JOB SAFETY ANALYSIS (JSA)

PROCEDURE NUMBER: HES-208
# CONTENTS

## Job Safety Analysis HES-208

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### Appendices

- **A** Glossary
- **B** Job Safety Analysis Form (CPL-208)
- **C** Think Incident Free (TIF) Form
- **D** Hazard Identification Tool
1.0 Purpose

A Job Safety Analysis (JSA) is a critical component of our effort to achieve Incident-Free Operations (IFO). It is a tool used to identify and mitigate/eliminate hazards associated with each step of a job.

Benefits: When this process is used correctly, it will result in reduced injuries and incidents. It should provide a common understanding to help everyone plan to do the job safely. It also can be used as an effective tool for training all (new and experienced) employees.

2.0 Scope

2.1 Personnel and Activities Covered by this Procedure

This JSA procedure applies to all Chevron Pipe Line Company (CPL) employees. The JSA procedure must be used in all company owned/operated facilities and areas.

All contractors working on CPL owned or operated property will use a JSA procedure that meets the minimum requirements in the Contractor Health, Environment and Safety Management (CHESM) process or they will follow this procedure.

3.0 Prerequisites

All jobs performed at CPL-owned and/or operated facilities/areas will be classified as:

- Low-Risk and Routine Jobs (LR/RJ) or
- High-Risk and/or Non-Routine Jobs (HR/NRJ).

All jobs require that a JSA be conducted before the work begins.

The following tools aid in this process:

- the JSA form (Appendix B)
- Think Incident Free (TIF) card (Appendix C),
- Hazard Identification Tool (Appendix D),

Other guidance tools should be used by employees (EEs) conducting the analysis to properly identify the hazards associated with each step of the job and the actions necessary to prevent injury or incident.

The extent of the analysis may differ based on the level of risk and/or the complexity (more than one person, Simultaneous Operations [SimOps], permitted activities, etc.) of the job being performed. Additional guidance is provided below.
4.0 Process Overview

**START**

- Form JSA Team

**Determine if job to be performed is a LR/RJ or a HR/NRJ.**
- A JSA must be performed prior to beginning any job.

**HR/NRJ**

- Create new JSA with input from all persons involved in the job
- Operations Supervisor or PIC verifies that written JSA has been completed

**BEGIN WORK/PERFORM JOB**

- If JOB CONDITIONS CHANGE, STOP AND REVISE JSA AS NECESSARY
- CONTINUE WORK UNTIL COMPLETE

**Submit JSA for Library?**

- **YES**
  - Submit JSA to Field Team Leader or approval
  - Field Team Leader Approves? **YES**
  - Input to Library
  - END
  - Operations Supervisor or PIC verifies that written JSA has been completed
  - Review and refresh library JSA onsite with all persons involved in the job

- **NO**
  - Submit to Safety Specialist for QA Review
  - End of JSA process

**LR/RJ**

- Does Library JSA exist for the HR/NRJ?
  - **NO**
    - Perform JSA on-site with input from all persons involved in the job
    - BEGIN WORK/PERFORM JOB
    - If JOB CONDITIONS CHANGE, STOP AND REVISE JSA AS NECESSARY
    - CONTINUE WORK UNTIL COMPLETE
  - **YES**
    - Determine if job to be performed is a LR/RJ or a HR/NRJ.
    - A JSA must be performed prior to beginning any job.
    - Create new JSA with input from all persons involved in the job
    - Operations Supervisor or PIC verifies that written JSA has been completed
    - Review and refresh library JSA onsite with all persons involved in the job
    - Field Team leader reviews written JSA for approval prior to entering into Library
    - END

**Note:** Classification of work as LR/RJ is at the discretion and approval of Field Team Leader. The Operations Supervisor has the authority to determine when a written vs. mental/verbal JSA is required.
5.0 Instructions

5.1 Low-Risk / Routine Jobs

Low-Risk / Routine Jobs (LR/RJs) are those jobs in CPL that are considered to have a low risk of injury or incident and tend to be performed routinely. These jobs are not required to be documented on the CPL JSA form. The work teams will identify the jobs in their area that meet this definition. These jobs should be reviewed by the people performing the work and then submitted to the Field Team Leader for approval. The area list of LR/RJs must be maintained in the area files by the Safety Specialist.

