

CPS ENERGY

EMPLOYEE & PUBLIC SAFETY

ZERO  SM
HARM
THROUGH SAFETY

June 1, 2016





CPS ENERGY SAFETY POLICY

- The health and safety of our employees and everyone else affected by our activities is fundamental to the success of our business. At CPS Energy, we believe that our long term success as a business is dependent upon the ability to keep our workforce and members of the public safe. Nothing that we do is so important that it cannot be done safely. Our policy is to create an environment in which no one is harmed. All Management should embrace safety at the highest level and exude a passion for continuous improvement and cascade that message throughout their organizations. Our relationships with our business partners and Union members are foremost to our sustainable success going forward. We will achieve this only by:

Setting the highest standards of care for all of our employees and business partners to go home at the end of each work day just as they start each work day will we achieve our vision.



CONTRACTOR PASSPORT PROGRAM

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PASSPORT OBJECTIVES

- Clearly state the CPS Energy expectations regarding all companies or persons performing work on our property, job sites or customer properties.
- In addition to site specific induction training.
- Complements existing compliance training.
- Protects our business partners and their employees.
- Supports CPS Energy's goal of achieving an injury free work place.



PASSPORT OR COMPLIANCE TRAINING

- The Passport process does not cover or replace OSHA compliance training.
- It is designed to highlight safe working practices, raise awareness of hazards and complement the required compliance training.
- Contractor's employees shall have their passport card and a valid picture I.D. on their person and show both upon request.

PASSPORT PROCESS

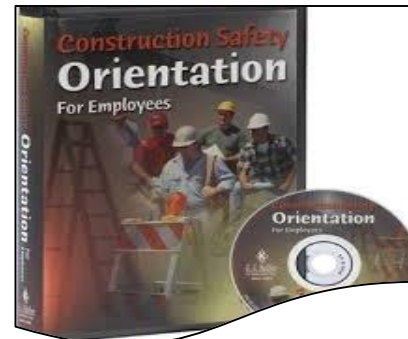
- CPS Energy will deliver the initial passport acknowledgement letter which outlines the passport process to each contract company
- The Contracted firm completes Employee Passport training, within 60 days
- The “Employee Passport Training” is completed through their own “Trainer”, having all employees sign the roster.

PASSPORT PROCESS (CONT.)

- The contracted firm acknowledges that all required “Passport Training” is complete for all their employees (internal and subs) by sending completed sign-in rosters to their CPS Energy Field Rep.
- Once CPS Energy receives the sign in roster, CPS Energy will issue to the contracted firm “Employee Passport Cards” for its direct employees, and any sub-contracted employees.

PASSPORT PROCESS (CONT.)

- The Contracted firm continues to train new employees as needed and send in the roster sheets to their field representative.





PASSPORT CARDS

- CPS Energy will continue to print new cards as training sheets are submitted for new contract employees
- Passport training for employees and trainers is required annually

PASSPORT REVOCATION

- The passport card may be cancelled for breaches of safety rules or unsafe acts.
- Contractor firms may be de-certified for:
 - Failure to provide required compliance training.
 - Failure to provide passport training.
 - Failure to enforce compliant safety policies and procedures while performing work.

PASSPORT QUESTIONS?

- Keep your Field Rep updated with any newly trained employees.
- Questions regarding specific Passport card or safety issues please contact your Field Rep.



BEHAVIOR BASED SAFETY

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BEHAVIOR BASED SAFETY (BBS)

- CPS Energy focuses everyone on achieving a Total Safety Culture (TSC), using:
 - actively caring
 - self-management
 - behavior-based observation & feedback
 - improved communication skills
 - increased safety leadership
 - **COACH**

Caring

Observing

Analyzing

Communication

Help





ACTIVELY CARING

CPS Energy principles of a ZERO HARM culture:

1. Each employee understands that working safe is a way of life.
2. Each leader owns the safety performance inherent to the employees, contractors, vendors and visitors for which he or she is responsible.
3. Each leader begins each meeting with a safety message.
4. Each leader models the behavior we expect to achieve **ZERO HARM**.
5. There's no job or operation so important that we each cannot take the time to do it safely.



ACTIVELY CARING

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CPS Energy principles of a ZERO HARM culture, cont'd:

6. All employees must proactively intervene to pull a co-worker out of harm's way.
7. All employees are provided training to do their work in a safe manner.
8. Each employee has the right to question work before proceeding.
9. All employees are trained and held accountable to conduct peer-to-peer safety observations.
10. No one can take short-cuts at the expense of safety.



CPS ENERGY

COVETED SAFETY RULES

- If it's not grounded, it's NOT dead.
- Personal protective equipment to be worn as required.
- Working at height 4 ft. above ground requires fall protection. This refers to a non-working surface and the use of the 3-point contact is necessary to ascend or descend from heights.
- Drive company vehicles responsibly as if they are your own.
- All jobs require a Pre-Job Safety Briefing (Tailboard) at the work site prior to starting the work.
- NEVER enter a confined space without testing of the atmosphere and means of extraction.
- Never put a member of the public in harm's way.



