
 <p><b>HEALTH, SAFETY &amp; ENVIRONMENTAL PROGRAM</b></p>	<b>Section 2.3: Pre-Construction Hazard Assessment Procedure</b>		
	APPROVED BY: Sarhan Abu-Kwiek	COR Elements: 1	
	APPROVAL DATE: 02/24/2023	DATE OF ORIGIN: 02/02/2023	REVISION # 1
	SIGNATURE: 	# OF PAGES: 7	

## PRE-CONSTRUCTION HAZARD ASSESSMENT PROCEDURE

### PURPOSE

The purpose of this procedure is to prevent or reduce incidents, injuries, equipment, and environmental damage by providing a framework for Pre-Construction Hazard Assessments completed in the project planning stages. Pre-Construction assessments identify hazardous conditions, processes, equipment and required mitigation measures ensuring the safety of workers, subcontractors and visitors while minimizing construction environmental footprints.

Senior management is committed to the health and safety of all people at our sites and facilities and to practice construction and manufacturing in the most environmentally friendly ways possible. Identification, assessment, and control of hazards that could cause injury or illness to employees, visitors and customers or negatively impact the environment is of paramount importance to all of us. We are dedicated to eliminating and controlling exposures to occupational and environmental hazards as a fundamental method of protecting workers and the environment.

### DEFINITIONS

**Pre-Construction Assessment:**

An assessment to identify and evaluate health, safety, and environmental risk in the planning stages of a project prior to construction

**Hazard:**

Any source of potential damage, harm, or adverse health effects on people, equipment, or the environment as a result of construction activities

**Assessment:**

A systematic review identifying tools, equipment, conditions, processes, etc. that may cause harm, damage, or any negative impact.

**Controls:**


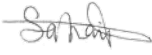
Procedures, tools, machines, training, and processes adopted to eliminate or minimize injury, adverse health effects, damage to equipment or environmental impact.

**HIRA:**

Hazard Identification and Risk Assessment (HIRA) is a corporate risk registry for all operations. It contains known hazards, program/legislative requirements, and controls.

### SCOPE

The Pre-Construction Hazard Assessment procedure applies to all construction projects or industrial operations expected to last longer than three (3) months and will be implemented during the planning stages of a project. Managers, supervisors, and workers affected by the job scope are encouraged to participate in site specific pre-construction hazard assessments.

 <p><b>HEALTH, SAFETY &amp; ENVIRONMENTAL PROGRAM</b></p>	<b>Section 2.3: Pre-Construction Hazard Assessment Procedure</b>		
	APPROVED BY: Sarhan Abu-Kwiek	COR Elements: 1	
	APPROVAL DATE: 02/24/2023	DATE OF ORIGIN: 02/02/2023	REVISION # 1
	SIGNATURE: 	# OF PAGES: 7	

## PRE-CONSTRUCTION HAZARD ASSESSMENT PROCEDURE

The focus of the Pre-Construction/Job Hazard Assessment is to identify and assess hazards as well as plan controls to eliminate or minimize the frequency and severity of incidents prior to mobilization.

**Considerations will include but not be limited to:**

- Known and possible hazards based on the scope of work
- Site conditions, geographic information (urban or rural neighborhood)
- Habitat, species at risk and environmental conditions
- Compliance with applicable regulations
- Customer requirements
- HSMS requirements including internal policies, safe work practices and procedures
- Hazards and controls listed on the HIRA
- Daily risk assessments (JSA) (construction projects only)


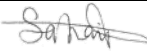
**Examples of hazard classifications:**

- Physical – heat, noise, vibration and poor lightning
- Chemical – exposure to dust, mists, vapours and smoke
- Biological – bacteria, allergens and viruses
- Ergonomic – repetitive motion and limitations in workspace design
- Psychosocial – workplace violence, stress and working alone
- Safety – struck by, housekeeping
- Environmental – Significant water ways, species at Risk and Archeological

The Pre-Construction Hazard Assessment will be developed using the Hazard Identification and Risk Assessment (HIRA) registry as a guide. Mitigation and control measures documented on the HIRA are considered adequate means of control for this process.

