PRE TASK PLANNING PROCEDURE

Project No:	

REVISION HISTORY	ISSUE DATE	DESCRIPTION	REVIEW / STATUS
00			

PREPARED BY:	**REVIEWED & APPROVED BY:**
QA QC ENGINEER	PROJECT ENGINEER

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1.0. PURPOSE

This technical methodology documents the processes to systematically identify, evaluate, control, and communicate known and potential workplace safety and health hazards to employees before work activities begin.

2.0. SCOPE

This practice includes the following major sections:

- General Requirements
- Process Hazard Analysis
- Job Safety Analysis
- Safety Task Assignment

3.0. APPLICATION

The requirements of this practice apply as follows:

- Process Hazard Analysis - design
- Job Safety Analysis - self-perform or construction management/subcontracted construction (any location) that is managed by [HSE DOCUMENTS]
- Safety Task Assignment
  - Construction – individual or crew “tasks”
  - Maintenance
  - Moving
  - Work or inspection “off-the-floor” in offices
  - Visits to nonofficial/“field” and facility worksites of others (such as construction, disasters, and operating, plants)

4.0. DEFINITIONS

4.1. **Control** - An action or measure that attempts to prevent a recognized hazard from causing **injury or damage.**

4.2. **Hazard** - A source of energy or condition that may cause injury to personnel, or damage to equipment, property, or the environment.

4.3. **Job Safety Analysis (JSA) –** A system that identifies hazards associated with each step of a job and develops solutions for each hazard that will either eliminate or control the hazard.

4.4. **Risk -** The combination of the probability (likelihood) of a specific unwanted event and the potential consequences if it should occur.

4.5. **Risk Assessment -** A detailed, systematic examination of any activity, location, or operational system to identify risks, understand the consequences, and review controls.

4.6. **Risk Management** - Management activities that enable risks to be identified, understood, and minimized to a reasonably achievable, tolerable risk.

4.7. **Safety Task Assignment (STA) –** The process of identifying and communicating to each employee the steps, hazards, and risks associated with a task, and the safe work practices that are to be applied to complete the task safely.

5.0. GENERAL REQUIREMENTS

The projects will adopt a “whole life” approach to pre-task planning for HSE from commencement of the project to commissioning and handover to the owner. The project will use a series of hazard studies to identify, analyze, and manage areas of risk or hazard. In addition, other specific risk assessments and reviews may be used to analyze specific areas of risk or hazard.

The following subsections provide a systematic approach to any pre-task planning process.

5.1. Hazard Identification

5.1.1. Workplace hazards can be identified in a number of ways.

5.1.2. Inspections provide a system of recognizing hazardous conditions so that those conditions can be corrected.

5.1.3. The data collected while performing inspections will be used to identify hazards and barriers to working safely and in an environmentally protective manner so that they can be addressed – such as procedure changes or purchasing different personal protective equipment (PPE). The data also will be tracked as a proactive measure of acceptable health, safety, and environmental (HSE) behavior on the site. Reports and safe work observation information will be shared with employees at Toolbox safety meetings. [Ref. Safe Work Observation].

5.2. Assessment

5.2.1. Once the hazards have been identified, it is necessary to assess what risk they pose to employees in the workplace. In this way we can establish a measure of the risk and determine what priority they should have for corrective action.

5.2.2. The risk assessment step is that part of the process that assesses the probability (likelihood) and consequences (severity) of hazards that have been identified. Once we have estimated

the probability and consequences for each hazard then we can allocate it a priority for corrective action.

5.2.3. Generally, risk assessment is estimating: what are the chances (probability) of an accident happening, and if it does happen, what are the chances that someone will be hurt? What will be the extent of equipment or environmental damage, and how bad will it be (severity)?

5.2.4. The level of risk is dependent on the exposure to the hazard and the probability and consequences of an event occurring.

Attachment 01 provides a no mandatory, formal method for assessing risk.

5.3. Control

This stage is the process of determining and implementing appropriate measures to control risk. In many countries, this process has been legislated and must be completed as far as practicable.

