



JOB SAFETY ANALYSIS (JSA) PROGRAM

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1 Purpose

The purpose of the Job Safety Analysis (JSA) Program is to provide guidance on JSAs including why they are needed, who needs to be involved in the process and how to write an effective JSA. In general, JSAs help integrate EMWD safety policies and procedures into a particular task or job by outlining the basic steps to perform the work, identifying hazards at each step, and creating controls to keep workers safe while performing the task or job. The use of JSAs helps prevent accidents and workplace illnesses by improving employee skills and awareness through an organized process.

JSA's for hazardous tasks shall be written by the employees who perform the work. If the department is establishing procedures for a new task or new equipment the manager, supervisor or lead may write the initial JSA with input from the employees performing the task. The manufacturer's instruction manual or other resources shall be consulted when creating the JSA.

2 Definitions

Activities – components of a person's job that may be divided into individual steps or tasks.

Control Measures – are used to eliminate or minimize job/task hazards. There are five types of control measures, listed here in the order of their level of effectiveness and referred to as the hierarchy of controls.

- Elimination – removes the hazard altogether; find a new way to perform the task
- Substitution – replacing the hazard with a non-hazardous or less-hazardous option. If a new way cannot be developed, change the physical conditions (such as tools, materials, equipment, layout or location)
- Engineering Controls – eliminate or reduce exposure to a chemical or physical hazard through the use of engineered machinery or equipment
- Administrative Controls – changes in work procedures such as written safety policies, rules, supervision, schedules and training with the goal of reducing the duration, frequency and severity of exposure to hazards
- Personal Protective Equipment (PPE) – equipment worn to minimize exposure to hazards that can cause workplace injuries or illnesses

Hazards – conditions or activities, if left uncontrolled, may result in injuries or illnesses including.

Chemical Hazards Chemical and toxic substances pose a wide range of health hazards (such as irritation, sensitization, and carcinogenicity) and physical hazards (such as flammability, corrosion, and explosibility).

Physical Hazards A physical hazard is an agent, factor or circumstance that can cause harm with contact.

Health Hazards chemical, physical or biological factors in our environment that can have negative impacts on our short- or long-term health.

Radiological Hazards uncontrolled release of radioactive material that can harm people or damage the environment.

Job Safety Analysis (JSA) – a process that focuses on job tasks to identify hazards before they result in injury. It focuses on the relationship between the worker, the task, the tools and equipment and the environment and it identifies control measures to reduce or eliminate hazards.

Steps or Tasks – individual components of an activity listed on a JSA that are analyzed for hazards, control measures and training requirements.

3 How to Write a JSA

3.1 SOP v. JSA

Before writing a JSA, determine whether what is needed is a JSA or an SOP.

An SOP is used to create a consistent systematic approach to a task where a JSA is utilized to provide step by step instruction on how to perform a task, identify the hazard associated with that task and provide control measures to eliminate the task. An SOP does not also require a JSA and vice versa. Only one is needed. Generally, if there are hazards that need to be eliminated, write a JSA.

3.2 Getting Started

- Involve your employees in the process. Involving employees helps minimize oversights, ensures quality analysis, and helps get employees “buy in” to the solutions.
- Review accident history and/or near misses with staff. Those events are indicators that the existing hazard controls may not be adequate.

- Conduct a preliminary job review and discuss the hazards with employees. Then brainstorm with them for ideas on how to eliminate or control the hazards.

If any hazards exist that pose an immediate danger to employees' life or health, take immediate action to protect the workers.

- Photograph the steps and include those as part of the JSA to ensure the steps and controls are understood.

3.3 Select a Job or Activity for Analysis

3.3.1 A JSA may be written for many jobs within the workplace. Priority should go to the following type of jobs:

- Jobs with the highest rate of injury, illness or frequency
- High-risk jobs with the potential to cause severe injury or illness
- Highly hazardous jobs that are performed infrequently
- Jobs where one error could lead to a severe accident
- New jobs
- Jobs with changes to equipment, process or procedure
- Jobs with complex procedures requiring written instructions

3.4 Break the Job/Activity into Steps or Tasks

3.4.1 Observe the job or activity being performed and document the individual steps or tasks completed.

- List each step/task sequentially to document which task comes first, second and so on
- Document potential hazards for each step
- Review the steps with employees and get their input on hazard controls
- Address any dangerous hazards immediately
- Consult the manufacturer's instruction manual or other resources when completing the JSA

TIP: Avoid these two common errors:

1. Making the breakdown too detailed, resulting in a large number of steps
2. Making the breakdown too general so that the steps are not distinguishable

A JSA should contain no more than 10-12 steps. If more steps are needed, the job should be broken into separate tasks.

3.5 Identify Hazards

3.5.1 When identifying hazards, look for things that could go wrong and any unsafe behaviors or unsafe conditions that may exist or might occur. Some samples of things to consider:

- Is there a danger of striking against, being struck by or otherwise making contact with an object or moving part?
- Can an employee be caught in, by or between objects?
- Is there a potential for slip and fall?
- Can someone fall to the same level or to another level?
- Can an employee strain themselves by pushing, pulling, lifting, bending or twisting?
- Do the tools, machines or equipment present potential hazards?
- Is there exposure to extreme heat or cold?
- Are there loud noises or vibration?
- What potentially harmful substances or electrical hazards are involved?
- Is lighting a problem?
- Are there dust, fumes, mist or vapors in the air?
- Is the chemical hazardous? Refer to the Safety Data Sheet (SDS) for specific information about the chemical(s) being used.

