**Safe Work Requirement**

Job Safety Analysis Procedure

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| Introduction This procedure explains what a job safety analysis is and contains guidelines for conducting step-by-step analysis in ECDC operation in Egypt. A sample of a completed job safety analysis and a blank job safety analysis form are included at the back of this manual.  It is important to note that the job procedures in this manual are for illustration only and do not necessarily include all steps, hazards, or protections for similar jobs in industry. In addition, OHSES 18001 standards should be referred to as part of ECDC job safety analysis in Egypt. There is other Similar International or National standards that apply to most job operations and also emphasize job safety analysis. Compliance with OGP Guidelines is mandatory.  Although this manual is designed for use by ECDC HSE advisors, employees also are encouraged to use the information contained in this manual to analyze their jobs, be aware of worksite hazards, and report any hazardous conditions to their advisors. Purpose Job-related injuries and fatalities occur every day in the workplace. These injuries often occur because employees are not trained in the proper job procedure. One way to prevent workplace injuries is to establish proper job procedures and train all employees in safer and more efficient work methods. Establishing proper job procedures is one of the benefits of conducting a job safety analysis carefully studying and recording each step of a job, identifying existing or potential job hazards (both safety and health), and determining the best way to perform the job or to reduce or eliminate these hazards. Improved job methods can reduce costs resulting from employee absenteeism and workers’ compensation, and can often lead to increased productivity.  Job Safety Analysis (JSA) is used to identify elements of risk related to every step in one job sequence and to develop protective measures to eliminate risk or reduce risk to the acceptable level. It is a simple assessment of one work activity, which is broken up to sequences and operational steps. The analysis shall be performed for isolated short job tasks and for more permanent activities related to the work on the systems and equipment where the risk element is considered to be significant. Selecting Jobs for Analysis A job safety analysis can be performed for all jobs in the workplace, whether the job task is special (non-routine) or routine. Even one-step-jobs such as those in which only a button is pressed can and perhaps should be analyzed by evaluating surrounding work conditions.  To determine which jobs should be analyzed first, review your job injury and illness reports. Obviously,  ***A job safety analysis should be conducted first for jobs with the highest rates of disabling injuries and illnesses.***  Also, jobs where close calls or near misses have occurred should be given priority. Analyses of new jobs and jobs where changes have been made in processes and procedures should follow. Eventually, a job safety analysis should be conducted and made available to employees for all jobs in the workplace. Involving the Employee Once you have selected a job for analysis, discuss the procedure with the employee performing the job and explain its purpose. Point out that you are studying the job itself, not checking on the employee’s job performance. Involve the employee in all phases of the analysis from reviewing the job steps and procedures to discussing potential hazards and recommended solutions. You also should talk to other workers who have performed the same job.  ***Are lockout procedures used for machinery deactivation during maintenance procedures?***   Conducting the Job Safety Analysis Before actually beginning the job safety analysis, take a look at the general conditions under which the job is performed and develop a checklist. Below are some sample questions you might ask.   1. Are there materials on the floor that could trip a worker? 2. Is lighting adequate? 3. Are there any live electrical hazards at the jobsite? 4. Are there any chemical, physical, biological, or radiation hazards associated with the job or likely to develop? 5. Are tools including hand tools, machines, and equipment in need of repair? 6. Is there excessive noise in the work area, hindering worker communication or causing hearing loss? 7. Are job procedures known and are they followed or modified? 8. Are emergency exits clearly marked? 9. Are trucks or motorized vehicles properly equipped with brakes, overhead guards, backup signals, horns, steering gear, and identification, as necessary? 10. Are all employees operating vehicles and equipment properly trained and authorized? 11. Are employees wearing proper personal protective equipment for the jobs they are performing? 12. Have any employees complained of headaches, breathing problems, dizziness, or strong odors? 13. Is ventilation adequate, especially in confined or enclosed spaces? 14. Have tests been made for oxygen deficiency and toxic fumes in confined spaces before entry? 15. Are work stations and tools designed to prevent back and wrist injuries? 16. Are employees trained in the event of a fire, explosion, or toxic gas release?   Naturally this list is by no means complete because each worksite has its own requirements and environmental conditions. You should add your own questions to the list. You also might take photographs of the workplace, if appropriate, for use in making a more detailed analysis of the work environment. Breaking Down the Job Nearly every job can be broken down into job tasks or steps. In the first part of the job safety analysis, list each step of the job in order of occurrence as you watch the employee performing the job.  QQ图片20170303191108.png  Be sure to record enough information to describe each job action, but do not make the breakdown too detailed. Later, go over the job steps with the employee.  