Practicable means considering:

- Severity of the hazard in question
- State of knowledge about the hazard or risk and ways of removing or mitigating it
- Availability and suitability of ways to remove or mitigate that hazard or risk
- Cost of removing or mitigating the hazard

5.3.1. Hierarchy of Controls

Having identified the potential hazards, the team is further responsible for identifying solutions to those hazards. The preferred hierarchy for developing solutions/controls is provided below.

Elimination - Eliminating toxic substances, hazardous equipment, or processes that are not necessary for a system of work.

Substitution - Where hazardous materials/chemicals have been identified as a hazard, the preferred option is to replace the material with a less hazardous one.

Engineering - The removal of potential hazards by reengineering the job is a preferred option. This includes design modification, guards, permanently fixed physical barriers, interlocked physical barriers, physical barriers, presence-sensing systems, enclosures, ventilation, automation, and isolation.

Administrative Controls - The application of administrative controls to hazards may include such actions as limiting the time of exposure, rotating employees, and training/re-training of employees.

PPE - The provision of PPE does not eliminate the hazard, but only shields the individual from it. Such action may have to be coupled with training in the correct use of the equipment.

5.3.2. Evaluation

This step means checking to see whether the introduced changes reduce the risk previously assessed. It may involve repeating the process of hazard identification, risk assessment, and risk control to verify that all risks to health and safety from a particular hazard have been controlled as far as is practicable; but this depends on the hazard, the nature of the assessed risks, and on the control measures used.

Where the evaluations of risk control measures reveal some remaining risk, the process continues until risk is minimized as far as practicable.

5.3.3. Monitor

To verify that control measures implemented are not eroded over time they must be monitored on a regular basis.

5.3.4. Continuous Hazard Identification

The project/office will conduct regular audits and inspections of workplaces and continue to identify hazards, assess risks, and develop/implement appropriate control measures. These audits and inspections will monitor the pre-task planning process in use to verify that the process is working effectively, analyses are modified as necessary, hazards are being mitigated, and control measures are appropriate and implemented.

[Ref. Safe Work Observation], Inspections/Assessments and Audits.

5.3.5. Risk Management and Assessment

At any stage, employees may identify further activities that require the application of risk identification, assessment, and management processes such as:

- Recruitment and selection of personnel
- “Critical" construction activities (such as multi-crane lifts)
- Interaction of personnel with technology, vehicles, and equipment
- Planned changes of operational status of equipment
- Confined spaces
- Working at heights
- Foreseeable emergencies
- Climatic extremes
- Archaeological discoveries
- Wastewater discharges

6.0. PROCESS HAZARD ANALYSIS

The project hazard study approach for the engineering phase is described in Execution of Process Hazard Analyses (PHAs). The hazard evaluation and risk mitigation process continues into the commissioning, construction, and operations/maintenance phases. Individual projects may choose to develop a different series of studies, but all aspects of the studies described herein must be incorporated.

6.1. PHA Level I

The Level I PHA is intended to identify potential chemical and process hazards that require specific considerations in order to ensure safety in design. Because the study is performed very early in the design process, the hazards identified tend to be of a general nature. The Level I PHA provides an opportunity for eliminating hazards while fundamental changes to the process are possible. Requirements for Level I PHAs are presented in Practice [Ref. Safe Work Observation], Conceptual Process Hazard Analysis – PHA Level I.

6.2. PHA Level II

The Level II PHA is intended to identify events that could occur during operation of the facility that would be a deviation from design intent. The potential causes and consequences are identified, and a judgment is made as to whether additional design features should be incorporated to safeguard against the identified scenarios.

Level II is performed after the basic design is complete during preliminary or front-end engineering. Details regarding the execution of PHA Level II reviews can be found in Practice [Ref. Safe Work Observation], Preliminary Process Hazard Analysis – PHA Level II.

6.3. PHA Level III

The Level III PHA is intended to identify events that could occur during operation of the facility that would be a deviation from design intent. The potential causes and consequences are identified, and a judgment is made as to whether additional design features should be incorporated to safeguard against the identified scenarios.

The Level III PHA serves as the final safety review before the Pre-Startup Safety Review (PSSR). Following the Level III PHA, the P&IDs are “frozen,” and all design changes occurring after that point must be processed through the project HSE Management of Change program (refer to Practice [Ref. Safe Work Observation], HSE Management of Change). Details regarding the execution of PHA Level III reviews can be found in Practice [Ref. Safe Work Observation], Design Process Hazard Analysis – PHA Level III.