3.6 Identify Control Measures

3.6.1 Using the hierarchy of controls (Elimination, Substitution, Engineering Controls, Administrative Controls and PPE), develop a safe, efficient job procedure to prevent accidents. Try to implement in the order listed with PPE as the last line of defense. Unless a hazard is eliminated, more than one type of control measure may be necessary.

3.6.2 Discuss the recommendations with employees who perform the job and consider their input in the process.

3.6.3 If a new or modified procedure is introduced, ensure that employees understand the reasons for the change and what they are required to do.

TIP: In developing solutions, general precautions such as, “be alert”, “use caution” or “be careful”, are ineffective. Solutions shall precisely state what is to be done.

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Example: Instead of, “Make certain the wrench does not slip or cause loss of balance.”

Replace with: “Set wrench jaws securely on bolt. Test its grip by exerting slight pressure on it. Brace yourself against something immovable or take a solid stance with feet apart before exerting slow steady pressure.”

3.7 Complete the JSA Form




3.7.1 EMWD uses JSA Builder for all JSAs. JSA Builder may be accessed on the Safety page of the Pipeline. Once the analysis is complete, access JSA Builder and create or modify the JSA.

3.7.2 The JSA title should be the department number and then the task

Examples: 895 – Biofilter Sump Pump Removal
854 – Paint Booth Operation

3.7.3 Review each step identified during the analysis above and list any hazards and the controls for the hazards.

3.7.4 Photos shall be included for each step of the task to allow employees to visualize the appropriate approach to each step. This will also make the JSA easier to understand and provides employees with a reference at a quick glance.

Task/Step	Potential Hazards	Recommended Safe Job Procedures	Score
<p>2. Notify Central Control over the radio stating 10-7 and the facility name. Unlock the gates with the district provided field master key and enter the facility. *NOTE* if at the Moreno Valley TGB #1293 wave your employee badge over the card reader enter the gates and then sign in at the main office.</p>	<p>1. See Potential Hazards Listed</p>	<p>Enter the facilities with caution. Abide all posted signs and be aware of potential hazards.</p>	<p>0</p>
<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>Cradle Point power supply cable and internet cable</p> </div> <div style="text-align: center;">  <p>Cradle point power indicator lights</p> </div> <div style="text-align: center;">  <p>TGB# 40515 cabinet at Daily 2 Tank</p> </div> </div>			
<p>3. Reboot the cradle point at TGB cabinet.</p>	<p>1. See Potential Hazards Listed</p>	<p>Inspect the condition of the TGB cabinet and be aware of insects and rodents. Unlock and open the TGB cabinet door cautiously. Inspect the battery for corrosion and be aware of the potential for the presence of battery acid. Reset the cradle point by first turning off the power switch and secondly unplugging the power supply cable from the cradle point. After waiting 1 minute, plug in the power supply and then turn the cradle point on. Confirm the cradle point has power by observing the power indicator lights on the back of the cradle point. Close and lock the cabinet door securely.</p> <p>1. *NOTE* 2402 master locks and field master keys are used at the TGB cabinet doors.</p> <p>2. *NOTE* Tech needs a UB key to access the cradle point unit in the communications room at the Soboba Tank TGB. The Meter Services Supervisor will issue the key when required.</p>	<p>0</p>

3.7.5 Once complete, the JSA is to be reviewed by employees and the manager and/or supervisor

3.7.6 Upon creation of new or significant revision/modification to existing JSAs, input or guidance from Safety, Risk and Emergency Management (SREM) must be included before the JSA is approved

3.8 Training on JSAs

3.8.1 All new employees shall be trained on existing JSAs.

3.8.2 Employees asked to perform new tasks must be trained to use the safe and efficient procedures developed in the JSA.

3.8.3 Annual training on all completed/existing JSAs shall be conducted by the department, that review shall be documented, and those records kept for three years. Save the documentation to: J:\Share\Dept Safety Documentation

3.7.4 Jobs that are performed infrequently require additional instruction and coaching to minimize accident potential.

3.9 Annual Reviews

3.9.1 All JSAs shall be reviewed annually and after an accident or injury. When conducting the review, follow the steps below:

- Open the JSA
- Click “modify”
- Review and make changes as necessary
- Once complete, review the JSA with department and document the review

TIP: Consider conducting this review during regularly scheduled department meetings

3.9.2 Think of the JSA as a living document – one that needs to be reviewed and updated periodically. Ask the following questions:

- Are employees following the JSA? If not, why? Is additional training needed?
- Are there new hazards that were not identified in the initial JSA?
- Do the hazard controls need to be changed or updated?

4 Responsibilities

Employees Shall:

- Assist in the development of JSAs
- Notify supervisor/manager if there is a change in job procedures or equipment
- Complete any necessary training and review JSAs before performing work/tasks
- Observe all safety rules, processes and procedures

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- Immediately report unsafe or unhealthy work conditions, incidents or accidents

Managers/Supervisors Shall:

- Determine which tasks require JSAs
- Review and approve JSAs created by departmental staff
- Ensure all employees within the department have reviewed the JSAs and that they have received any required training to perform the tasks
- Conduct annual reviews of all JSAs and ensure that proper documentation of the annual review is maintained for a minimum of three years
- When an incident or accident occurs, perform an analysis of any applicable JSAs to determine if proper procedures were followed; revise the JSA as needed and provide training as required.
- Ensure all employees have access to the JSAs and that employees review the JSAs during onboarding and before performing tasks; encourage employees to provide input on the JSAs including any recommended changes or updates.

SREM Shall:

- Provide training on JSAs
- Work with management and employees to ensure consistent and effective implementation of the JSA program
- Review JSAs post-accident and provide coaching and guidance on modifications
- Provide input/guidance on all new or significantly revised JSAs