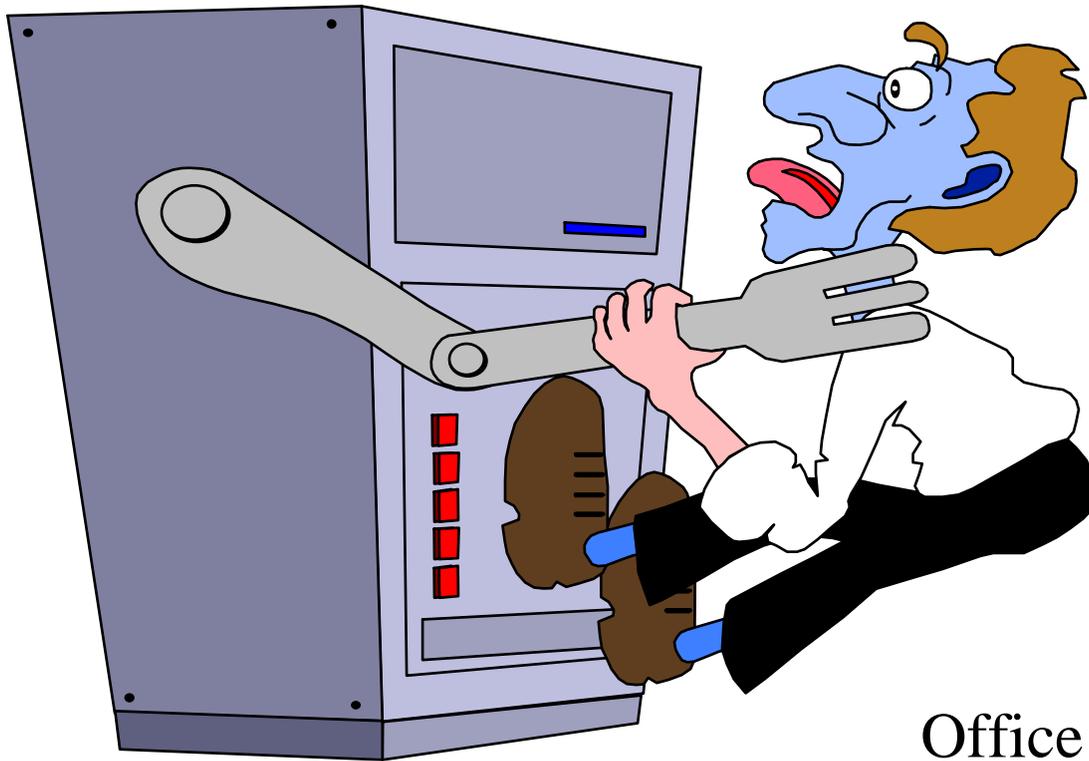


JOB SAFETY ANALYSIS

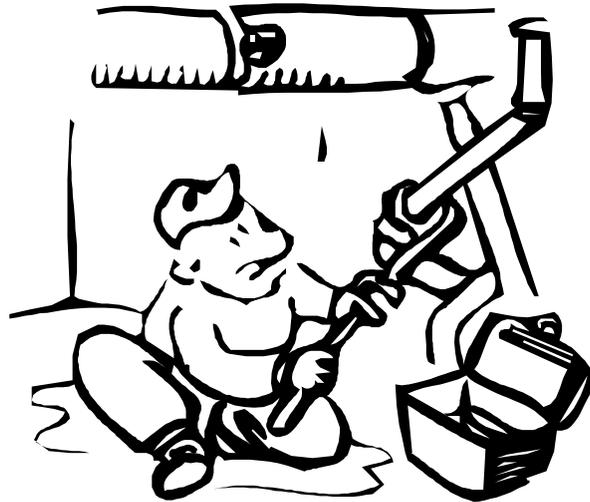
ACCIDENT PREVENTION



Office of General Services
Safety Support Unit

JOB SAFETY ANALYSIS PURPOSE

PREVENT ACCIDENTS BY
ELIMINATING OR CONTROLLING
ANTICIPATED HAZARDS



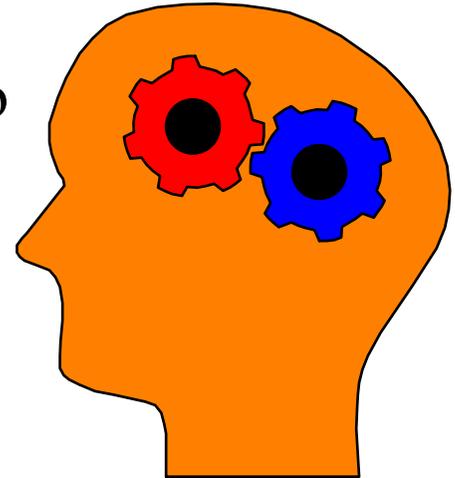
ULTIMATE GOAL - ZERO ACCIDENTS



JOB SAFETY ANALYSIS ADVANTAGES

IMPROVED:

