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## Purpose

- To provide guidelines for identifying, assessing and controlling workplace hazards;
- To ensure the potential hazards of new processes and materials are identified before they are introduced into the workplace;
- To identify the jobs/tasks which require risk assessment.

## Key Responsibilities

As specified within this program.

CARDINAL SURVEYS COMPANY must assess a work site and identify existing or potential hazards before work begins at the work site or prior to the construction of a new work site

## Hazard and Risk Identification

The hazard identification process should be used for routine and non-routine activities as well as new processes, changes in operation, products or services as applicable.


The Safety Manager shall conduct a baseline worksite hazard assessment which is a formal process in place to identify the various tasks that are to be performed and the acCARDINAL SURVEYS COMPANYing identified potential hazards. The results are included in a report of the results of the hazard assessment and the methods used to control or eliminate the hazards identified. The hazard assessment report must be signed and have the date on it.

Inputs into the baseline hazard identification include, but are not limited to:

- Scope of work;
- Legal and other requirements;
- Previous incidents and non-conformances;
- Sources of energy, contaminants and other environmental conditions that can cause injury;
- Walk through of work environment;

Hazards identifications (as examples) are to include:

- Working Alone
- Thermal Exposure
- Isolation of Energy
- Hearing Protection
- Musculoskeletal Disorders
- Bloodborne Pathogens

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- Confined Spaces
- Driving
- General Safety Precautions
- And any other established policy or procedure by CARDINAL SURVEYS COMPANY
- Any other site specific work scope

Policies are in place to identify potential hazards by the use of JSA, JHA, FLRA, work permits, inspections by department, site or CARDINAL SURVEYS COMPANY audits, toolbox meetings, incident notices, safety observations and incident investigations.

All identified hazards are then assessed for risk and risk controls are assigned within the worksite hazard assessment for that specific hazard.

At existing locations employees and/or subcontractors are actively involved in the identification of hazards. All employees and subcontractors affected by hazards identified in the hazard assessment process are informed of the hazards and the methods used to control or eliminate the hazard. Worker names and participation in the process shall be documented either on the written hazard assessment reports or in tool box meeting forms. Workers will be trained in the hazard identification process including the use and care of proper PPE, how to complete FLRA, JHAs, etc.

Unsafe hazards must be reported immediately and addressed by the supervisor. The supervisor discusses the worksite hazard assessment with employees at the respective work location during the employee's documented orientation.

#### **Review of Hazard Assessment**


Existing worksite hazard identifications are formally reviewed annually or repeated at reasonably practicable intervals to prevent the development of unsafe and unhealthy working conditions and specifically updated when new tasks are to be performed that have not been risk assessed, when a work process or operation changes, before the construction of a new site or when significant additions or alterations to a job site are made.

The respective supervisor or project manager advises the Safety Manager when additional hazards are introduced into the work place in order to revise planning and assessment needs.

#### **Risk Assessment**

Each identified hazard is assessed for risk based on potential consequences of effecting injury to people, damage to assets, the environment or reputation of CARDINAL SURVEYS COMPANY. The frequency of risk exposure is then considered.

Following risk assessment steps each risk assessed becomes classified as low, medium or high in accordance with the CARDINAL SURVEYS COMPANY Risk Assessment Matrix shown below. The risk

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level of the hazard is recorded with the associated work task within the site specific HSE plan for the job site.

#### CARDINAL SURVEYS COMPANY RISK ASSESSMENT MATRIX


CONSEQUENCE					FREQUENCY				
Severity	People	Assets	Environment	Reputation	A	B	C	D	E
					Not Done	Rarely	Once a week	Several Times in a Week	Multiple Times in a Day
0	No health effect	No damage	No effect	No impact					
1	Slight health effect	Slight damage	Slight effect	Slight impact					
2	Minor health effect	Minor damage	Minor effect	Limited impact					
3	Major health effect	Localized damage	Localized effect	Considerable impact					
4	Single fatality	Major damage	Major effect	National impact					
5	Multiple fatalities	Extensive damage	Massive effect	Global impact					

<b>Key</b>	Manage for continuous improvement (Low)	Incorporate risk reduction measures (Medium)	Intolerable (High)
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### Risk Controls

Risk assessed hazards are compiled with and addressed and mitigated through dedicated assignment, appropriate documentation of completion, and implemented controls methods including engineering or administrative controls and PPE required into the worksite hazard assessment of the site specific HSE plan. No work will begin before the worksite assessment is completed. Additionally, no risk assessed as High (Intolerable) shall be performed.