Examples of LR/RJs may include but are not limited to:

- Department of Transportation (DOT) valve inspections (above ground)
- Booster Station/Meter Station Checks
- Transmitter calibrations/Pressure Safety Valve (PSV) calibrations
- Vibration testing on pumps
- Fire extinguisher inspections
- Calibrating three-way monitors
- Line locating
- Working at a office work station
- Attending meetings
- Filing records
- Using office machines (copy, fax, etc.)

Each identified LR/RJ must have a quality JSA conducted prior to beginning the work. These are the basic steps for conducting the JSA:

1. Identify the job (swab launch/receive, product switches, sample changes).
2. Involve the person(s) doing the job and/or other knowledgeable person(s) as needed.
3. Outline or break down the job into key steps (isolation, decommission, load, and launch).
4. Outline the hazards associated with each step (pressure, temp, slips, trips, falls, pinch points etc.).
5. Implement/take actions to eliminate and/or mitigate the identified hazards prior to beginning the job.

Individuals/teams performing LR/RJs must:

- Assure the JSA is performed at the job site prior to beginning the job
- Review the JSA on site with all affected personnel.
- Address any changes identified prior to and during the course of the job and take appropriate action.
- Use available hazards identification tools to perform the JSA.

NOTE: If at any time the normal scope of the job or conditions change, the work will be stopped and the analysis will be updated to include the change.
5.2 High-Risk / Non-Routine Jobs

High-Risk/Non-Routine Jobs (HR/NRJs) are those jobs in CPL that are considered to have a high risk of injury or incident and/or conducted on a non-routine basis. All HR/NRJs require a new documented JSA or an updated library JSA.

Examples of HR/NRJs should include but are not limited to:

- Any job done under a permit (safe work, lockout/tagout, confined space entry, hot work, excavation, etc.)
- Any job requiring use of a crane (all equipment used for lifting or hoisting)
- Any job involving work requiring fall protection
- Jobs assigned to a Short-Service Employee (SSE)
- Any job assigned to outside personnel unfamiliar with the job/facility (can be Company or contractor crews)
- Any job that has an existing CPL Library JSA and has not been approved as a LR/RJ

Note: Exception to the above are those listed on the local Field Team Leader list of low risk routine jobs. Field Team leader should maintain a list of those activities that are low risk routine for their areas.

Each identified HR/NRJ must have a quality JSA conducted and documented prior to beginning the work. These are the basic steps for conducting the JSA:

1. Identify the job (see examples above).
2. Involve the person(s) doing the job and/or other knowledgeable person(s) as needed.
3. Outline or break down the job into steps (isolation, decommission, load, and launch).
4. Outline the hazards associated with each step (pressure, temp, slips, trips, falls, pinch points, etc.).
5. Implement/take actions to eliminate and/or mitigate the identified hazards.

Individuals/teams performing HR/NRJs must:

- Assure the JSA is performed at the job site prior to beginning the job (see library JSAs below).
- Review the JSA on site with all affected personnel.
- Address any changes identified during the course of the job and take appropriate action.
- Use available hazards recognition tools to perform the JSA.
- Document the Job Safety Analysis on a blank CPL JSA form or an updated CPL Library JSA form.

NOTE: If at any time the normal scope of the job or conditions change, the work will be stopped and the analysis will be updated to include the change.
6.0 Roles and Responsibilities

6.1 CPL Employee(s)

The CPL Employee(s) is responsible for:

- Completing JSA and other associated hazard identification training as required.
- Conducting a quality JSA prior to beginning work.
- **Documenting** the JSA when required.
- Submitting the JSA form to the Safety Specialist after completing the job.
- Identifying LR/RJs in their work area when required.