Where possible a walkthrough of the site or area should occur to aid in the hazard identification process

1. **Review contract/customer scope of work and related health and safety or environmental requirement** documents including:
  - Formal environmental assessment reports if applicable
  - Customer specific Health, Safety and Environmental requirements
2. **Identify and assess** foreseeable hazards based on the scope of work and review of documentation, site conditions, geographic information and major work classifications (excavation, steel erection working at heights, traffic control, soil conditions, access, neighbourhood etc.).
3. **Review:**
  - The HIRA for approved and adequate mitigation measures
  - Documented hazard assessments and information
  - Applicable health and safety legislation and regulatory requirements
  - Applicable environmental legislation and regulatory requirements

 <p><b>HEALTH, SAFETY &amp; ENVIRONMENTAL PROGRAM</b></p>	<b>Section 2.3: Pre-Construction Hazard Assessment Procedure</b>		
	APPROVED BY: Sarhan Abu-Kwiek	COR Elements: 1	
	APPROVAL DATE: 02/24/2023	DATE OF ORIGIN: 02/02/2023	REVISION # 1
	SIGNATURE: 	# OF PAGES: 7	

## PRE-CONSTRUCTION HAZARD ASSESSMENT PROCEDURE

- HSE Policies, procedures, safe work practices
  - Customer requirements
- 4. Determine appropriate ways to eliminate or control identified hazards, including:**
- Reducing, isolating or segregating the source of exposure
  - Changing the method, the task is completed
  - Removing the hazard by “engineering it out” of the system through design or modifications
  - Providing equipment, tools, expertise to reduce risk
  - Scheduling or rescheduling when required (weather or multiple contractor hazards)
  - Policies and procedures
  - Orientation
  - Training
  - Personal Protective Equipment controls (PPE):

### Documentation

The Pre –Construction Hazard Assessment information must be documented on the:

- Pre-Construction Hazard Assessment form
- Environmental Management Plan (EMP) when applicable.

### Communications

The information found in this assessment will be communicated:

- During site-specific orientation as required
- At job kick off meetings
- To subcontractors as required

### Review and Approval

This procedure will be reviewed as required or as a minimum on an annual basis.



## PROCEDURE

### Identify the Job, Process or Job Steps:

- Identify the Job, Process or task to be evaluated
- Document the Job, Process, or steps on the appropriate form
- Where necessary break the task into smaller steps or segments that allow the process to move forward

### Identifying Hazards:

1. For site specific safety plans and daily risk assessments review the job, procedure or task breaking it down into main steps (task that will move the process forward) and document them on the appropriate form
2. For the HIRA steps may not be broken out, hazard will be listed under the task or job.
3. Identify all potential and actual hazards associated with the task and the working environment, including but not limited to:
  - Physical – heat, noise, vibration, and poor lightning

 <p><b>HEALTH, SAFETY &amp; ENVIRONMENTAL PROGRAM</b></p>	<b>Section 2.3: Pre-Construction Hazard Assessment Procedure</b>		
	APPROVED BY: Sarhan Abu-Kwiek	COR Elements: 1	
	APPROVAL DATE: 02/24/2023	DATE OF ORIGIN: 02/02/2023	REVISION # 1
	SIGNATURE: 	# OF PAGES: 7	

## PRE-CONSTRUCTION HAZARD ASSESSMENT PROCEDURE

- Safety – kinetic energy (struck by), trip hazards, stored energy, gravity, electrical
- Chemical – exposure to dust, mists, vapors liquid chemicals and smoke
- Biological – bacteria, allergens, blood borne pathogens, vector borne diseases and viruses
- Ergonomic – repetitive motion, excessive repetition, vibration, posture, lighting, and workspace design
- Psychosocial – workplace violence, stress, pace of work, schedules and working alone
- Environmental – Species at Risk, significant water features, spills, archaeological sites, etc.

### Identifying, Assigning, and Recording Controls:

The hierarchy of controls must be implemented when considering the most effective controls for identified hazards. Controls can be implemented in three basic areas:

1. At the Source of the Hazard (Elimination or Substitution): this is the best method of control as the hazard is eliminated completely.
2. Along the Path between the Workers and Hazard (Engineering Controls): this is the second-best choice of control because there is a barrier that prevents worker exposure to the hazard.
3. At the Worker (Administrative Controls, PPE): this is the least effective control because it does nothing to eliminate or reduce the hazard, requires proper fit (glasses and respirator), and can introduce psychological stressors.