If an existing or potential hazard to workers is identified during a hazard assessment CARDINAL SURVEYS COMPANY must take measures to eliminate the hazard, or if elimination is not reasonably practicable, control the hazard. If reasonably practicable, CARDINAL SURVEYS COMPANY must eliminate or control a hazard through the use of engineering controls. If a hazard cannot be adequately controlled using engineering controls, CARDINAL SURVEYS COMPANY must use administrative controls that control the hazard to a level as low as reasonably achievable. If the hazard cannot be adequately controlled using engineering and/or administrative controls, CARDINAL SURVEYS COMPANY must ensure that the appropriate personal protective equipment (PPE) is used by workers affected by the hazard. CARDINAL SURVEYS COMPANY may use a combination of engineering

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controls, administrative controls, and personal protective equipment if there is a greater level of worker safety because a combination is used.

### **Emergency Control of Hazards**

Only those employees competent in correcting emergency controls of hazards may be exposed to the hazard and only the minimum number of competent employees may be exposed during hazard emergency control. An example is a gas leak in a building. Only those personnel with training on fire safety, gas supply shut off and other related controls will attempt to resolve the emergency control of a hazard. CARDINAL SURVEYS COMPANY will make every possible effort to control the hazard while the condition is being corrected or under the supervision of client emergency response personnel in every emergency.

### **Certification of Hazard Assessment**

The Safety Manager completes and signs the certification of hazard assessment for the worksite hazard assessment (also see PPE Program) and includes it within the site specific HSE plan. Hazard assessments are reviewed annually and updated when new tasks are to be performed that have not been risk assessed.

### **Job Safety Analysis (JSA)**

For those jobs with the highest injury or illness rates, jobs that are new to our operation, jobs that have undergone major changes in processes and procedures or jobs complex enough to require written instructions will have a Job Safety Analysis performed. Completed JSAs are available from the Safety Manager.

### **Site Specific HSE Plan (SSSP)**

Each work location has a site specific HSE plan. Each employee reporting to a location shall receive a documented orientation from a CARDINAL SURVEYS COMPANY supervisor that includes the SSSP for that site. The SSSP contains the CARDINAL SURVEYS COMPANY Health and Safety Policy, site specific safety requirements as well as a PPE matrix and a signed site specific worksite hazard assessment for that location, which the CARDINAL SURVEYS COMPANY has a responsibility to provide.

### **Review Process**

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The hazard assessment program will be reviewed to ensure no new hazards derived from the corrective measures. The review shall include a management of change consideration as well.

The safety committee shall be involved in the review process as well.

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## WORKSITE HAZARD ASSESSMENT FORM

### CERTIFICATE OF HAZARD ASSESSMENT STATEMENT FOR    form shall be signed    SITE

I certify a worksite hazard assessment was performed for this facility on    date by the CARDINAL SURVEYS COMPANY Safety Manager. (*Signature on File*)

**Task: Indicate Task Group** *(Additional Tasks shall be listed in each site specific HSE plan)*

TASKS	RISK LEVEL	HAZARDS	ENGINEERING OR ADMINISTRATIVE CONTROLS	PPE (Refer to PPE Matrix)
<i>List individual task</i>	<i>Use Risk Matrix</i>	<i>Identify hazards associated with task</i>	<ul style="list-style-type: none"> <li>• <i>List procedures that apply</i></li> <li>• <i>List appropriate engineering controls</i></li> <li>• <i>List procedures or other administrative controls</i></li> </ul>	<i>List appropriate PPE</i>
<i>Example:</i> Washing Parts	MED	Chemical Exposure (Skin, Eyes, Body)	<ul style="list-style-type: none"> <li>• CARDINAL SURVEYS COMPANY PPE Procedure</li> <li>• No smoking;</li> </ul>	Chemical gloves, splash proof goggles chemical apron
			•	
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## JOB SAFETY ANALYSIS FORM