7.0. JOB SAFETY ANALYSIS

7.1. The JSA Team

A JSA should be performed by more than one person in order to provide a greater breadth of technical competence. There is not an optimum number of persons required to conduct a JSA. However, fewer rather than more are preferred.

Ideally, the team should include:

- Supervisor
- Employee(s) experienced in the task

- Other employees that will be performing the work
- Specialists (such as HSE representatives, engineers, and industrial hygienists) as required

7.2. Selection of Jobs to be analyzed

Particular jobs may be selected for analysis either by the Site Manager, the supervisor responsible for the work, the HSE Representative, or by request of the HSE Committee.

Any employee at the workplace is permitted to submit that a particular job be subject to a JSA. If such a submission is made, then the recipient is responsible for giving it objective consideration and also for keeping a record of the conclusions from that consideration (such as a diary note).

As a guide, jobs are selected for analysis on the following basis:

7.2.1. Hazard Potential

Some tasks have a recognizable hazard potential greater than activities generally conducted at the site. As examples, such tasks will include dual crane lifts; critical lifts (load exceeds 30 ton or 75 percent of rated capacity); jobs that involve more than one work group; work in confined spaces; crane rope change; and hot work.

7.2.2. Consequences of Failure

A work method failure during the execution of some tasks may result in unacceptably high-damaging consequences. Such tasks may include work at height and manual handling.

7.2.3. Incident History

Tasks that have previously resulted in an accident or jobs with a high accident potential should be subjected to a JSA review. New, changed, or infrequent jobs/work methods, and repetitive tasks that are the subject of proposed changes to the work method (such as changed equipment) should be the subject of a JSA.

7.2.4. Live Machinery/Equipment

Jobs undertaken on live machinery and equipment should be subject to a JSA due to the inherent hazards associated with such work.

The JSA process should also be applied to a project work scope before the HSE procedures are developed for the project. In this situation, the project work scope should be broken into base activities, and these activities should then be analyzed. The results of the JSA should be used to develop the project procedures.

7.2.5. Define Scope

Before commencing a JSA, it is important to define the scope of work (the job to be analyzed) and select the appropriate employees. This scope definition should be undertaken by the person responsible for organizing the JSA.

7.2.6. Basic Process for Completing a Job Safety Analysis

The basic steps necessary to perform the job from start to finish must be listed. Each of the steps of a job should accomplish some major task. The task may consist of a set of movements. Look at the first set of movements used to perform a task and then determine the next logical set of movements. Each step description defines an action, but does not describe hazards or precautions. Cleanup and stowing of equipment at the completion of work is a step.

Hazards associated with each step will be identified. Equipment, personnel, and the activities that are required to complete each step will be considered. Each step to find and identify hazards that could lead to an accident will be examined. The preparer will verify that all hazards are listed, including environmental and health hazards.

Using the first two steps as a guide, the preparer will decide what actions are necessary to eliminate or reduce the hazards that could lead to an accident that may result in injury, damage, or occupational illness.

Recommended safe work plans/operating procedures and the required or recommended PPE for each step of the job will be listed. Be specific. Say exactly what needs to be done to correct the hazard. Avoid general statements like “be careful”; they tend to indicate that not enough thought has been applied to the problem and the team has taken the easy way out.

Each JSA will be recorded on Form XXXX, Job Safety Analysis.

The individual steps will be numbered consecutively, beginning with the number one.

The hazards identified for each step will be numbered consecutively as a subset. For example, for Step No. 1 the identified hazards would be numbered 1.1, 1.2, and 1.3; while for step No. 3 the identified hazards would be numbered 3.1, 3.2, and 3.3.

All employees and visitors will read or receive instruction in JSA requirements before commencing work on the job. Employees and visitors must sign the JSA to indicate that they understand and will comply with the JSA.

7.2.7. Automated JSA

It is permissible to use an automated JSA process if it is at least as robust as the process described in this practice.