- Safety Awareness
 - Know Rules Before Starting the Job
- Work Processes
 - Uses Worker Experience
 - Documented
 - Safe & Efficient
 - Recognition, Evaluation & Control Of Hazards



JOB SAFETY ANALYSIS

Four Basic Steps

- **SELECT A WORK PROCESS TO BE ANALYZED**
- **SEPARATE THE WORK PROCESS INTO BASIC STEPS**
- **IDENTIFY THE HAZARDS ASSOCIATED WITH EACH STEP**
- **ELIMINATE or CONTROL EACH HAZARD**



JOB SAFETY ANALYSIS

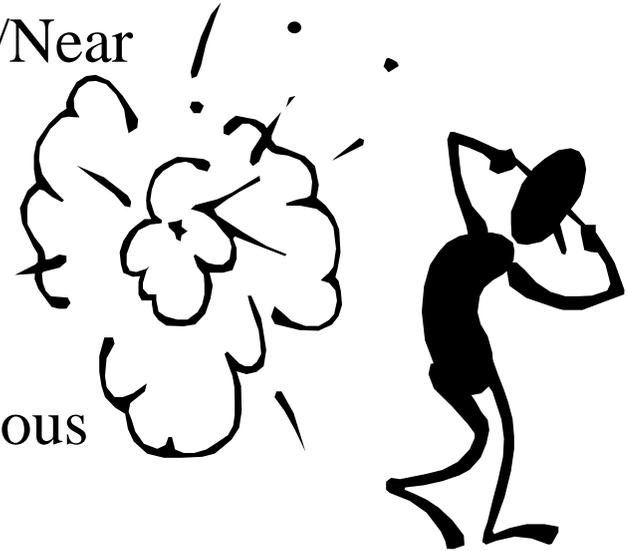
STEP 1 - SELECT A WORK PROCESS

- ACCIDENT FREQUENCY

- Job with Repeated Accidents/Near Misses

- ACCIDENT SEVERITY

- Probability of Fatality or Serious Injury



JOB SAFETY ANALYSIS

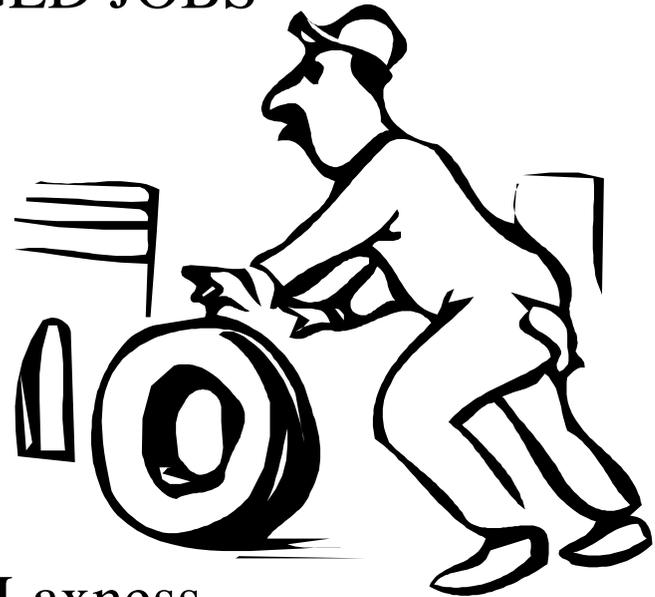
STEP 1 - SELECT A WORK PROCESS (cont.)

