

JOB RISK ANALYSIS

Process Overview

OBJECTIVES & FIELD OF APPLICATION

The Job Risk Analysis (JRA) process is defined in **GM EP HSE 010**

The objectives is to **reduce the risk to an acceptable level** by following the steps below:

- Identify all potential hazards encountered in a defined activity,
- Determine the appropriate and sufficient risk reduction measures,
- Develop an action plan to implement the agreed risk-reduction measures.

The JRA process is to be applied on **all Total E&P Operated Sites and activities** including offices and bases. On sites where Total E&P is not operator but has interests, use of the guidelines should be studied on a case-by-case basis, when the tools and methods used by the contractor or any other third party are different.

It applies to **jobs which are considered safety critical in terms of risks** that may cause personal injury and/or occupational illness and/or damage to environment and/or risks that may cause asset losses and/or media impact, in oil & gas and non oil & gas activities.

WHEN CONDUCTING A JRA?

Affiliates / Entities shall define the criteria to define the situations requiring a JRA.
Typically:

- **New jobs**

Jobs that have not yet been done or risk assessed.

- **Past accident or incident history**

Jobs where high potential accidents or incidents have previously occurred

- **Concurrent operations / multi-discipline operations**

Operations in which there are interfaces with more than 3 specialties involved.

- **Number of people at risk**

Activities where a large number of people is involved (Recommendation: >5 people).

- **Minimum frequency of the job**

Jobs that are performed very infrequently. (Recommendation: <every 6 months).

For repetitive jobs, it is recommended that **a set of typical JRA is established**

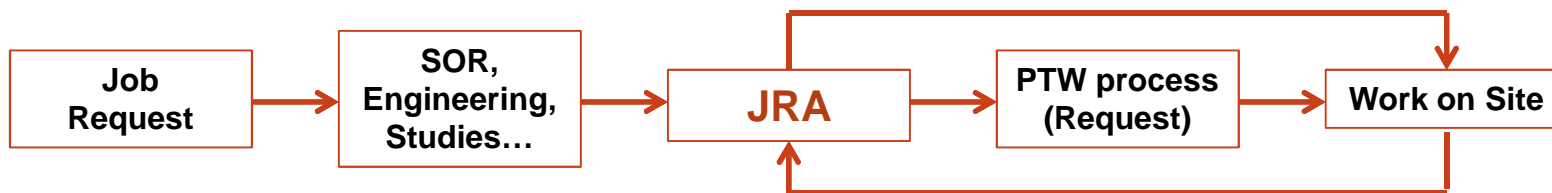
JRA TEAM

Job Risk Assessment should be conducted by **a team formally assigned by the RSES**, comprising at least:

- The direct job supervisor and a person in charge of the actual execution of the job.
- The HSE representative (HSE advisor or representative).
- The Works supervisor.

For jobs that are more complex or involve a number of different disciplines or departments, the team should include a representative from each discipline and/or department. .

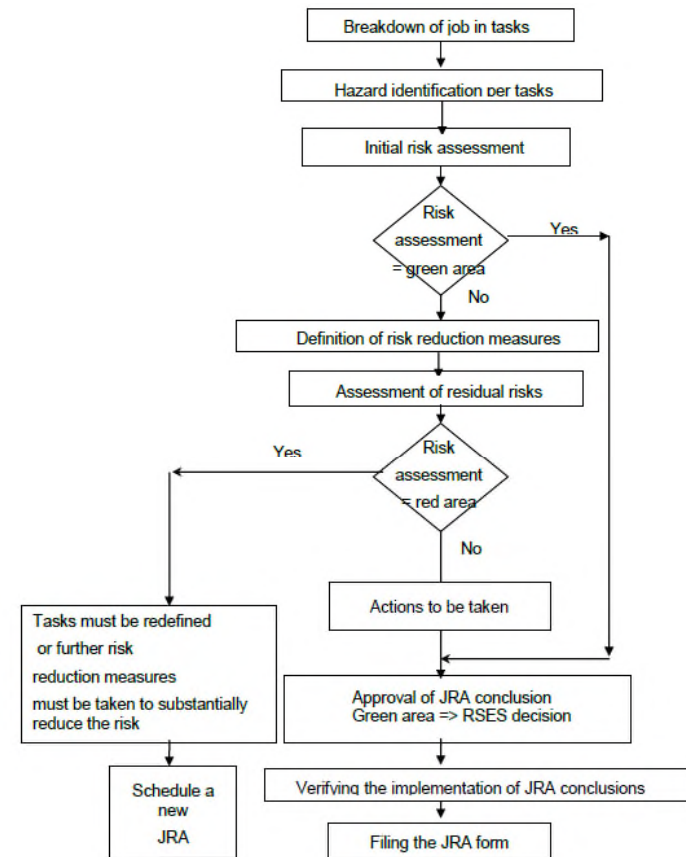
The Job Risk Analysis (JRA) process is a **Dynamic Process** and **an active participation of the work force** in implementing the Job Risk Assessment should be encouraged and stimulated among both Total E&P and Contractor personnel.