7.2.8. Informing Employees

Employees must be informed of identified or potential hazards and prescribed safety measures before initiating work activities through review of pre-task planning documents. In general, pre-task planning documents must include hazard analyses, permits, and other safety and health-related work plans.

7.2.9. Training

Training associated with hazards/control measures and activities identified on pre-task planning documents will be completed in accordance with Practice XXXXX, Training and Orientation.

When requested, engineering will provide technical support or pre-task planning to ensure compliance with codes, standards, and regulations.

7.2.10. Responsibilities

A. Supervision

Supervisors will ensure the following activities are performed:

- Research (to the extent possible) and identify known environmental hazards in areas employees enter or in which they work.
- Identify known or potential hazards and list on the JSA and (as required) other pre-task planning documents. Ensure that required training and permits are completed for those applicable items on the known or potential hazards list.
- Ensure and maintain documentation of competency/qualification.
- Ensure that pertinent information from the pre-task planning document(s) is communicated to affected employees before they perform work or enter the worksite.
- Ensure current pre-task planning documents are at the worksite.
- Ensure compliance with this practice.

B. [HSE DOCUMENTS] Construction Engineers and Contract Administrators

[HSE DOCUMENTS] construction engineers and contract administrators will ensure that [HSE DOCUMENTS] subcontractors and lower tier subcontractors have submitted the required JSA(s), the JSA(s) has been reviewed and approved by the [HSE DOCUMENTS] HSE Representative (and the client, if required), and a pre-task walkthrough has been conducted with the appropriate [HSE DOCUMENTS] project representatives (including safety and health) and the subcontractor before the start of work.

C. Project HSE

- Provides safety and health related program guidance for pre-task planning.
- Reviews and approves all JSAs after the documents have been signed by appropriate supervision.
- Where possible, this review and approval should be made by another HSE (or quality control) Representative who was not involved in the preparation of the documents.

Note: Review with recommendations to change these documents is not considered involvement in preparation.

- Ensures a pre-task walkthrough on the project has been completed before the start of work.
- Reviews and evaluates any hazardous material and/or hazardous process that creates a potential employee exposure. Processes may include, but are not limited to, welding or

cutting, confined spaces, coating application/removal, sandblasting, asbestos and lead work, and chemical use.

Once supervision completes the JSA, the HSE Representative will review and approve it. A specific review by industrial hygiene may be required when conditions dictate, or as requested by the HSE Representative.

If an incident or accident occurs during performance of the job or task, that portion of the work will be stopped and the supervisor (along with the HSE Representative) must review the worksite to ensure that appropriate controls are established and identified on the JSA before allowing the work to continue.

7.2.11. Process

A. Asbestos Inspection

A "good faith" asbestos inspection report must be submitted by the building owner/operator and reviewed before construction/maintenance work begins. A written report or statement from the building owner/operator stating that "no asbestos-containing material will be disturbed during the work effort(s)" may be substituted for the good faith asbestos inspection report. If asbestos is going to be disturbed, the report or statement must be attached to the JSA. An asbestos inspection report is not required for walkthrough inspections or maintenance activities where asbestos is not disturbed.

B. Hazard Analyses Documented

Hazard analyses will be documented as follows:

- Job-specific JSA
- Task-specific JSA
- Position Hazard Analysis
- STA
- Asbestos Work Plan
- Lead Compliance Plan
- Hazardous Waste Health and Safety Plan (or equal)
- Automated job hazard analysis
- Other equivalent hazard analysis process/methods approved by [HSE DOCUMENTS] HSE.

Note: All types of hazard analyses, except the STA and process hazard analysis, are collectively referred to in this practice as JSAs.

Note: Attachments to JSAs may include the Energized Electrical Work Permit; Confined Space Hazard Identification; Confined Space Entry Permit; Hot Work Permit; Fall Protection Work Plan; Good Faith Roof Assessment; SDSs, Radiological Work Permit; and Excavation Permit and scan documents.

C. JSA Required

No field activities on the worksite may be performed until a JSA covering the activity (with the appropriate hazards identified and control measures established to protect the employee) has been

reviewed and approved. All JSAs are reviewed and approved by the [HSE DOCUMENTS] HSE Representative.

