

EH&S JOB SAFETY ANALYSIS

TABLE OF CONTENTS

<u>Section</u>	<u>Page</u>
❖ PURPOSE	2
❖ SCOPE	2
❖ RESPONSIBILITIES	2
❖ PRECAUTIONS / LIMITATIONS	2
❖ PREREQUISITES / INITIAL CONDITIONS	2
❖ PROCEDURE	3
General.....	3
Prerequisites for Writing a Job Safety Analysis (JSA).....	3
Instructions for Writing a Job Safety Analysis (JSA).....	3
Use of the Job Safety Analysis (JSA).....	4
Revising of the JSA’s.....	5
❖ ACCEPTANCE / FUNCTIONAL CRITERIA	5
❖ RETENTION / RECORDS	5
❖ DEFINITIONS	5

ATTACHMENT

1 Examples of Hazards/Accidents/Injury Types.....	6
2 EH&S Job Safety Analysis (JSA) Form.....	7
3 EH&S Job Safety Analysis Example.....	8

EH&S JOB SAFETY ANALYSIS

PURPOSE

Job Safety Analysis (JSA) is a process used to review work methods and uncover hazards that might result in accidents/injuries. It provides a standard method to analyze hazards and prevention methods/barriers for a task. JSAs are applied primarily to potentially hazardous or hazardous operations.

SCOPE

This procedure defines the requirements for using Job Safety Analysis (JSA) at PCCD.

RESPONSIBILITIES

Managers and Supervisors are responsible for ensuring personnel participate in performing JSA's.

PRECAUTIONS / LIMITATIONS

Precautions

None

Limitations

None

PREREQUISITES / INITIAL CONDITIONS

Prerequisites

VERIFY this document is current by checking Palomar College website, Environmental Health & Safety section (Procedures) tab.

Initial Conditions

None

EH&S JOB SAFETY ANALYSIS

PROCEDURE

General

- A JSA should be performed for any industrial high risk activity that is not controlled by a standalone procedure
- A JSA **MAY BE** performed for any task or work activity

Prerequisites for Writing a Job Safety Analysis

PREPARE to write a JSA as follows: (See ATTACHMENT 3 – Form, and ATTACHMENT 5– Example.)

- Break the job down into successive steps or actions

<u>NOTE</u>

As a rule the JSA should contain less than 10 steps. If more steps are needed, the job should be broken into separate tasks and separate JSA's.

- **REVIEW** the work order scope/procedure/job description for the sequence of steps and expected outcomes with the person(s) performing the JSA
- **SOLICIT** feedback from group discussions with employees/contractors familiar with the job
- **WALK DOWN** the job or use pictures or videotape of the job, if available
- **CONTACT** Environmental Health & Safety (EH&S) with any questions or help needed in filling out a JSA

Instructions for Writing JSAs

- **IDENTIFY** the sequence of basic job steps before analyzing each step for hazards, accidents and prevention method/barriers
- **LIST** potential accidents/hazards associated with each step. (See ATTACHMENT 1)
- **LIST** prevention methods/barriers to prevent injury for each of the potential accident/hazards identified

EH&S JOB SAFETY ANALYSIS

DEVELOP safe methods to eliminate or lessen the hazards and prevent potential accidents. The order of preference and effectiveness of hazard control is:

- Engineering Controls – eliminate or minimization of the hazard through enclosures, ventilation, product substitution, guardrails, shield walls, etc.;
- Administrative Controls – monitoring programs, alarms and warning signs, training, change in the work practice through written rules/procedures; scheduling supervision to reduce duration, frequency and severity to hazardous environments or situations (i.e., noise control, health hazards, repetitive motion, heat stress, etc.)
- Additional PPE – chemical suit, personal fall protection, etc.

CONSIDER the following:

- Equipment modifications to change physical conditions
- Work process changes and or procedural changes
- Use of protective barriers, postings, and hazard warnings
- Special personal protective equipment (PPE) needed

IDENTIFY any special equipment/tools to be used.

LIST any inspection requirements for the special equipment or tools.