STAGES OF THE METHODOLOGY

The analysis can be broken down into **nine stages**:

1. Breakdown of the job into tasks
2. Task-by-task Hazard Identification
3. Initial risk assessment
4. Definition of risk reduction measures
5. Assessment of residual Risks
6. Actions to be taken
7. Approval of JRA conclusions
8. Verifying the implementation of JRA conclusions
9. Filing the JRA Form



RISK ASSESSMENT PRINCIPLES (Stages 3 and 5)

$$S \times P = R$$

The **Severity** of the consequences of an incident is found by answering the question:
What rating applies to the worst possible realistic consequence, if the hazard becomes an incident?
 The Hazard severity should be taken from the matrix from CR EP HSE 102.

For practical reasons, the five categories have been organised into four main categories, i.e.:

- Category “**Minor**” equivalent to category “Minor” in CR EP HSE 102
- Category “**Moderate**” equivalent to category “Moderate” in CR EP HSE 102
- Category “**Serious**” equivalent to category “Serious” in CR EP HSE 102
- Category “**Major**” equivalent to categories “Major”/“Catastrophic” in CR EP HSE 102

The **Probability** of occurrence is found by answering the question:
Is it likely that the effect of the hazard will occur?
 The answer to this question can be selected from the following predetermined categories:

Very unlikely (Vu)
 Little or no chance of occurrence
 A freak combination of factors would be required for an incident to occur

Unlikely (Un) Conceivable but would require multiple failures of the risk reduction measures system
 A rare combination of factors would be required for an incident to occur

Possible (Po) Easy to postulate a scenario for accident but considered unlikely
 Not certain to occur but an additional factor may result in an accident

Probable (Pr) Likely to occur and the team have knowledge of a similar event
 Likely that an incident would occur

Once the **Risk** has been assessed, the table below is used to determine the type of action to be taken.


1 Acceptable (A) No immediate action required other than the existing reduction measures listed.

2 Tolerable (T) Hazard to be investigated, with a view to further reducing the risk.
 Risk reduction measures must be defined (stage 4) and residual risk must be re-assessed (stage 5).

3 Unacceptable (U) Task must be redefined or risk reduction measures must be taken to substantially reduce the risk.

| | | | | | |
|---|--------------------|------------|---------------|--------------|------------|
| P R O B A B I L I T Y | Probable (Pr) | T | U | U | U |
| | Possible (Po) | A | T | U | U |
| | Unlikely (Un) | A | A | T | U |
| | Very Unlikely (Vu) | A | A | A | T |
| | | Minor (Mi) | Moderate (Mo) | Serious (Se) | (Hi) Major |
| SEVERITY | | | | | |

TYPICAL JRA FORM

|  | | Installation: <i>Example of JRA used for derogation justification to CR EP FPP 140 (extract of the request)</i> | | | | | | | Page: 1 / n | | | | |
|--|---|--|--------------|----|--|--|---------------|----|--------------------|---------------------|-------------|--------------|-----------|
| | | Leader: RSES | | | Attendees: <i>Drilling contractor representative IHSE site/Production Operating authority/OSL</i> | | | | | | | Date: | |
| Exploration Production | | | | | | | | | | | | | |
| Job Description: <i>Skidding Rig with well F3 SCSSV inoperable and open</i> | | | | | | | | | | | | | |
| # | TASK | HAZARD | INITIAL RISK | | | RISK REDUCTION MEASURE | RESIDUAL RISK | | | ACTION PARTY | TARGET DATE | COMPL. DATE | FOLLOW-UP |
| | | | S | P | R | | S | P | R | | | | |
| 1 | Set BOP back on Rig (Heavy lift) | Dropped objects Human consequences Environment conseq. Equipment /Prod. | Hi | Po | U | Certified lifting equipment. Planned maintenance system | Un | Un | Un | Drilling contractor | Dd/mm/yy | Dd/mm/yy | |
| | | Typical | Hi | Po | U | & | | | | | Dd/mm/yy | Dd/mm/yy | |
| | | | Hi | Po | U | Well 7 enclosed with protection from under weather board deck to Xmas tree level. Well 3 not in lift envelope. Adjacent wells 1,2 & 5 | Mo | Mo | A | Drilling contractor | | | |
| | | | | | | Shut in and depressurised Note if adjacent wells are damaged, severity due production loss will be serious | Se | | T | Operating Authority | Dd/mm/yy | Dd/mm/yy | |
| 2 | Open up conductor tensioning unit deck panels | Dropped objects Human consequences Environment conseq. Equipment /Prod | Hi | Pr | U | Ensure that there are no loose items on conductor tensioning units panels | Un | Un | Un | Drilling contractor | Dd/mm/yy | Dd/mm/yy | |
| | | | Mi | Pr | T | & | | | | | | | |
| | | | Mo | Pr | U | Ensure that all scaffolding / equipment is cleared from under the Conductor | Mo | Mi | A | Drilling contractor | Dd/mm/yy | Dd/mm/yy | |

JRA IN PRACTICE...

- JRA should be lead by **experienced personnel**, with the collaboration of all trades and Contractors. Also involve « fresh eyes » in the Team
- The JRA Team should have all the **required documentation available** prior commencing the assessment (site activities look-ahead, drawings, equipment data...) and should usefully have a site visit in the process.
- The JRA results shall be **shared and explained** to all the involved work parties.
- JRA form are to be **joined to all PtW request**
- JRA purpose is **not trying to move everything in the Green Zone**. It is all about actual decrease of the risk level.



TOTAL

COMMITTED TO BETTER ENERGY

**THANK YOU FOR YOUR ATTENTION
ANY QUESTIONS ?**



BACK-UP

Examples

Check list from GM EP HSE 10

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