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| | Job Safety Analysis | | | |
| | Organization Name | | | |

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| JSA Refer # | | Project Ref # | | | |
| Project Name | | Location/Site | | | |
| Activity Name | Civil Work Activity | Prepared By | | | |
| Reviewed By | | Issue Date | | Review Date | |
| Approved On | | Approved By | | | |
| Participants <i>(List all employees involved in the job safety analysis preparation)</i> | | | Tools and Equipment <i>(List all tools & equipment that are to be used in the work)</i> | | |
| Participant | Designation | Department | Tool | Equipment | |
| | | | Tool Name Here | Equipment Name Here | |
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| S/ # | Job Steps | Identified Hazards | Controls Required | Action By |
|---------|--------------------------|---|--|----------------|
| 1 | Driving to/from worksite | <ul style="list-style-type: none"> Vehicle accident Property damage Personal injury Hit by moving vehicle Vehicle collapses during job Vehicle crash/ roll over Driver fatigue Driving on uneven surface/road | <ul style="list-style-type: none"> Ensure compliance of the legislation, organizations road safety policies and operation procedures. All of the workers must undergo the safety rules and induction training, defensive driving trainings. Ensure the workers are trained, experienced, skilled, have valid driving license. Ensure a safe vehicle is used for the job and well maintained before start of the job. | QHSE Driver |

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| | | <ul style="list-style-type: none"> ● Brake failure ● Weather conditions ● Hitting stationary nearby objects ● Fire & explosion during collision | <ul style="list-style-type: none"> ● Follow the speed limits when driving at the worksite, to worksite and from worksite. ● Conduct toolbox talks and pre-job briefing. ● Driver, passenger/helper are bound to wear the seat belts when riding the vehicle. ● Driver should be alert for the other's mistakes and control the situation to avoid accident. ● Maintain a safe distance from the pedestrians at the worksite and public roads to avoid hitting them. ● Driver within the limits when driving on site, and on public road to avoid hitting other vehicles. ● Ensure vehicle is maintained and serviced for the job execution. During job, collapse can lead to delay in job execution and completion. ● Vehicle should be provided with the roll cage to protect the driver and passenger inside the vehicle in case vehicle topples and roll over. ● Driver should take full rest, and should be medically fit for the job. ● Avoid driving on uneven road, but if it can't be avoided, drive carefully. ● Check the brake and ensure it is working properly before start of job. ● Maintain safe distance from other objects available near e.g., barrier, fire hydrant. ● Don't drive in inclement weather e.g., rain, thunderstorm, fog etc. ● Ensure emergency equipment are available in the vehicle for emergency usage, e.g., fire extinguisher, first aid kits etc. ● Workers should be trained to use the emergency equipment, provide first aid to the injured people onsite. | |
| 2 | Site Preparation | <ul style="list-style-type: none"> ● Minor injuries ● Major injuries | <ul style="list-style-type: none"> ● Ensure correct and well-maintained tools are being employed for the job execution. | QHSE Engineer |

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| | | <ul style="list-style-type: none"> Defective tools usage at worksite Tools usage by incompetent person Misuse of the tool No implementation of assessed controls measures | <ul style="list-style-type: none"> All people involved in the work activity must wear the PPEs for the protection. Job safety analysis and work method statement should be communicated and implanted throughout the work activity. Tools should be inspected and maintained before start of the job, and defective tools should be removed from site. Workers should be trained, skilled, and experienced to use the tools safely. Fire extinguishers and first aid kits should be available onsite and ready to use. Tools should be used for the relevant job only, and secured properly after job. All work procedures, guidelines, and safety requirements should be followed. | Supervisor |
| 3 | Loading & Unloading of material | <ul style="list-style-type: none"> Fall from height/ trailer during loading/ unloading Load collapse during loading/ unloading activity Material loss during loading/ unloading Lifting requirements ignored. Working in inclement/ harsh weather. Minor injuries Major injuries Hit by objects Property damage during transportation Fire incident | <ul style="list-style-type: none"> Ensure the work platform is being used to perform the job at height, and the working area is provided with sufficient guarding if work platform is not available. Don't do the manual handling of the load for loading/ unloading purposes. Ensure the correct accessories are used for the lifting purpose, and load is attached to the lifting equipment properly. Don't work in inclement weather e.g., high winds, night, fog, rainy weather. Use PPEs and hand safety when manual handling is not avoidable. When load is being lifted for loading and unloading, barricade the area to avoid getting closer. Ensure the load is safe and secured for transportation using the proper accessories. Use correct transportation lorry, and ensure object oversizing is avoided. Ensure the workplace and transportation lorry has appropriate emergency equipment. Ensure the lifting equipment and accessories are well maintained, and inspected before the start of the job. | QHSE Engineer Supervisor |