IDENTIFY any training or competency requirements to do the work.

IDENTIFY who will be responsible for the work.

APPROVE the JSA and forward to EH&S for posting on the EH&S web portal.

Use of the Job Safety Analysis

- **REVIEW** the JSA with employees and solicit their feedback.
- **ENSURE** all Task steps and hazards are identified.
- **ENSURE** mitigation is able to be accomplished.
- **ENSURE** mitigation is implemented.
- **INCLUDE** JSAs in Pre-Job Briefs

EH&S JOB SAFETY ANALYSIS

Revising JSAs

- **REVISE** JSAs when conditions or work processes change during performance of the work, the scope of work changes, or lessons are learned after conducting the work.
- **REVIEW** the JSA during the Post-Job De-brief to determine if the JSA requires modification to be prepared for future work

NOTE

1. The JSA provides a learning opportunity for the supervisor and employees. They should be distributed to all employees who perform that job. Supervisors should review the analysis with the employees, get feedback, and provide additional training if needed.
2. New employees, or employees asked to perform new tasks, may require training to use the safe and efficient methods developed in the JSA. Employees should be trained in the correct method to perform a task, to recognize the hazards associated with each step, and to use the necessary precautions to avoid injury or accidents.
3. Pre-job Briefs should address the points listed on the JSA to serve as a refresher to employees who may have forgotten some of the hazards in performing the task and the proper methods to be used to avoid these hazards.
4. Finally, the JSA is an incident/accident investigation tool. When incidents/accidents occur involving a job for which a JSA has been performed, the accident analysis should be reviewed to determine if proper methods were followed or if the safe work methods should be revised.

ACCEPTANCE / FUNCTIONAL CRITERIA

Acceptance Criteria

None

Functional Criteria

None

RETENTION / RECORDS

- For all work done under a work order, **MAINTAIN** a copy of the JSA in the work package.

DEFINITIONS

None

EH&S JOB SAFETY ANALYSIS

EXAMPLES OF HAZARDS/ACCIDENTS/INJURY TYPES

(See more detailed examples in Attachment 2. Use these descriptions to fill in the “Potential Accidents/Hazards” column on the JSA Form.

- Struck Against Object or Equipment
- Struck by Object or Equipment including Foreign Body – Eye
- Caught in or Compressed by Equipment or Objects
- Caught in or Crushed by Objects or Equipment
- Rubbed or Abraded by Friction or Pressure
- Rubbed or Abraded by Vibration
- Falls to a Lower Level
- Falls on the Same Level
- Bodily Reaction, i.e., Climbing, Crawling, Slip
- Overexertion / Strain / Sprain
- Repetitive Motion
- Electric Current Contact
- Exposure to Temperature Extremes / Heat Stress
- Exposure to Air Pressure Changes
- Exposure to Burn – Acid / Chemicals / Caustics
- Exposure to Noise
- Exposure to Oxygen Deficiency / Dusts / Gases / Fumes / Vapors
- Non-highway Equipment Accident
- Pedestrian / Non-passenger Accident
- Fire / Explosion
- Assaults by Animals / Insects

EH&S JOB SAFETY ANALYSIS

EH&S JOB SAFETY ANALYSIS (JSA) FORM

Note
 This form is available on the EH&S web portal.

JSA #:	PCCD JOB SAFETY ANALYSIS	REV #:	
DATE:	WORK ORDER NUMBER:	JOB BEING ANALYZED/LOCATION:	
WORK GROUP(S) PERFORMING JOB:	ANALYSIS PERFORMED BY:	APPROVED – SUPERVISOR:	
	DATE:	DATE:	
PPE REQUIREMENTS:			
SEQUENCE OF BASIC JOB STEPS	POTENTIAL ACCIDENTS/HAZARDS	PREVENTION METHODS/BARRIERS	RESPONSIBILITIES
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
SPECIAL EQUIPMENT/TOOLS TO BE USED	INSPECTION REQUIREMENTS	TRAINING/COMPENTENCY REQUIREMENTS	
Forward completed JSA to PCCD EH&S			