- NEW / NONROUTINE / CHANGED JOBS

- Never been Done
- Not Done Often
- Unknown Hazards

- ROUTINE JOBS

- Repeated Exposure Results in Laxness



JOB SAFETY ANALYSIS

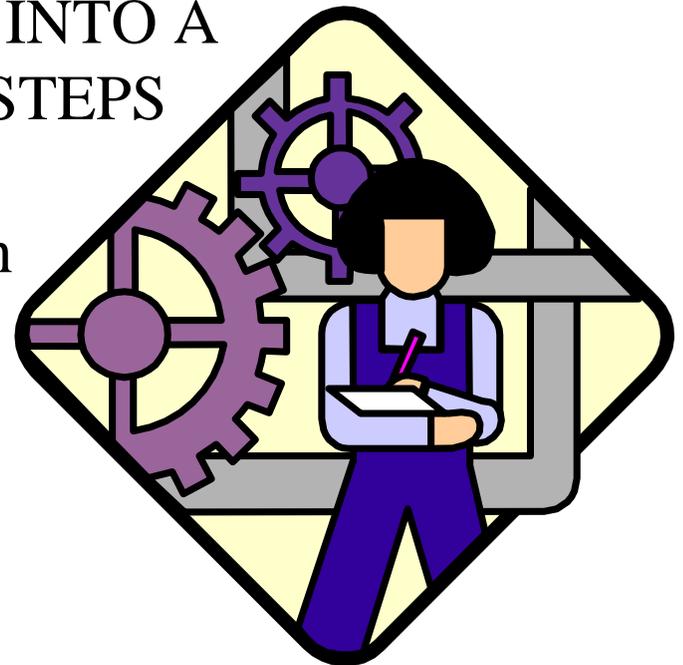
STEP 2 - SEPARATE THE WORK PROCESS INTO BASIC STEPS

- SEPARATE THE WORK PROCESS INTO A SERIES OF RELATIVELY SIMPLE STEPS

- Detail - Not Too Little / Too Much
- In Proper Sequence
 - Note if Order is CRITICAL

- VALIDATE THE STEPS

- Watch Different People



Job Safety Analysis Worksheet

Title of Job/Operation Front End Loader Date 8/20/96 No. _____
 Position/Title(s) of Person(s) Who Does Job _____ Name of Employee Observed J. Doe
Equip Opr II Analysis Made By A. Smith
 Department Horticulture
 Section Facilities Mgt Analysis Approved by _____

Sequence of Basic Job Steps	Potential Accidents or Hazards	Recommended Safe Job Procedures
1. Walk-Around Inspection		
2. Check Fluid Levels		
3. Operate		

Struck By (SB)
 Struck Against (SA)
 Contacted By (CB)
 Contact With (CW)

Caught On (CO)
 Caught In (CI)
 Caught Between (CBT)
 Fall to Same Level (FS)

Fall to Below (FB)
 Overexertion (OE)
 Exposure (E)

JOB SAFETY ANALYSIS

STEP 3 - IDENTIFY THE HAZARDS ASSOCIATED WITH EACH STEP

- LOOK AT WHAT COULD HAPPEN:

- When Equipment Used

- If Steps Not Done / Done Incorrectly /
Out Of Order / Short Cuts Used



Job Safety Analysis Worksheet

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	1b. CBT - Loader Bucket & Ground or Other Equipment	
	1c. FS - Uneven Walk Surfaces	
	1d. E- Weather	
2. Check Fluid Levels		
3. Operate		

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JOB SAFETY ANALYSIS

ACCIDENT TYPES

- STRUCK AGAINST (SA)- Can the Worker Strike Against Anything?

- Machinery
- Protruding Objects
- Sharp or Jagged Edges

- EXAMPLE: Employee Carries Container and Bangs a Hand on a Door Jamb

JOB SAFETY ANALYSIS

ACCIDENT TYPES

- **STRUCK BY (SB)** - Can the Worker Be Forcefully Struck by Something?
 - Anything that can Move and Strike the Worker
 - Unexpected but Possible Movement from Stationary Objects
 - Ladders
 - Tools
 - Containers
- **EXAMPLE:** An Access Panel Closes on Employee's Hand

JOB SAFETY ANALYSIS

ACCIDENT TYPES

- CONTACTED BY (CB) - Can Some Agent or Object Come Into Non-Forceful Contact With the Worker ?

- Chemicals
- Hot Fluids
- Fire
- Electrical Flashes
- Steam

- EXAMPLE: A Chemical Container develops a Leak and Gets on the Employee

JOB SAFETY ANALYSIS

ACCIDENT TYPES

- CONTACT WITH (CW) - Can the Worker Come in Contact with some Injurious Agent or Object?
 - Electrically Charged Equipment
 - Chemicals
- EXAMPLE: While Working on a Boiler, the Worker Rubs His Arm Against a Hot Pipe

JOB SAFETY ANALYSIS

ACCIDENT TYPES

- CAUGHT ON (CO)- Can some Part of the Worker or Their Clothing be Caught On some Projection and be Pulled Into an Injurious Contact?
- EXAMPLE: A Worker's Shirt Sleeve Gets Caught On a Lathe

