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Hazard Assessment Guidelines

Purpose: This guide has been prepared to provide consistency and to assist subcontractors that need guidance in the hazard assessment process. A hazard assessment is used to identify hazards, assess hazard risks and implement suitable control measures to prevent or reduce workers exposure to chemical, physical and biological agents.

Introduction: A hazard assessment should be performed by a competent team of individuals who have a good working knowledge of the scope of work. Always include supervisors and workers because they are the most familiar with the operation. In general, to do an assessment, you should:

- Identify the scope of work (break it down into tasks and subtasks)
- Identify the hazards associated with tasks and subtasks
- Evaluate the likelihood of an injury or illness occurring, and its severity
- Review all available heath and safety information about the hazard such as MSDSs, manufacturer's recommendations, and test results.
- Identify actions to eliminate the hazard or substitute with a lesser hazard
- Identify the appropriate controls
- Monitor and evaluate to confirm the risk is controlled
- Keep any documentation or records that may be necessary. Document include the process used to assess the risk, outlining any evaluations, and detailing how conclusions were made.

Element (1)

Hazard Identification: Identify all of the possible ways in which workers may be harmed through work-related activities. The subcontractor hazard identification program should include the following elements.

- Subcontractors are responsible for identifying existing and potential workplace hazards for each task associated with the scope of work
- Develop a list of hazards for each task of the scope of work. Hazard identification data must be recorded so that it can be used for risk assessment activities and in determining appropriate control measures.
- Describe method used for review and update of modifications, changes to existing operations and work practices. How are the changes evaluated for new hazards?
- Subcontractor shall maintain and provide employees access to MSDS for all **hazardous** chemicals that are used when performing work.

Hazard identification: Should be regarded as an ongoing, integral part of workplace hazard review. Re-evaluate the hazards and controls when the following occurs:

- Before and during the introduction of a new scope of work
- Before and during alterations or changes to the scope of work
- New information on hazards or control measures becomes available
- The start of a new project
- A change in the work process
- A change or addition to tools, equipment, machinery (including locations or the way they are used)
- New employees are hired
- Moving to a new building or work area
- Introduction of new chemicals or substances
- Significant changes in weather conditions that will effect the scope of work and / or safety of the workers

Element (2)

Hazard risk assessment: Refers to the process of assessing risks associated with each hazard identified during the hazard identification process.

Subcontractors should evaluate each hazard to determine its' level of risk. Risk assessments are very important as they form an integral part of a good occupational health and safety management plan. They help to: create awareness of hazards and risks, identify who may be at risk, determine if existing control measures are adequate or if more should be done, prevent injuries or illnesses when done at the design or planning stage, and prioritize hazards and control measures. To research the hazard, subcontractors should consider the following information:

- Product information / manufacturer documentation,
- Past experience (workers, etc)
- Legislated requirements and/or applicable standards
- Industry codes of practice / best practices
- Health and safety material about the hazard such as material safety data sheets (MSDSs), or other manufacturer information
- Information from reputable organizations
- Results of testing (atmospheric, air sampling of workplace, biological, etc)
- The expertise of an occupational health and safety professional
- Information about previous injuries, illnesses, "near misses", lessons learned, accident reports etc.

Ranking or prioritizing hazards is one way to determine the potential for accident, injury or illness. The subcontractor should consider the following when ranking and prioritizing hazards:

- Percentage of workforce exposed

- Frequency of exposure
- Degree of harm likely to result from the exposure
- Probability of occurrence

Hazard assessment recordkeeping: Keeping records of your hazard assessment and any control actions taken is very important. The subcontractor records should provide the following information:

- Evidence that a quality hazard review was conducted
- Determination of the risks involved
- Control measures were suitable for the risk(s)
- Hazards in the workplace were evaluated and monitored
- Conclusions and lessons learned

It is most important that the conclusions reached about risks are documented and that any supporting information on how that decision was made is included in associated records.

Element (3)

Hazard control program: A hazard control program consist of all steps necessary to protect workers from exposure to a harmful substance or system, and the procedures required to monitor worker exposure and their health to hazards such as hazardous chemicals, materials or substance, or other types such as noise and vibration. A written workplace hazard control program will outline which methods are being used to control the exposure and how these controls will be monitored for effectiveness.

Hazard control provides a means by which risks can be systematically evaluated against a set of control options, known as the "hierarchy of controls" to determine the most effective control methods for the risks associated with each hazard. This process involves analyzing the data collected during the hazard identification and risk assessment processes, and developing a strategic plan to control the risks identified.

Use of hierarchy of controls

The Hierarchy of Control is a list of control measures, in priority order, that shall be used to eliminate or minimize exposure to the hazard. The hierarchy of control provides a sequence of options which offer a number of ways to approach the hazard control process. The subcontractor's worker's protection program (WPP) shall reference the use of the hierarchy controls for controlling workplace hazards.

- **Elimination of hazards:** An option use to get rid of the hazard altogether. The best way to eliminate the risk is to completely remove the hazard. It is the first line of defense for eliminating employee exposure. Subcontractors shall fully exercise this option at every opportunity when feasible or practical.

- **Substitution of hazards**: Substitution involves replacing a highly toxic substance or hazardous work practice with a less toxic substance / hazardous one. **Use this option when feasible.**
- **Use of engineering controls**: If the hazard cannot be eliminated, substituted or isolated, an engineering control is the next preferred option. It involves such things as guards, introducing remote stop and start buttons, and use of muffling to reduce noise levels. **Use this option when feasible and practical.**
- **Use of work practices and administrative controls to limit exposure**: Includes the use of warning signs, regular rest breaks for employees exposed to hot environments, reducing employee exposure to noisy machines by using a worker rotation policy, and providing supervision and employee training on the associated hazards.
- **Personal protective equipment (PPE)** should be considered only when other control measures are not practical. Employees must be trained in the proper use, fitting, cleaning and maintenance.