EH&S JOB SAFETY ANALYSIS

EH&S JOB SAFETY ANALYSIS EXAMPLE

JSA #:	PCCD JOB SAFETY ANALYSIS		REV #:
DATE: 12/01/2013	WORK ORDER NUMBER: 13-00000	JOB BEING ANALYZED/LOCATION: Water Pipe Replacement/ Bldg. A- Side walk Area	
WORK GROUP(S) PERFORMING JOB: Facilities Plumbers, HVAC, Maintenance Tech., Carpenters	ANALYSIS PERFORMED BY: James Dean	APPROVED – SUPERVISOR: Elvis Presley	
	DATE: 12-01-2013	DATE: 12/01/2013	
PPE REQUIREMENTS: Proper Hand Protection for task/approved protective footwear/Safety Glasses, Safety Goggles, Face Shields (Hard Hat & Hearing protection as necessary).			
SEQUENCE OF BASIC JOB STEPS	POTENTIAL ACCIDENTS/HAZARDS	PREVENTION METHODS/BARRIERS	RESPONSIBILITIES
1. Equipment Staging & Set-Up (Mobilize)	A) Heat Stress B) Struck By C) Noise	A) Refer to EH&S Procedure PCCD-I-1; Work rate guidelines & drink water B) Use spotters, secure loose tools C) Hearing Protection	Facilities Plumbers, HVAC, Maintenance Tech., Carpenters
2. Dig trench and install shoring if necessary	A) Falls B) Heat Stress C) Cave-ins D) Noise	A) Be aware of tripping hazards & open holes B) Same as 1.A C) Use shoring if trench is ≥5 feet deep or if trench is <5 feet consult with supervisor to see if shoring is needed D) Same as 1.C	Facilities Plumbers, HVAC, Maintenance Tech., Carpenters
3. Fine Leaks	A) Water Pressure B) Sprayed by sand C) Slip, Trips & falls D) Cuts E) Back Injury	A) Safety Goggles & Face Shield B) Same as 3.A C) Be aware of surroundings D) Hand Protection E) Use proper material handling and tools/equipment for task	Facilities Plumbers, HVAC, Maintenance Tech., Carpenters
4. Order Materials for repair	A) None (If wrong parts are purchased can cause a delay in job)	A) Verify correct parts prior to placing order	Supervisor, Building Services
5. Repair damaged pipe	A) Back Injury B) Struck By C) Cuts D) Pinch Points	A) Same as 3.E B) Same as 1.B C) Same as 3.D D) Avoid placing hands and or body between movable objects whenever possible	Facilities Plumbers, HVAC, Maintenance Tech., Carpenters
6. Rigging	A) Falls B) Struck By C) Struck By Falling Objects D) Noise	A) Same as 2.A B) Same as 1.B C) Same as 1.B D) Same as 1.C	Facilities Plumbers, HVAC, Maintenance Tech., Carpenters
SPECIAL EQUIPMENT/TOOLS TO BE USED	INSPECTION REQUIREMENTS	TRAINING/COMPENTENCY REQUIREMENTS	
O2 Monitor	Calibrate Meter	O2 Monitor Trained	
Shoring Equipment, Metal Plates or Plywood & Rigging Equipment	Inspect equipment for defects	Shoring & Trenching/Rigging Trained	
Tarps & Barrier Tape	Inspect integrity of fabric	NONE	
Backhoe & Bobcat	Check Fluid Levels	Heavy Equipment	
Forward completed JSA to PCCD EH&S			

SUMMARY OF CHANGES

Author: Derrick Johnson Phone: x3677 Location: R-6

Date of Revision	Description of Change/Comments	Reviewer(s)	Step, Section, Attachment or Page
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Document Reviewers:	Name:
Supervisor, Environmental Health & Safety	Derrick Johnson
Technician, Environmental Health & Safety	Sean Heath
Supervisor, Building Services	Jeff Bennett
Approvers:	
Assistant Superintendent/Vice President of Finance & Administrative Services Final Approval:	
Director, Facilities Final Approval:	