### Identifying Control Measures:

- Identify controls that will reduce either or both the likelihood occurrence or possible consequence to people, property or equipment should an incident happen.
- Identify all actions necessary to eliminate or control the risk through engineering controls, work practices, hygiene practices, facilities, and PPE (Consider both actual and potential exposure of workers)
- Consider all methods of work and procedures used in processing, use, handling or storage of the substance, materials, equipment, etc.
- Consider safe work practice, procedures, training, experience, competency, tools, and equipment.
- Ensure the risk level has been reduced to the lowest possible numerical value.



### Documenting Control Measures:

- Preventive measures must mitigate and or reduce the risk to an acceptable level
- Assign controls to all identified hazards
- List recommended preventive measures on the appropriate form in the column titled Controls.
- Do not use general statements such as "be careful" or "use caution".
- Use specific statements describing action to be taken and how it is to be performed
- Document controls on the appropriate form (HIRA, Project Hazard Assessment, Workplace Specific or JSA)

### Assessing Risk:

Assessing the risk requires a competent person having knowledge of the regulations, codes of practice and industry standards that apply to the work, training to perform the assessment in compliance with HSMS and legislative requirements and experience in the work being assessed.

**For all types of risk assessments remember to:**

 <p><b>HEALTH, SAFETY &amp; ENVIRONMENTAL PROGRAM</b></p>	<b>Section 2.3: Pre-Construction Hazard Assessment Procedure</b>		
	APPROVED BY: Sarhan Abu-Kwiek	COR Elements: 1	
	APPROVAL DATE: 02/24/2023	DATE OF ORIGIN: 02/02/2023	REVISION # 1
	SIGNATURE: 	# OF PAGES: 7	

## PRE-CONSTRUCTION HAZARD ASSESSMENT PROCEDURE

- Account for worker training, knowledge, and experience (competency).
- Document on the appropriate form or template
- Consider all potential and actual hazards in normal operational situations as well as non-standard events such as shutdowns, power outages, emergencies, etc.
- Review all available health and safety information about the hazard such as SDSs, manufacturer’s literature, and information from reputable organizations, results of testing, etc.
- Consider who may be exposed, how they may be exposed, how much they will be exposed to and when they will be exposed
- Consider the work area lay out, ergonomics, equipment, machinery, processes, and other contractors.

### Assigning Numerical Values to Determine Risk:

The likelihood of an incident occurring ranges from almost Impossible to certain and will be assigned a numerical value from 1-5 on the risk matrix chart

The consequence of an incident ranges from Minor Injury/First Aid to Critical Injury or Death and will be assigned a numerical value from 1-5. on the risk matrix chart

Risk will be determined by multiplying the numerical value assigned to likelihood by the numerical value assigned to Consequence. (Likelihood X Consequence = Risk). Using the risk matrix.

### Determining Risk and Residual Risk:

- Identify a job, operation or task and list it on the on the appropriate form.
- List the known and potential hazards associated with the job, operation, or task
- Note: Give no regard to the possible controls when assigning pre-control values on the HIRA
- Assign a numerical value to the likelihood of an incident happening
- Assign a numerical value to the consequence of an incident occurring
- Use the risk matrix, to multiply the numerical value assigned to likelihood with the numerical value assigned to consequence
- The remaining value represents residual the risk or risk remaining after controls are applied.
- Document the total value in the corresponding column

The risk rating numerical value will correspond with a colour on the risk matrix indicating:

Green = Low Risk

Yellow = Medium Risk



Orange = Critical Task

Red = High Risk

The risk rating and numerical values:

**Low/Acceptable risk** – The total numerical value is calculated to be between 1 and 5, the controls are considered adequate to mitigate the risk and no other action is required.

**Medium Risk** – The total numerical value is calculated to be between 6 and 9. Consideration should be given to additional measures reducing risk. Work can proceed, however controls must be maintained to ensure that the risk does not increase.

