

Job Hazard Assessments

"Hazard Assessment"

- *A disciplined process used to identify project, work and/or process related hazards, evaluate relative risk and identify the appropriate control measures required to protect the health and safety of employees and minimize all forms of unintentional loss.*

In the sand and gravel industry, we can break down the overall operation of a job site into smaller, individual tasks or jobs. We then focus our assessments on each job.

The process to do this is the **JHA** – the *Job Hazard Assessment*.

You, your co-workers, contractors, and others that can help with identifying and evaluating hazards are to be included in all hazard assessments.



When is a JHA done?

On work sites that:

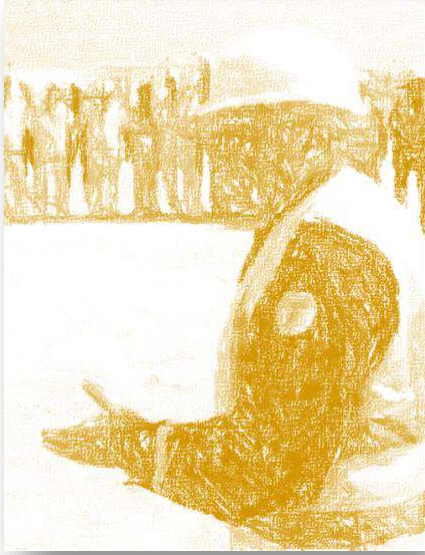
- are newly established
- have never been previously assessed
- have had new and/or modified equipment or processes added
- involve multiple contractors on the same or immediately adjacent work areas
- have experienced frequent incidents, small or large

For jobs, procedures, tasks & work processes that:

- are new or infrequent
- involve inexperienced employees
- are associated with frequent incidents, large or small
- are deemed **Critical**
 - These have the potential for serious injury and/or adverse health effects
- involve a change in an operating procedure
- have the potential for severe property and/or environmental damage
- have the potential for significant interruption of production

With materials, substances or products (prior to purchasing) that:

- Are associated with frequent events that may or may not have incurred significant loss
- Pose significant risk, with the potential for serious injury and/or adverse health effects to employees or the community
- Have the potential for severe property and/or environmental damage
- Have the potential for significant interruption to production



Identify the Hazards

1. All jobs within the company or on a specific site, plant or project, have been catalogued and the hazards associated with each identified plus the relative risk and the control measures that are available.
 - Form **SL-01 "Hazard and Risk Assessment"** and **SE-02 "Risk Assessment Matrix"** are used to prioritize jobs according to risk and identify those jobs that require a Job Hazard Analysis or a review of current safe work guidelines or procedures.

Job Hazard Analysis (JHA)

2. Utilize form **SL-01 "Hazard and Risk Assessment"** to analyze the high risk identified in Step 1. Break down the job, or process, into its tasks, steps or components, in order, and identify all hazards associated with each task, step or component.
 - If you are not familiar with the job or process, ask your supervisor for help.



Initial Evaluation

3. Evaluate each hazard identified in step 2 as to the probability that the hazard will affect the work and as to the severity of the consequences that could be experienced if the hazard does affect the work.
 - Establish an Initial Risk Rating using form **SE-02 "Risk Assessment Matrix"** as a guide.
 - Assume no controls are in place.

Consider Communications

- Assessing the ability to effectively communicate is commonly overlooked in hazard assessments. Communications may be affected by many factors including noise, location, incompatible equipment, language differences, trade terms, lack of common understanding of signals and/or procedures.

Consider the Environment

- The work environment is a factor that requires consideration.
- Noise, heat, cold, weather, adjacent work by others, work space, hazardous products used or created, ergonomic factors, physical efforts required etc. all can be factors which must be considered as possible hazards and evaluated.
- Also consider the possible effects of the work on the physical environment as well as the workspace.

Consider Emergency Preparedness

- Any Hazard/Risk Assessment that does not address emergency preparedness is incomplete.

- If an unexpected adverse event does occur, one must be prepared to reduce the effects by having trained emergency responders available with equipment appropriate to the situation.

If biological, liquid or solid hazardous materials can contaminate a worker, decontamination methods and equipment must be considered in the emergency plan. This may vary from a simple eyewash or emergency shower to a multi-stage decontamination process involving complicated PPE and methods depending on the product involved.

Workers that are involved with products that can be harmful to the eyes or skin must have immediate access to an emergency eyewash and/or shower, as applicable. If the worker may be alone, use of the emergency station should automatically trigger an alarm for emergency assistance.

Evaluate / Select Control Measures

4. Identify those hazards with risk ratings that indicate that hazard controls are required for the most reasonable safe working environment to exist. Identify those controls that are already in place and determine if they are the most "effective" control measures.
 - Identify those control measures that are not in place, but are required to reduce the risk to an acceptable level.

