Job Safety Analysis
February 2013 Safety Meeting
Job Safety Analysis

• A job safety analysis, JSA, is a process of systematically identifying workplace hazards by breaking down a particular job into a series of relatively simple steps, so that hazards and risks can be eliminated before accidents occur.
• JSAs focus on the relationship between the worker, the tools and the work environment.
Job Safety Analyses

Also known as

• Job hazard analysis (JHA)
• Job safety environmental analysis (JSEA)
Job Safety Analysis

- JSAs separate a job into basic steps
- Each step is analyzed to identify potential and actual hazards
- Once all hazards associated with the step are identified, safe job procedures must be developed
Job Safety Analysis

• Conducted on many jobs in the workplace
• Priority should go to the following types of jobs
  – Highest injury or illness rates
  – Potential to cause severe injuries or illness
  – Where human error could lead to a severe accident or injury
  – New to the operation or have undergone changes
  – Complex enough to require written instructions
Job Safety Analysis

JSAs are required to
• Analyze job specific hazards
• Prevent workplace injuries and illnesses
• Improve job planning
• Establish proper job procedures
• Help workers recognized potential hazards
• Assure good communication
• Commit to safety and health
Job Safety Analysis

JSA training

• It is important to be trained on your company’s JSA process
• Ensures accuracy
• Be compliant with company specific JSA forms
Job Safety Analysis

JSA

• Completed prior to work
• Workers must participate, discuss, provide input and attend safety meetings
• If changes or existing hazards are found, the JSA has to be updated
• Must be signed by supervisor
• Review JSA in accordance with company policy
Job Safety Analysis

JSEAs

• Required by many operators in oil and gas industry
• Prevent environmental incident, discharge or violation
• Adds environmental concerns into the formula
  – Wind
  – Weather
  – Outside conditions
Job Safety Analysis

JSEAs may address
• Waste processing
• Chemicals, oil and diesel on the jobsite
• Access routes and traffic management
• Wildlife and vegetation
• Noise and vibration
• Flooding and hydrology
• Air quality
• Wind speeds
• Archaeological considerations
Job Safety Analysis

There are many advantages to JSAs

- Communication tool
- Involves everyone in the job
- Aids in training new workers
- Maintains safety awareness
- Used as a tool for accident investigations
- Determines what actions will help eliminate, control or minimize hazards
Performing a JSA

Steps to complete a JSA are
1. Identify the job for analysis
2. Break down the job into basic steps
3. Identify hazards and potential accident causes
4. Develop solutions for each hazard
5. Review and buy-in
6. Modify JSA if conditions change
Identify the Job for Analysis

• Break a large job into smaller tasks
• Described in 8 or fewer steps
• Performed in one day or less
• Ask questions
  – What can go wrong?
  – What are the consequences?
  – How could it arise?
  – What are other contributing factors?
  – How likely is it that the hazard will occur?
Break Down into Basic Steps

• Describe the job in sequential order
• Record them on the JSA form
• Use action words
• Include pre-job preparations
• Include post-job requirements
• Review with experienced workers
Identify Hazards and Potential Accident Causes

- Review each step for potential hazards
  - Safety or environmental
- Describe the hazards
  - Undesired result + hazard
- Record all hazards
Develop Solutions

• Develop solutions for each hazard
• Solutions must be observable acts
  – Find new way to do job
  – Change the physical condition
  – Modify the procedure
  – Use proper
    ◦ Safety equipment
    ◦ Safe work practices
  – Reduce the task frequency
• Record required safety equipment and PPE on JSA
• Record solutions on the form
Review and Buy-in

- All workers on the job must review, agree and sign
- Meet customer JSA review and approval requirements
- Begin work when JSA is signed by all
- The job is to be conducted as described on the JSA or it must be modified
Modify JSA if Conditions Change

• The job must be suspended and the JSA reviewed if conditions change

• Before work can resume
  – JSA modified to reflect changes
  – Changes communicated to all involved
  – Workers sign off on modified JSA
Controlling Hazards

Main ways to control hazards

• Engineering controls
• Administrative controls
• Personal protective equipment
Engineering Controls

• Tend to be more effective than administrative controls and PPE
• Remove the hazard by applying methods
  – Elimination
  – Substitution
  – Isolation
  – Ventilation
Administrative Controls

- Important component to effective hazard control
- Focuses on reducing worker exposure
- Reduce hazards through
  - Training
  - Planning and scheduling
  - Information and training
  - Policies and procedures
  - Safe work practices
  - Environmental and medical surveillance
  - Rules
Personal Protective Equipment

- Any barrier worn on the body to reduce or control a hazard
- Determined by specific job and specific potential hazards
- Required when hazards cannot be controlled through engineering or administrative controls
- PPE is the last resort