D. Subcontractor JSA Reviews

Subcontractor JSAs must be submitted to the [HSE DOCUMENTS] HSE Representative 5 days before commencing work. The JSA will be reviewed and initialed by the [HSE DOCUMENTS] HSE Representative when acceptable.

Note: It is a common contractual requirement to submit JSAs to the client for review/acceptance at least 15 days before commencing work. In such cases, subcontractor JSAs must be submitted to the [HSE DOCUMENTS] HSE Representative at least 20 days before commencing work.

E. JSA Reviews by Employees

Each employee reviews the JSA for the specific task performed before performing the work activity. This review may be in the form of a pre-task briefing, a one on one discussion with the supervisor, or reading the JSA. The review is documented by employee signature on the Pre-Task Planning Signoff (Form XXXXX) or equal.

F. Posting a JSA

The JSA will be posted in a conspicuous place at the worksite. Employees will be informed where this location is. Visitors and suppliers are required to review and sign the JSA before entering the worksite.

Note: On occasion, it will be impractical to post the JSA at the worksite. However, in all cases the JSA will be available at the worksite when activities are being performed.

G. No routine Workers

In the event that no routine personnel (such as inspectors or visitors) arrive on the worksite and the existing JSA (whether developed by [HSE DOCUMENTS] or subcontractor) does not cover the hazards associated with their activity, a new JSA will be written to cover that activity or the supervisor will modify the existing JSA to cover the activity.

H. Updating a JSA

JSAs (including attachments) will be renewed, amended, or revised when the safety requirements change, hazards change, new hazards are identified, the work scope changes, or 6 months has elapsed since the last review. The date on the JSA(s) will be changed to reflect the renewal/ modification. The HSE Representative will review and approve all changes. Employees involved in the work will review the renewed/modified JSA and resign and date Form XXXXXX or equal.

I. Pre-Task Walkthrough

Personnel performing a pre-task walkthrough will use the appropriate documents and information available to ensure hazards, or potential hazards, are correctly identified and communicated for the activity being performed.

If, after the pre-task walkthrough, there is inconsistency between what the actual conditions are at the worksite and what was expected in the pre walkthrough evaluation, the differences will be resolved before any work begins and the appropriate changes noted on the JSA.

Completing a “hazard checklist” (such as Forms XXXXX, Pre-Task Hazard Checklist; XXXXXX, Plant Risk Assessment Checklist; or XXXXXX, Job Hazard Checklist) is an optional but convenient method of documenting hazards/controls identified during the pre-task walk down. This form also provides a convenient (but again optional) method of notifying subcontractors of the suspected/potential hazards associated with a contract/scope of work (refer to Practice XXXXXX, Contractor Selection and Alignment).

Key [HSE DOCUMENTS] employees (such as construction supervision and craft, and the HSE Representative), the customer/client, and subcontractor (if subcontractor work) should be involved in the pre-task planning process. Involvement may include pre-task walkthroughs, participation in developing the JSA, or input/changes recognized during pre-task meetings.

J. JSA Preparation

JSAs are prepared and address specific work activities and hazards associated with the specific work, and controls to mitigate the hazards. Subcontractors use the hazard information contained in the contract, as well as the pre-task walkthrough, when developing JSAs covering their work.

Further evaluation and documentation on the continuation page(s) are required for activities when any of the following situations pertain:

- Any hazard/activity on page 1 is checked “yes.”
- Hazards associated with the work to be performed are not sufficiently defined.
- Employees may be exposed to hazardous materials.
- Other significant or unusual hazards are anticipated or could become involved.

Subcontractors and lower tier contractors may use their own JSA forms, provided the information contained in their completed form addresses the process and guidelines as outlined in this practice.

JSAs include the following information as prescribed on the JSA form:

- Job scope and description of activities
- Listing of each activity or phase
- Identification of the hazards associated with the activities being performed, including the use or presence of hazardous chemicals
- Specific, effective safety measures (engineering, administrative, or PPE) to eliminate or control the hazards
- A list of specific applicable work control documents, such as maintenance instruction or equipment procedure
- Required training
- Required permits

- Identification and detail (including drawings and other documentation) of activities/hazards for which protective measures are required to be designed, inspected, or approved by a professional engineer or Competent/Qualified Person

K. Pre-Task Meeting

The supervisor/designee will conduct a pre-task meeting before any work activity begins and discusses the completed pre-task planning documents with all employees directly involved in the activity. A "pre-task meeting form" (such as Form XXXXXX, Pre-Task Briefing Checklist) may be used to document topics covered in the meeting. Any employee who is not in attendance at the pre-task meeting will not be allowed to work until he/she attends a similar briefing.