Effective Control Measures

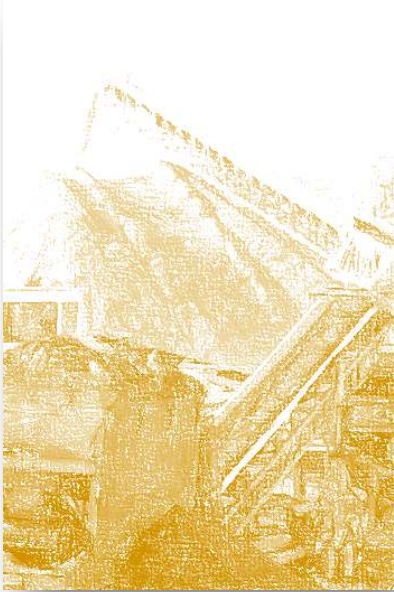
5. "Effective Control Measures" are control measures that either eliminate the hazard completely or reduce the Risk to an "acceptable" level for work to begin.

Hazard control measures are to be considered in the following order.

- Elimination or Substitution (less hazardous product, method)
- Engineering (guards etc.)
- Administrative (training, permits, etc.)
- Personal Protective Equipment (PPE) (last consideration for hazard control, the utilization of PPE cannot create additional hazards for the worker)
- Combination of any or all of above

Re-Evaluate for Residual Risk

6. Continuing with form [SL-01 "Hazard and Risk Assessment"](#), re-evaluate the risk for each hazard identified in Step 3 as if the hazard control measures are in place and functioning.
 - Use [SE-02 "Risk Assessment Matrix"](#) again as a guide.
 - The Residual Risk must be in the "acceptable range" and the identified controls in place and functioning for the work to proceed.
 - Everyone involved with the work must be informed of the JHA results and be trained on the hazard control measures.



A Health & Safety Professional should be included in the development of Critical Practices and Codes of Practice.



Develop Safe Work Practice

7. Prepare a guideline, procedure, Safe Work Practice or code of practice, as appropriate, based on the Job Hazard Assessment results.

A Safe Work Practice results from the process of assessing and establishing solutions to identified worksite hazards.

- **Best Practices** are general in nature providing information and points to consider during the task (e.g. Fire Safety).
- **Critical Practices** are more detailed, specific "step by step" directions regarding the safe completion of a job or task (e.g. Confined Space Entry).
 - They can also encompass a larger scope than guidelines or procedures.
- **Codes of Practice** are specific procedures that may include standards for training, testing, PPE, hazard control, equipment selection, medical reviews, etc. that may be required by legislation (e.g. for designated substances and confined spaces).



Training

8. Once the hazard/risk assessment process and safe work processes have been completed, all workers affected by the changes shall be informed of the results of the assessment and trained on any new guidelines, procedures and/or Safe Work Practices that were developed as a result of the JHA.

Safe Work Practice (SWP)

9. A Safe Work Practice is a document describing how to control hazards and manage risks for certain work involving significant risk or for a project scope of work.

→ A SWP is developed following a hazard assessment, and is intended to ensure that hazards are identified, risks are carefully evaluated, controls and contingencies are clearly identified and that the necessary actions and implementation strategies have been outlined.

Criteria

A Safe Work Practice must be developed when:

- The hazards and risks of the work to be performed cannot be adequately controlled with standard work guidelines or procedures.
- Deviations are required from the current approved Loss Control Program.
- The tasks to be performed are known as jobs involving high-risk tasks (e.g. confined space entry or work in excavations).

Development

Safe Work Practices should be developed by the following method:

- A SWP Leader should be appointed.
This person:
 - Is responsible to facilitate the activities and ensure technical integrity and content of the plan.
 - Will analyze the needs and select a team of knowledgeable individuals to assist in the development of the plan.
 - Ensures the objectives are established and clearly communicated to all members of the team.
- The team will:
 - Conduct a Hazard/Risk Assessment of the work.
 - Refer to any previous plans/procedures that are applicable.
 - Develop a Safe work practice to adequately control hazards and minimize risk.
 - Conduct a "dry run" to test the SWP.

Content

Each SWP must include all details and documentation relative to the activity, personnel and equipment involved.

The following should be included and documented:

- Title of activity/job and work scope including personnel, equipment and supplies required.
- Personnel involved in developing the plan
- Execution organization complete with roles and responsibilities
- Date of preparation
- Anticipated start and finish dates
- Communications (Who, When, How)
- Work site drawing
- Major activities, hazards and related risk
- Hazard/Risk control measures including training, guidelines, procedures, codes of practice, equipment, legislation etc.
- Detailed sequential work execution steps and schedule
- Contingency plans, including rescue
- Copy of the hazard/risk assessment
- All pre-job meetings and attendees
- Required permits & related approvals
- PPE requirements

Implementation

Prior to beginning the work, one or more pre-job meetings are conducted to review the Safe Work Practice.

- Meeting attendees will include all workers involved in the work and representatives for others affected by the work.

Any need for deviation from the Safe Work Practice requires:

- the work to be stopped

- the Safe Work Practice to be re-evaluated and
- Approval and authorization re-issued.