<b>Location / Dept:</b>		<b>Date:</b>	<b>New?</b> <input type="checkbox"/>	<b>Revision</b> <input type="checkbox"/>	<b>JSA NO:</b>				
<b>Task</b>				<b>Supervisor:</b>					
<b>Team Members</b>				<b>Analysis By:</b>					
				<b>Reviewed By:</b>					
				<b>Approved By:</b>					
<b>Specific rules and procedures to be followed (Safe Work Practice Number ____):</b>									
<b>Sequence of Basic Job Steps</b>		<b>Potential Injury or Hazards</b>		<b>Recommendations to Eliminate or Reduce Potential Hazards.</b>					
<b>CHECK ITEMS REQUIRED TO DO THIS JOB:</b>									
Safety Glasses	<input type="checkbox"/>	Leather Gloves	<input type="checkbox"/>	Face Shield	<input type="checkbox"/>	Fire Extinguisher	<input type="checkbox"/>	Atmospheric Testing	<input type="checkbox"/>
Hard Hats	<input type="checkbox"/>	Work Vest	<input type="checkbox"/>	Goggles (type?)	<input type="checkbox"/>	Lockout/Tagout	<input type="checkbox"/>	Traffic Control	<input type="checkbox"/>
Safety Shoes	<input type="checkbox"/>	Fall Harness	<input type="checkbox"/>	Flame Resistant Clothing	<input type="checkbox"/>	Warning signs	<input type="checkbox"/>	Other	<input type="checkbox"/>

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**INSTRUCTIONS FOR COMPLETING THE JOB SAFETY ANALYSIS FORM**

Select an employee to help you with the JSA: someone who is experienced in the job, willing to help and a good communicator. The employees play an important role in helping you identify job steps and hazards. In summary, to complete this form you should consider the purpose of the job, the activities it involves, and the hazards it presents. In addition, observing an employee performing the job, or "walking through" the operation step by step may give additional insight into potential hazards. Here's how to do each of the three parts of a Job Safety Analysis:

SEQUENCE OF BASIC JOB STEPS	POTENTIAL HAZARDS	RECOMMENDED ACTION OR PROCEDURE
<p>Examining a specific job by breaking it down into a series of steps or tasks, will enable you to discover potential hazards employees may encounter.</p> <p>Each job or operation will consist of a set of steps or tasks. For example, the job might be to move a box from a conveyor in the receiving area to a shelf in the storage area. To determine where a step begins or ends, look for a change of activity, change in direction or movement.</p> <p>Picking up the box from the conveyor and placing it on a hand truck is one step. The next step might be to push the loaded hand truck to the storage area (a change in activity). Moving the boxes from the truck and placing them on the shelf is another step. The final step might be returning the hand truck to the receiving area.</p> <p>Be sure to list all the steps needed to perform the job. Some steps may not be performed each time; an example could be checking the casters on the hand truck. However, if that step is generally part of the job it should be listed.</p>	<p>A hazard is a potential danger. The purpose of the Job Safety Analysis is to identify ALL hazards – both those produced by the environment or conditions and those connected with the job procedure. To identify hazards, ask yourself these questions about each step:</p> <p>Is there a danger of the employee striking against, being struck by, or otherwise making injurious contact with an object?</p> <p>Can the employee be caught in, by or between objects? Is there a potential for slipping, tripping, or falling?</p> <p>Could the employee suffer strains from pushing, pulling, lifting, bending, or twisting?</p> <p>Is the environment hazardous to safety and/or health (toxic gas, vapour, mist, fumes, dust, heat, or radiation)?</p> <p>Close observation and knowledge of the job is important. Examine each step carefully to find and identify hazards – the actions, conditions, and possibilities that could lead to an accident. Compiling an accurate and complete list of potential hazards will allow you to develop the recommended safe job procedures needed to prevent accidents.</p>	<p>Using the first two columns as a guide, decide what actions or procedures are necessary to eliminate or minimize the hazards that could lead to an accident, injury or occupational illness.</p> <p>Begin by trying to: (1) engineer the hazard out; (2) provide guards, safety devices, etc.; (3) provide personal protective equipment; (4) provide job instruction training; (5) maintain good housekeeping; (6) ensure good ergonomics (positioning the person in relation to the machine or other elements).</p> <p>List the required or recommended personal protective equipment necessary to perform each step of the job.</p> <p>Give a recommended action or procedure for each hazard.</p> <p>Serious hazards should be corrected immediately. The JSA should then be changed to reflect the new conditions.</p> <p>Finally, review your input on all three columns for accuracy and completeness with affected employees. Determine if the recommended actions or procedures have been put in place. Re-evaluate the job safety analysis as necessary.</p>