JOB SAFETY ANALYSIS

ACCIDENT TYPES

- CAUGHT IN (CI) - Can the Worker or Some Part of the Worker's Body Get Caught In an Enclosure or Opening of Some Kind?
- EXAMPLE: A Worker Can't Remove His/Her Hand After Placing it Through a Small Access Panel

JOB SAFETY ANALYSIS

ACCIDENT TYPES

- CAUGHT BETWEEN (CBT) - Can the Worker or Some Part of the Worker's Body get Caught Between Two Moving Objects or a Moving Object and a Stationary Object and get Pinched?
- EXAMPLE: When Guiding a Truck in Backing, a Worker gets Caught Between the Loading Dock and the Truck

JOB SAFETY ANALYSIS

ACCIDENT TYPES

- FALL TO SAME LEVEL (FS) and FALL TO BELOW (FB)-
Can the Worker Slip or Trip and Fall?
- EXAMPLE (FS): An Employee Slips on an Icy Sidewalk and Falls.
- EXAMPLE (FB): A Worker Leans Too Far, Loses Balance and Falls Off of a Ladder

JOB SAFETY ANALYSIS

ACCIDENT TYPES

- OVEREXERTION (OE) - Can the Worker be Injured While Lifting, Pulling or Pushing, or due to an Awkward Body Position or Repetitive Tasks?
- EXAMPLE: A Worker Strained His/Her Back While Picking Up a Container

JOB SAFETY ANALYSIS

ACCIDENT TYPES

- EXPOSURE (E) - Can Environmental Conditions Injure the Worker?

- Noise
- Extreme Heat or Cold
- Poor Air
- Toxic Chemical Gases / Fumes

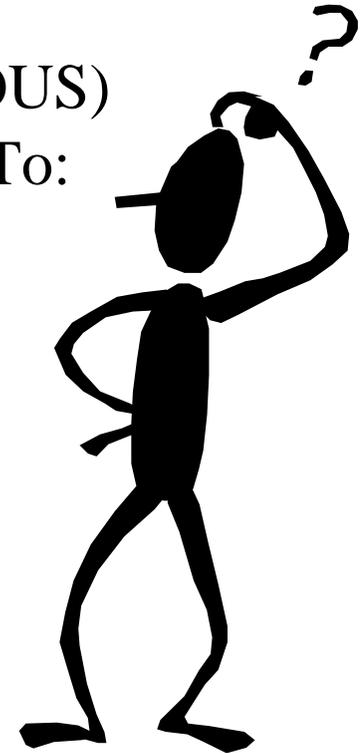
- EXAMPLE: While Doing Work on a Roof on a 98 Degree Day with 50 Percent Humidity, the Employee Gets Heat Stroke

JOB SAFETY ANALYSIS

STEP 4 - **ELIMINATE** or **CONTROL** EACH HAZARD

•IS THERE A BETTER (LESS HAZARDOUS)
WAY TO DO THE JOB? Look For Ways To:

- ELIMINATE Accidents / Hazards
 - Delete Unnecessary Steps
 - Engineering Design, i.e., Guard
- CONTROL Accidents / Hazards
 - Procedure, i.e., Lockout / Tagout
 - Use PPE



JOB SAFETY ANALYSIS

STEP 4 - ELIMINATE or CONTROL EACH HAZARD (cont.)

- ENGINEERING

- Change the Physical Conditions

- Ensure the Worker has the Right Tools, Equipment & Materials for the Job

- Advantages: Built-In Protection does Not Rely on the Worker

- Disadvantages: Takes Time to Plan and Implement, and is Costly

JOB SAFETY ANALYSIS

STEP 4 - Controlling Each Hazard (cont.)

- CHANGE JOB PROCEDURES - Combine, Add, Reorder and/or Delete Steps
- Advantages: Easy, Quick and Inexpensive to Implement
- Disadvantage: May Create New Hazards

JOB SAFETY ANALYSIS

STEP 4 - ELIMINATE or CONTROL EACH HAZARD (cont.)

- PERSONAL PROTECTIVE EQUIPMENT (PPE)
 - LAST RESORT
- Advantages: Moderate Cost and Fairly Easy to Implement
- Disadvantages: Totally Depends on the Worker's Willingness to Faithfully Use It

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JOB SAFETY ANALYSIS

SUMMARY

JSA is a Process Used to -

- Separate the Work Process into a Series of Relatively Simple Steps
- Determine Hazards and Safe Procedures for Each Step of a Work Process
- Develop Solutions to Control or Eliminate the Hazards Associated with Each Step of a Work Process
- Improve Safety Awareness Through Documentation of Work Processes
- Prevent Accidents
- Improve Job Efficiency

