

JOB SAFETY ANALYSIS (SJA) - "MIN TAKE 2" – "RISK INVENTORY OPERATIONS PERSONNEL"

1 PURPOSE

Job Safety Analysis (JSA) is a tool for systematic evaluation of maintenance or project work, normal work tasks or less frequent work tasks or procedures, and to eliminate or reduce the risk of personal injury or damage to the environment or property to as low a level as is practically possible.

"Min take 2" is a personal risk evaluation for "non-operations personnel" with the purpose of identifying and avoiding risks related to starting a work task, and stopping after work is completed in order to check off and check quality.

"Risk inventory operations personnel" is a personal risk evaluation for operations personnel with the purpose of identifying and avoiding risks related to starting a work task (shutting down/resetting, commissioning, other risks)

This instruction describes these risk evaluation methods.

2 SCOPE JSA

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2.1 Work where a JSA must always be carried out

For all maintenance work an assessment should be made to see if JSA needs to be carried out or not.

For the following work an SJA is always needed:

- *High pressure washing*
- *Blasting*
- *Crane lifting*
- *Entry in confined space*
- *Hot work with special approval routine*
- *Lifting personnel with crane, forklift truck or mobile working platform, skylift or similar*
- *Diving work*
- *Work with asbestos*
- *Work on multiple levels at the same time*

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2.2 Decision on whether other maintenance requires JSA or not

Operations coordinator/planner evaluates the need of a JSA when the work order is made and shall also make a note if a relevant JSA is available. This is noted in "Long text" in the SAP work order.

Maintenance planner makes his own evaluation whether a JSA is needed and makes a change in the "Long text" if he/she decides it is needed and this does not correspond with the previous evaluation. An operation is created to the department responsible for the area where the work will be made (HMSS-310), if this is not already made in the previous step.

A follow-up to see if JSA's are performed and evaluation if additional JSA's not previously identified are needed shall be made at a RBWS meeting.

All involved disciplines have the right as well as the obligation to make a demand for a JSA if they consider there is a need.

2.3 New machines and apparatus

When new machines and apparatus are brought into use it must always be considered whether a JSA should be carried out as a basis for the operating/work instructions.

2.4 Existing work tasks

JSA can, if necessary, also be made of existing work tasks.

3 ANALYSIS GROUP COMPOSITION

The analysis must be led by someone who is familiar with analysis techniques. It is also important that the participants have good detailed knowledge of the different work procedures and the risks that the procedures carry. This means that operators, mechanics and management should take part.

If contractors carry out or take part in the work, it is important that they take part in the analysis.

A safety representative should participate when carrying out new JSA's. When updating the JSA an assessment can be made.

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4 RESPONSIBILITY

4.1 The following functions have responsibility for a JSA being carried out

- The project manager for projects
- In other cases it is the department responsible for the area where the work is performed
 - o Operations: Coordinator, operations planner or shift leader (emergency work)
 - o For areas where operations are not responsible it's the person writing the work permit for the area is responsible for a JSA being made. For example the Electrical Manager, for work in in switchgears

Maintenance or project work can often require shut down of factories or sections of factories. This shut down may also require going through a JSA. If this required, the operations department is responsible for producing it.

Where possible the JSA must be carried out two weeks before the work begins.

4.2 Responsibility for information about risk/action from JSA

The completed JSA must state who is responsible for passing information about the risks/action to the work permit issuer and to those who carry out the work.

This person is also responsible for evaluating whether there is a need to update the JSA if the conditions (for example shut down, work flow, work methods) are changed from when the JSA is carried out to when work starts.

The JSA must be available in paper form at the status printer when printing status.

5 WORKFLOW FOR JSA

The form for the JSA is on the intranet, and is accessed via the link Forms and templates on the start page under the heading Practical services or via link: [Job Safety Analysis](#).