 <p><b>HEALTH, SAFETY &amp; ENVIRONMENTAL PROGRAM</b></p>	<b>Section 2.3: Pre-Construction Hazard Assessment Procedure</b>		
	APPROVED BY: Sarhan Abu-Kwiek	COR Elements: 1	
	APPROVAL DATE: 02/24/2023	DATE OF ORIGIN: 02/02/2023	REVISION # 1
	SIGNATURE: 	# OF PAGES: 7	

## PRE-CONSTRUCTION HAZARD ASSESSMENT PROCEDURE

**High Risk** - The total numerical value is calculated to be between 15 and 25, the risk is unacceptable. Work must not proceed until risk is reduced to a lower level. Controls including training, tools, equipment, safe work practices and procedures are required to reduce risk. Tasks that have a high-risk rating are **not** to be carried out without approval from J-AAR management.

**Critical Tasks** -- Any risk assessment with a determined numerical value between 10 and 15 is considered to be a critical task. Safe work practices or procedures will be documented for all critical tasks.

### RESPONSIBILITIES

**Senior Management:**

- Review hazard assessment policies, procedures, practices, and Corporate HIRA
- Provide required resources for the development of ongoing hazard assessments

**Supervisors:**


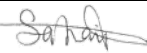
- Ensure required hazard assessments are completed
- Ensure competent supervision are assigned
- Provide assistance and resources to site supervision as required
- Ensure control measures fit the task and are implemented in a timely manner
- Communicate the requirements of the EMP & Site-Specific Safety Plan to supervisors prior to the start of the project and as needed as the project progresses
- Implement the requirements of the EMP & Site-Specific Safety Plan
- Ensure hazard assessments are completed accurately including potential hazards and effective control methods to mitigate or eliminate risk
- Ensure hazard assessments are documented using the appropriate forms
- Communicate the details of hazard assessments and controls to employees and others
- Ensure employees are trained and competent to complete the task being assigned
- Ensure training in the selection, care and use of protective devices required

**Workers:**

- Participate in the pre-construction hazard assessment as required.
- Work in accordance with instruction tools and protective devices provided
- Report any changing conditions or hazards that arise during task completion
- Ask for clarification if unclear about information provided or task assigned

**Health and Safety Team:**

- Develop policies and procedures to identify, assess and control hazards
- Provide training for supervisors and employees to effectively conduct hazard assessments
- Develop and maintain a HIRA in cooperation with employees and managers
- Complete an EMP, Pre-Construction Hazard Assessment and Site-Specific Safety Plan
- Act as a resource to site teams for ongoing hazard assessments and controls
- Attend pre job start up meetings and assist teams to create required plans

 <p><b>HEALTH, SAFETY &amp; ENVIRONMENTAL PROGRAM</b></p>	<b>Section 2.3: Pre-Construction Hazard Assessment Procedure</b>		
	APPROVED BY: Sarhan Abu-Kwiek	COR Elements: 1	
	APPROVAL DATE: 02/24/2023	DATE OF ORIGIN: 02/02/2023	REVISION # 1
	SIGNATURE: 	# OF PAGES: 7	

## PRE-CONSTRUCTION HAZARD ASSESSMENT PROCEDURE

### Health and Safety Committee/Rep:

- Review policies and procedures as required
- Participate in assessments as required
- Provide recommendation for change

### REQUIREMENTS

#### Documentation:

- Corporate Hazard Identification and Risk Assessment Matrix
- Job Hazard Analysis form
- Site Specific Safety plan
- Environmental Management Plan
- Safe Job procedures
- Safe Work Practices
- Occupational Health & Safety Act
- Construction Regulation 213/91
- Industrial Regulation 851/90

#### Training:

- Hazard recognition and control
- Job Hazard Analysis
- Responsibilities as per legislation and the HSMS
- Site specific safety plan
- Selection, care and use of protective devices required

### REVIEW

This procedure will be reviewed and revised as required. Revisions are required when there are changes in business conditions, scope of work, regulatory requirements or when deficiencies become known.

### ENFORCEMENT

Following this procedure is a condition of employment for all employees. This will be enforced strictly by management and supervision. Failure to follow this procedure, as set out, may lead to progressive discipline up to and including dismissal or removal from site as deemed appropriate by J-AAR Excavating.

### DOCUMENT AND RECORD CONTROL

All documents and records generated as part of this procedure will be stored on HCSS/J-AAR's servers indefinitely. Any hard copies generated will be stored at J-AAR's head office for two years after project completion.