6.2 CPL Safety Specialist

The CPL Safety Specialist is responsible for:

- Providing area JSA and other hazard identification training.
- Assessing JSA content and effectiveness during Safe Work Practice Field Reviews.
- Communicating recommendations for improvement to the process and training to the Area Operations Supervisor.
- Maintaining all documented CPL JSAs submitted in their assigned area.

6.3 CPL Field Team Leader

The CPL Field Team Leader is responsible for:

- Supporting the implementation and execution of the JSA procedure in their assigned area.
- Communicating results and recommendations of the Safe Work Practice Field Reviews to their team.
- Reviewing and approving LR/RJ classifications for their assigned area.
- Reviewing and approving any JSA recommendations (new and/or revisions) for inclusion into the JSA library.

7.0 Reporting Requirements

None
8.0 Documentation and Records Retention

8.1 Required Documentation for HR/NRJ JSAs

- A blank CPL JSA form will be used by Chevron employees for all HR/NRJs that do not currently have a pre-existing library JSA.

- Every HR/NRJ JSA (new or library) must contain the following information:
  - Job name and date
  - Job site
  - Company name(s) involved in the job
  - Emergency contact names and numbers of the CPL and contract Company representatives
  - Sequence of job steps
  - Potential hazards with each step
  - Recommended actions to address each hazard
  - Agreed Stop-the-Job triggers
  - Review and signatures of all persons involved in the job

  **NOTE:** Every CPL team that has created and maintains library JSAs should review the jobs associated with those JSAs to determine if they should continue to be treated as HR/NRJs or reclassify those jobs as LR/RJs.

All new and/or updated library HR/NRJ JSAs must be submitted to the Safety Specialist as per the quality review requirements in this procedure. The Safety Specialist and/or Field Team Leader will review all new or revised JSAs before they are entered into the JSA library. Once approved, the new or revised JSA will be included in the online library at the direction of the Field Team Leader.

8.2 Document Storage and Retention Time

All **documented** CPL JSAs (new and library) used to safely complete HR/NRJs must be collected at the area field office as designated by local management.

At the conclusion of the job:
  - JSA records will be attached to any permits issued for the work.
  - JSA records and permits will be submitted to the Safety Specialist and maintained in a designated file for a period of no less than two years.
  - JSA records will be reviewed and analyzed at least a quarterly by the Safety Specialist.
  - Lessons learned and recommendations for continual improvement from the quarterly review must be submitted to the Field Team Leader and Operations Supervisor for the purpose of sharing with their teams.
  - All contractor JSA reviews will be addressed through the CHESM program.

As described in this procedure, the CPL JSA process must be followed systematically prior to conducting any job. In order to facilitate and improve the use of this process, training will be provided to all employees of Chevron Pipe Line Company that are
required to use this process. The training will be developed, scheduled, and conducted by the HES Training Staff.

8.3 Document Control Information

<table>
<thead>
<tr>
<th>Description</th>
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<tbody>
<tr>
<td>Approval Date</td>
<td>28 March 2007</td>
</tr>
<tr>
<td>Next Revision Due</td>
<td>Every 3 years</td>
</tr>
<tr>
<td>Control Number</td>
<td></td>
</tr>
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</table>

Document History

<table>
<thead>
<tr>
<th>Date</th>
<th>Notes related to changes</th>
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<tr>
<td>5/09</td>
<td>Process Overview (JSA Flowchart), Hazard Recognition to Hazard Identification</td>
</tr>
<tr>
<td>10/09</td>
<td>Replaced OEC with Area Safety Specialist</td>
</tr>
<tr>
<td>9/10</td>
<td>Revised Roles and Responsibilities to reflect sunsetting quarterly permit reviews replaced by SWP Field Reviews; changed CSM to CHESM; corrected job titles.</td>
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9.0 Document List

This is a complete list of the documents referenced in this process.