Figure 1 shows a worker performing the basic job steps for grinding iron castings.  **Figure 1 Grinding Castings: Job Steps**   |  |  |  | | --- | --- | --- | | 1. Reach into metal box to right of machine, grasp casting, and carry to wheel. | 2. Push casting against wheel to grind off burr. | 3. Place finished casting in box to left of machine. |  Identify Hazards After you have recorded the job steps, next examine each step to determine the hazards that exist or that might occur. Ask yourself these kinds of questions.   1. Are there hazards that would require the use of PPE and equipment that are appropriate for the job? 2. Are work positions, machinery, pits or holes, and hazardous operations adequately guarded? 3. Are lockout procedures used for machinery deactivation as required? 4. Is the worker wearing clothing or jewelry, or have long hair that could get caught in the machinery or otherwise cause a hazard? 5. Are there fixed objects that may cause injury, such as sharp edges? 6. Is the flow of work organized (e.g., Is the worker required to make movements that are too rapid)? 7. Can the worker get caught in or between moving parts? 8. Can the worker be injured by reaching over moving machinery parts or materials? 9. Is the worker at any time in an off-balance position? 10. Is the worker positioned to the machine in a way that is potentially dangerous? 11. Is the worker required to make movements that could lead to or cause hand or foot injuries, or strain from lifting the hazards of repetitive motions? 12. Can the worker be struck by an object or lean against or strike a machine part of object? 13. Can the worker fall from one level to another? 14. Can the worker be injured from lifting or pulling objects, or from carrying heavy objects? 15. Do environmental hazards (dust, chemicals, radiation, welding rays, heat, or excessive noise) result from the performance of the job?   Repeat the job observation as often as necessary until all hazards have been identified.  Figure 2 shows basic job steps for grinding iron castings and any existing or potential hazards.  QQ图片20170303191108.png  **Figure 2 Grinding Castings: Hazards**   |  |  |  | | --- | --- | --- | | 1. Strike hand on edge of metal box or casting; cut hand on burr. Drop casting on toes. | 2. Strike hand against wheel. Flying sparks, dust, or chips. Wheel breakage. Not Enough of Wheel guarded. No dust removal system. sleeves could get caught in machinery. | 3. Strike hand against metal box or castings. |  Recommending Safe Procedures and Protection After you have listed each hazard or potential hazard and have reviewed them with the employee performing the job, determine whether the job could be performed in another way to eliminate the hazards, such as combining steps or changing the sequence, or whether safety equipment and precautions are needed to control the hazards. An alternative or additional procedure is to videotape the worker performing his or her job and analyze the job procedures.  If safer and better job steps can be used, list each new step, such as describing a new method for disposing of material. List exactly what the worker needs to know to perform the job using a new method. Do not make general statements about the procedure, such as “Be Careful.” Be as specific as you can in your recommendations.  You may wish to set up a training program using the job safety analysis to retrain your employees in the new procedures, especially if they are working with highly toxic substances or in hazardous situations. (Some OSHA standards require that formal training programs be established for employees.)  If no new procedure can be developed, determine whether any physical changes such as redesigning equipment, changing tools, adding machine guards, personal protective equipment, or ventilation will eliminate or reduce the danger.  If hazards are still present, try to reduce the necessity for performing the job or the frequency of performing it.  Go over the recommendations with all employees performing the job. Their ideas about the hazards and proposed recommendations may be valuable. Be sure that they understand what they are required to do and the reasons for the changes in the job procedures.  Figure 3 identifies the basic job steps for grinding iron castings and recommendations for new steps and protective measures.  QQ图片20170303191108.png  **Figure 3 Grinding Castings: New Procedure or Protection**   |  |  |  | | --- | --- | --- | | 1. Provide gloves and foot protection. | 2. Provide larger guard over wheel. Install local exhaust system. Provide safety goggles. Instruct workers to wear short or tight-fitting sleeves. | 3. Provide for removal of completed stock. |  Revising the Job Safety Analysis A job safety analysis can do much toward reducing accidents and injuries in the workplace, but it is only effective if it is reviewed and updated periodically. Even if no changes have been made in a job, hazards that were missed in an earlier analysis could be detected.  If an illness or injury occurs on a specific job, the job safety analysis should be reviewed immediately to determine whether changes are needed in the job procedure. In addition, if a close call or near miss has resulted from an employee’s failure to follow job procedures, this should be discussed with all employees performing the job.  Any time a job hazard analysis is revised, training in the new job methods, procedures, or protective measures should be provided to all employees affected by the changes. A job safety analysis also can be used to train effectively new employees on the steps and job hazards.   1. **Record**   10.1 BSA-ECDC -HS-CL-S002-01-Job Safety Analysis Training Guide Check v1.0  10.2 BSA-ECDC -HS-CL-S002-02-Job Safety Analysis Check v1.0  10.3 Part-5/Attachment-7 /No. 7.JSA Library |