Note: The supervisor/designee should invite the [HSE DOCUMENTS] HSE Representative to attend the initial pre-task meeting for each project/task order.

The pre-task meeting will focus on discussions of the area where work is performed, scope of work, equipment used, the hazards and control measures (including PPE), and any evacuation and emergency procedures.

Each employee directly involved in the activity (including employees in support roles) will sign Form XXXXXX (or equal) indicating that he/she understands the activity, hazards, and controls associated with the work effort as indicated on the applicable pre-task planning documents and attachments.

Note: Only those employees signing Form XXXXX (or equal) are allowed to work on the job specified in the document.

Note: If an employee does not understand the safety requirements or scope of the job, the employee may not proceed with the work until the requirements and scope are clearly understood.

8.0. SAFETY TASK ASSIGNMENT

The STA is the process of identifying and communicating to each employee the task steps to be completed, the hazards and risks associated with the task, and the safe work practices that are to be applied to complete the task safely and in an environmentally acceptable manner.

The STA process includes the following:

- Pre-task planning
- Hazard identification and correction
- Supervisor and employee accountability

8.1. Responsibility

It is the responsibility of Project/Site Management to verify completion of the STA process on a daily basis. It is the supervisor's responsibility to conduct the STA process daily with his/her employees before

each new work assignment. The STA forms must be provided to Project/Site Management at the completion of each shift.

8.2. Process

- The supervisor receives the job/task assignment.
- The supervisor conducts a review of the job/task to be assigned.
- An STA meeting is conducted with the employees who have been chosen to perform the assignment and who have agreed to comply with STA requirements.
- Each step of the task will be reviewed with the assigned employees, and all potential hazards will be identified.
- Safe work practices, PPE, and task competency requirements will be reviewed and discussed with the employees.
- The supervisor is responsible for providing all required PPE and other equipment necessary for the safe completion of the task in the work area.
- The supervisor completes the STA form. Each employee assigned to perform the task will sign the STA form indicating awareness of the task at hand, potential hazards, safe work practices, and required PPE.
- The STA form will be displayed in the work area until the end of the shift or until the task is completed.
- The supervisor will monitor the job/task as it begins and periodically revisit the work location to monitor working conditions and compliance with the STA requirements.

Note: While performing the job/task, if additional employees are assigned to the work team, the supervisor must review the STA with those employees, and their signatures must be added to the STA.

8.3. Post-STA

- The post-STA will be completed at the end of shift or at task completion.
- The supervisor will review and complete the post-STA with each employee. All safety concerns/problems that occur during the assignment should be recorded on the post-STA.
- Each employee will sign the post-STA indicating that they have reviewed and agree with the listed comments.
- When the job/task is completed, the STA form will be submitted to Project/Site Management for retention.
- An STA trifold card is provided as Form XXXXXX, Safety Task Assignment.

9.0. RESOURCES

- Global Standards
- Australian Government Safety and Compensation Council;
- List of National Codes of Practice
- Safety and Compensation Council;
- List of National Standards

- European Union-European Agency for Safety and Health at Work
- United Kingdom-Construction Regulations 2007

10.0. REFERENCES

- Training and Orientation
- Contractor Selection and Alignment
- Inspections/Assessments and Audits
- Safe Work Observation
- Execution of Process Hazard Analyses
- Conceptual Process Hazard Analysis – PHA Level I
- Preliminary Process Hazard Analysis – PHA Level II
- Design Process Hazard Analysis – PHA Level III
- HSE Management of Change

11.0. Forms:

- Job Safety Analysis
- Safety Task Assignment
- Pre-Task Hazard Checklist
- Plant Risk Assessment Checklist
- Hazard and Risk Review
- Job Hazard Checklist
- Pre-Task Briefing Checklist

12.0. ATTACHMENTS

- Formal Risk Assessment Process