Document List

<table>
<thead>
<tr>
<th>Documents</th>
<th>Retention and Storage</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPL – 208 Job Safety Analysis Form is used to document this procedure.</td>
<td>Job Safety Analysis Records will be submitted to the Safety Specialist and maintained in a designated file and must be kept for a period of no less than two years at the appropriate office.</td>
</tr>
</tbody>
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# Appendix A – Glossary

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
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<tbody>
<tr>
<td>Contractor</td>
<td>A person who agrees to furnish materials or perform services at a specified price for construction. The person performing the work.</td>
</tr>
<tr>
<td>Contractor Health Environment &amp; Safety Management (CHESM)</td>
<td>A comprehensive process to assure CPL Contractors meet all requirements and expectations, as per OE Element #6: Third Party Services.</td>
</tr>
<tr>
<td>Employee(s) (EEs)</td>
<td>CPL employees</td>
</tr>
<tr>
<td>High Risk/Non-Routine Job (HR/NRJ)</td>
<td>Jobs in CPL that are considered to have a high risk of injury or incident and/or conducted on a non-routine basis. All HR/NRJs require a new documented JSA or a refreshed library JSA.</td>
</tr>
<tr>
<td>Incident Free Operations (IFO)</td>
<td>A term used to reference systematic thinking of overall operations and project execution without incidents.</td>
</tr>
<tr>
<td>Job Safety Analysis (JSA)</td>
<td>A tool used to identify and mitigate/eliminate hazards associated with each step of a job. When used correctly, it will result in reduced injuries and incidents. It should provide a common understanding to help everyone plan to do the job safely. It also can be used as an effective tool for training all (new and experienced) employees.</td>
</tr>
<tr>
<td>JSA Library</td>
<td>Online database for approving, retaining, and submitting JSAs</td>
</tr>
<tr>
<td>Low Risk/Routine Job (LR/RJ)</td>
<td>Jobs in CPL that are considered to have a low risk of injury or incident and tend to be performed routinely. These jobs are not required to be documented on the CPL JSA form. The work teams should identify the jobs in their area that meet this definition. These jobs should be reviewed by the people doing the job and then submitted to the Area Supervisor for approval as an LR/RJ. The area list of LR/RJs should be maintained in the area files by the Area Safety Specialist.</td>
</tr>
<tr>
<td>Safety Pressure Valve (PSV)</td>
<td>An overpressure protection device</td>
</tr>
<tr>
<td>Safety Pressure Valve (PSV)</td>
<td>An overpressure protection device</td>
</tr>
</tbody>
</table>
Short Service Employee (SSE) | A CPL Employee with less than six months in the same job or with company, identified with an orange high visibility hard hat.
---|---
Simultaneous Operations (SimOps) | A facility or location where multiple work elements are taking place at the same time that may or may not impact each other.
Think Incident Free (TIF) | A person who agrees to furnish materials or perform services at a specified price for construction. The person performing the work

Appendix B - JSA form

Job Safety Analysis

<table>
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<tr>
<th>Sequence of Key Job Steps</th>
<th>Potential Hazard(s)</th>
<th>Recommended Action</th>
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In case of an incident, the following people will be contacted:

- CPL Rep:
- Ph #:
- Contr. Rep:
- Ph #:
- Other:
- Ph #:

Hazard Identification Tools

- Dangers
- Machinery
- Protective Equipment
- Personal Protective Equipment
- Lighting
- Filters
- Radiation
- Chemicals
- Noise
- Vibration
- Heat
- Cold

What conditions, job changes or distraction will trigger the use of Stop Work Authority on the job?

Participants (signatures required by all affected personnel)

- Name 1
- Name 2
- Name 3
Appendix C – Think Incident Free (TIF) Form

Appendix D – Hazard Identification Tool