3	6	• Scaffolds shall be erected by trained scaffolders only. • Scaffolds shall not be used unless inspected by 3rd party certified scaffold inspector. • Scaffold materials used must be without damage and in good condition. • Do not over load scaffold. • Ensure scaffold platform is provided with safe access, top rails, mid rails and toe board. • Tool belts must be used while working at height. • Scaffolds to be placed on level & rigid surface. • Wheels of mobile scaffold must be locked during operation. • Do not move scaffold when workers are on top. • Ladder must be secured with clamps. • Trained & competent operatives must be deployed. • The bottom area shall be cordoned off and signage placed. • Regular rest time & adequate drinking water supply for operatives working at cramped areas to be ensured.	1	3	**3**	Site Engineer / HSE Representative / Foreman	Prior and during execution
	Existing services No work permission from authorities Un Trained staff, Explosion, electrocution, damage service.	All workers	X		4	5	20	• STARRT briefing to operatives • Check relevant Authority (e.g. power, water council) records for location of services. • If in doubt, use experienced/accredited service locators. •.Use of Job specific PPE. •.Competent staff and supervision. • Avoid make contact with other services. •Isolate the live conductors when working with power tools. • All protection and control devices shall be correctly set and operational. • All unused cable entries and openings shall be sealed properly with dummy plugs of suitable IP rating.	2	3	**6**	Site Engineer / HSE Representative / Foreman	Prior & during execution

	Manuall handling: Repetitive work, sharp/protruding ends, vibration, noise, overhead work, load falling on person, hot and humid climate, poor illumination	All workers	X		3	3	9	•Rotation of work, adequate rest, proper positioning and posture, •Job Specific PPE. • Cordon off the working area. • Ensure load is not impairing the view. • Watch out for un even surfaces. • Ensure no spillage or slippery on working platform. •provision of adequate illumination.	1	3	**3**	Site Engineer / HSE Representative / Foreman	Prior & during execution
House Keeping	Slip, Trip. Fall, Environmental Effect Manual handling, protruding sharp objects, dust, poor illumination, uneven surfaces, heavy load,	General labors	X		2	3	**6**	• Adequate PPE should be used. • Extreme care when working in wet and slippery areas. • Personnel should never run on worksite. •. Keep worksite clean and tidy at all times. •. All materials to be secured by suitable chocks, sandbags or other means. • All pipes not laid during the course of a day are to be returned to the stockpile and secured appropriately. •Store/park plant & equipment off site & in a secure area.	1	3	**3**	Site Engineer / HSE Representative / Foreman	Prior & during execution

ADDITIONAL HEALTH & SAFETY REQUIREMENTS:

- In all conditions, during all work phases, always minimize the presence of personnel in all working areas
- During all the operations is required the presence of supervisors / foremen
- Operators shall have valid operating license.
- Ensure proper maintenance to vehicles, tracks and walkways
- Always give priority to the collective measures to the individual protection.
- Work area to be fenced off and adequate signage to be installed to warn of construction works.
- All workers involved to be submitted to HSE induction prior to start work.
- Wastes should be managed properly.
- For health reasons, it is forbidden to smoke, drink and eat during works and hands must be washed at the end. Avoid formation of dust.
- All Workers, in JV premises, shall wear the following PPE (Personal Protective Equipment): Safety Helmet
  - Safety shoes
  - High visibility work clothes
  - Protective goggles
- Other PPE to be worn as required and stated in MSDS
  - Hear protection as muffles or ear caps (according to the activity)
  - Gloves (according to the activity)
  - Respiratory mask (according to the activity)
  - Welding or metal cutting PPE
- **Responsible personnel: _____: Mob # _____**

table of risk evaluation R = G X P		LIKELIHOOD THE EVENT OCCURS				
		Improbable =1	Possible = 2	Probable =3	Very probable =4	Frequent =5
SERIOUSNESS OF EVENT	Very serious effects = 5	5	10	15	20	25
	Serious effects = 4	4	8	12	16	20
	Moderate effects = 3	3	6	9	12	15
	Slight effects = 2	2	4	6	8	10
	No relevant effects =1	1	2	3	4	5

RED - VERY HIGH RISK (Unacceptable)

ORANGE – HIGH RISK (Unacceptable)

YELLOW – MEDIUM RISK (Acceptable provided that everything reasonably practicable has been done to reduce the risk)

GREEN – LOW RISK (Acceptable)