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| | | | <ul style="list-style-type: none"> Lifting plan is used and implemented when loading/unloading the load on lorries. Ensure the lifting equipment is sited on the firm, and even ground, the outriggers are fully extended to secure the lifting equipment. | |
| 4 | Manual handling | <ul style="list-style-type: none"> Property damage Personal injury Fatality Lifting heavy loads Cuts due to sharp edges Pinching hands when putting load Slip, trip, and fall during manual handling Unbalanced and loss of control Back pain, strain, muscle pain | <ul style="list-style-type: none"> Avoid manual handling at the worksite, instead use mechanical aid. Employee trained, experienced, and skilled worker for the job execution. Ensure the load is being handled carefully. Don't carry the load more than lifting capacity, if manual handling is not avoidable. Use mechanical aid when load is heavier, e.g., crane, hoist, trolley etc. adopt team load lifting technique. Lift the load properly, keep it close to the body and assess the passage for transportation of the load. Ensure the walkways are even, without any hurdle, not slippery, well illuminated. Ensure the PPEs are used, housekeeping is good. | QHSE Supervisor Worker |
| 5 | Working at height | <ul style="list-style-type: none"> Fall from height Falling objects Use of improper working platform Misuse of working platform Incompetent people hired for work Injuries and deaths Improper fall protection usage | <ul style="list-style-type: none"> Provide proper work at height platforms, and equipment to perform the job. Area around the work at height should be barricaded, and safety signs should be posted. Competent and well-trained workers should be hired for the job performance. The work platforms should be inspected, maintained, and installed by the competent people. All the openings in the work at height platforms should be covered, and edges should be barricaded using the guard rails. Toe boards should be installed to prevent the rolling objects fall from height. | QHSE Engineer Supervisor Worker |

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| | | <ul style="list-style-type: none"> Working near the overhead power lines Falling through openings/ from edges Working in rough weather Incomplete access/exit Unauthorized entries | <ul style="list-style-type: none"> Safety nets, air bags should be provided and placed at worksite. Workers should be provided with the personal fall arrest system/pfas to use, harness should be able to hold 2,268kg (5,000 lbs) of weight. Lifeline should be installed to anchor the harness. At least maintain 10ft distance from the overhead power lines when working at height. Stop the job when weather is inclement, and high winds are blowing. Workers should be provided with the proper access/exit arrangements. Work area should be barricaded to prevent the unauthorized people entry. | |
| 6 | Hand tools usage | <ul style="list-style-type: none"> Minor to major injuries Misuse of tool Use by incompetent person Lack of training Defective tool use | <ul style="list-style-type: none"> Ensure the tools are made for the job only. Workers are provided with the PPEs specially hand protection. All of the tools are inspected by competent person before start of the job. Tools are maintained, and defective tools are replaced immediately. Prevent use of tools for irrelevant job activity. Ensure the tools are secured after job to prevent the misuse. Provide correct tools for the job execution, instead of using irrelevant tools. Conduct toolbox talks, induction trainings, and sessions to ensure workers are trained and well informed. | QHSE Engineer Supervisor Workers |
| 7 | Power Tools usage | <ul style="list-style-type: none"> Minor to major injuries Misuse/incompetent person use Defective tool use Lack of training | <ul style="list-style-type: none"> Ensure the power tools are well inspected, maintained, and used by the competent person. Inspect the tools before job, and replace if damaged or not maintained. Ensure the electric cord, plug, and buttons are in good condition. Ensure the moving parts are covered, and workers are trained to use the tool. Ensure the tools are not modified by workers, e.g., guard's removal. Change in equipment should be subject to approval, and training. | QHSE Engineer Supervisor Workers |

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| 8 | Waste Management | <ul style="list-style-type: none"> Slip, trip, fall Fire Environmental impact Illness Spillage Lack of competence | <ul style="list-style-type: none"> Ensure the waste is removed from the site using mechanical aid instead of manually. Ensure the compliance of the legal requirements in addition to organizational waste management standards in the light of ISO 14001 Environmental Management System. Ensure the flammable and ignitable items are not dumped with the general debris. Flammable and ignitable debris is handled with care and dumped carefully at designated area. Ensure the items that can impact the environment adversely, are handled with care, and dumped carefully or handed over to the approved contractors or public departments for removal. Workers are trained, and experienced to handle the waste carefully in order to prevent any adverse effect. Workers are provided with the approved quality PPEs when handling waste to prevent the illness. Emergency response and spill containment plan with kit is developed and implemented. Workers are trained and experienced to contain the spillage in any emergency situation. Workers are trained, and provided with the relevant information to keep them updated with the required information. Monitoring and supervision of the waste removal operation. | QHSE Environmental Engineer Supervisor Workers |
| 9 | Working in Rough environment | <ul style="list-style-type: none"> Heat stress Cold stress Working in high winds Working in rain | <ul style="list-style-type: none"> Work should be avoided working in rough weather conditions. If working in adverse weather conditions is not possible, trained workers should be hired for job execution. | QHSE Supervisor Workers |

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| | | <ul style="list-style-type: none"> Working in night | <ul style="list-style-type: none"> Workers should be provided with the basic facilities when working in hot/cold weather. Workers should be provided with cold water and shelter when working in hot weather. Work activity should be supported with the 30 minutes brakes on regular intervals. Workers should be provided with the hot beverages when working in cold weather. Work activity should be modified and 30minutes brake should be given for rest. Stop the job at height if high winds are blowing. Working in rain is prohibited, workers should move to the shelter. To work in night, the night work risk assessment should be prepared, and implemented. Comply with the night work procedure. Workers should be trained enough to work in unusual hours e.g., night shift. Training should be provided, and monitoring is mandatory to ensure workers are complying and working properly. Workers working out of the routine should be provided with tea/coffee to stay awake. | |

| JSA Team Lead | Safety Officer | Project Engineer | Approved By |
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| Name: Designation: Date & Time: | Name: Designation: Date & Time: | Name: Designation: Date & Time: | Name: Designation: Date & Time: |
| Signature: | Signature: | Signature: | Signature: |

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