The work flow is as follows:

- I. Define the work procedures step by step. (Important not to rush into the risks immediately.)
- II.** List what can cause ill health or injury/damage for each work procedure. **See example in Appendix 2.**
- III. For each "risk cause" (point II above) write down what personal injury or damage to the environment or property would be caused.
- IV. List what actions (procedures, instructions, training) are already in place.

- V. Determine if further actions are required to eliminate or reduce the risks as far as is practically possible, if so what.
- VI. Decide who is responsible for implementing the relevant actions under point V.
- VII. Produce a rescue plan if there is a risk of serious accident or serious danger to personnel (see appendix 2).
- VIII. Decide who is responsible for following up actions and submitting it to the work status printer (see section 5.2).

If a JSA has been carried out for a very similar job it can be used on the condition that the document is gone through again. The updated document should state who was involved in going through and dated with the new date. It is important that one is aware of the risks of using an "old" analysis and that one considers whether there are further risks in the present work that one had not previously taken into consideration.

6 ARCHIVING OF JOB SAFETY ANALYSES

Archiving must take place by place number. It should also state what type of work, such as working at height, heavy lifting, accessing tanks etc.

The form must be entered on the intranet under the relevant operation department.

The current JSA forms must be archived for three months together with the work permit in the relevant department.

7 MIN TAKE 2

Min Take 2 is a simple risk analysis that must be carried out before starting work that is carried out by maintenance technicians and contractors. Other "non-operations personnel" must also carry out Min Take 2 for more infrequent work.

Analysis must be carried out at the work site before starting work. All members of the work team must participate in the analysis and all names must be noted on the form. In the event that a provider is added after the work has started, the person in question must carry out their own Min Take 2.

If work continues for several consecutive days, a new analysis must be carried out each day.

The analysis form must be carried during the work and be available for inspection in event of a safety check for example.

8 RISK INVENTORY OPERATIONS PERSONNEL

Risk inventory operations personnel is a simple risk analysis that must be carried out before starting work that is carried out by operations personnel. Examples of such work for an operator are shut down of equipment before maintenance work, resetting after completed work and commissioning *of equipment*.

Analysis must be carried out at the work site before starting work. All members of the work team must participate in the analysis and all names must be noted on the form. In the event that a provider is added after the work has started, the person in question must carry out their own risk assessment.

If work continues for several consecutive days, a new analysis must be carried out each day.

The analysis form must be carried during the work and be available for inspection in event of a safety check for example.

APPENDIX 1

Form: [Job Safety Analysis](#)

APPENDIX 2

Examples of issues when making a SJA

- Is there a risk of falling from two meters or more?
- Is there a risk of lack of oxygen when entering a confined space?
- Is there a risk of exposure to chemical or biological substances?
- Is there a risk of falling objects?
- Are there any risks with heavy lifting?
- Is there a risk of electrical high voltage?
- Are there any risks when working near voltage?
- Are there any risks with passing traffic?
- Are there any risks when working with explosives?
- Is there a drowning risk or other risks with work that includes diving?
- Is there a risk of ionizing radiation (x-rays)?
- Are there any risks when working with earth masses?
- Are there any risks with demolition of hazardous material (e.g. asbestos) or bearing constructions?
- Is there a risk of increased emission to the environment?
- Is there a risk that chemical substances will form during work?
- Should gas bottles be used at high altitude?

APPENDIX 3

Rescue plan

Produce a rescue plan if there is a risk of serious accident or serious danger to personnel in the workplace.

The work that could be covered is

- Access to chimneys
- Access to holes
- Access to tanks
- Access to nitrogen rich environments
- Access to caves
- Working at height

What should one think of??

- Who should one save? Are extra harnesses, rescue lines, air hoses etc. required?
- Should the Technical Group be informed?
- Should the Emergency Services be informed (contacted through the safety technicians)?
- What should the contact method be? Is an extra communications radio required?
- What telephone numbers should be available (gate security, control room, contact person)
- What equipment do I need for the rescue (Stretcher, spinal board or medical oxygen)?
- Does everyone know where the equipment is located at the company?