REPORT ALL ACCIDENTS AND NEAR-MISSES

- CPS Energy recognize the link between serious injuries and minor incidents.
- To prevent injuries, we will learn lessons from the low consequence events.
- It is required that **ALL** accidents, injuries, and near-misses be reported immediately to your management team.

THE SAFETY PYRAMID



ACCIDENT PREVENTION

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ACCIDENT FACTORS

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Accidents are seldom caused by a single factor, but rather multiple factors and here are a few examples:

- Speed
- Rain
- Distraction
- Cell phone
- Drugs/Alcohol
- Arguments
- Tight schedules
- Lack of training
- Radio
- Poor sleep
- Important meeting
- Kids screaming
- Deadlines
- Headache
- Lack of qualification
- Lack of procedural enforcement

All employees must be constantly vigilant, trained, competent, and empowered to deal with these and many more potential causes.

RECOGNIZE THE CAUSE

Recognize the Cause

- To prevent accidents we must pay close attention to everything and everyone around us.
- It means that we constantly consider potential:
 - Failures and changes to systems and equipment around us
 - Changes in environment
 - Unsafe acts by others around us
- **Each person** must consider what they can do to control their own work area to protect themselves and others.

EMPLOYEE CHARACTERISTICS

Employees
Must
Be

- Competent
- Trained
- Alert
- Drug and alcohol free
- Responsive
- Furnished with a plan
- Constantly vigilant
- In constant communication

TOOLS & TRAINING

- During planning you must consider the proper tools and equipment:
 - Complete inspection
 - Correct usage
 - No modifications
 - Proper selection
 - Proper training and qualifications
 - Availability





SITE SAFETY PLANNING

- Effective work doesn't happen by accident!
- Work site safety planning must be considerate of:
 - Properly trained employees
 - The environment and changing environment
 - Tools & equipment
 - Procedures
 - Enforcement and oversight

WORK ENVIRONMENT

The work environment must be considered when planning work



- Slips, trips and falls
 - Housekeeping
 - Adjacent work
- Overhead loads
 - cranes
 - lifting & rigging
- Materials such as
 - asbestos
 - chemicals
- Natural hazards
 - Temperature extremes

WORKSITE

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WORKSITE OBSERVATIONS

- CPS Energy is continuing to intensify safety audit and observation efforts.
- We will continue to invest resources to reduce human and financial losses on our worksites.
- Observations are reviewed and recommendations are made.
- Ensures safe worksites and safe practices are maintained.
- Management & Supervision should make routine visits to their job sites.
- Review procedures and practices used by work crews.
- Ensure Passport training requirements are met, enforced and documented.

HIGH RISK - JOB BRIEFINGS

A more intensive job briefing shall be conducted for infrequent and high-risk work:

- If the work is complicated or particularly hazardous
- If employees are not expected to recognize and avoid the hazards associated with the job

The number and extent of the job briefings depends on the type of work being performed



JOB BRIEFINGS (OR TAILBOARDS)

Ensure that written Job Briefings are completed on **all jobs before** work is initiated, which shall include, at a minimum

1. The hazards associated with the specific job
2. Specific applicable work procedures
3. Specific precautions (e.g., engineering controls)
4. Lock-Out/Tag-Out (LOTO) / Energy source controls
5. Personal protective equipment
6. Special consideration for any substation work
7. Location of energized equipment in, or adjacent to, the work area.

An additional Job Briefing shall be held if significant changes occur, which might affect the safety of the employees.



ACCIDENT/INJURY NOTIFICATION

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CRITERIA FOR SAFETY NOTIFICATIONS

- Gas: Fire/Explosion, unintentional ignition
- Electric: Shock or burn requiring medical treatment at a hospital.
- All: death or any injury that requires hospitalization (admitted overnight)
- All: Any newsworthy event
- Interruption of service to Electric & Gas customers.
- All notifications must be made within as soon as possible.



CRITERIA FOR SAFETY NOTIFICATIONS (CONT'D)

- All: Death or hospitalization (admitted overnight) involving 1 or more employees involved in the same event within 8 hours of notification of the event.
- All: amputations or hospitalizations of less than 3 employees (admitted overnight) within 72 hours of notification or the event or hospitalization.
- All injuries:
 - OSHA recordable
 - First Aid
 - Report only
- All Near Miss Events incident that qualifies as a report only injury

Contact your manager and company Safety Rep immediately.



GENERAL PASSPORT TRAINING

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COMPRESSED GAS CYLINDERS

- Handle compressed gas cylinders carefully.
- Never roll cylinders.
- Keep cylinders upright.
- Do not drop cylinders.
- Keep oxygen/acetylene hoses in good condition.
- Do not remove reverse flow valves from torches.
- Keep oxygen/acetylene pressure settings within
- manufacturer's specifications
- Maintained per manufacturer's specifications

Storage of Oxygen and Acetylene Gas Cylinders

Two criteria:

- 1) *Separated by a fire rated wall at least 5' in height, or*
- 2) *Separated by a minimum of 20'.*

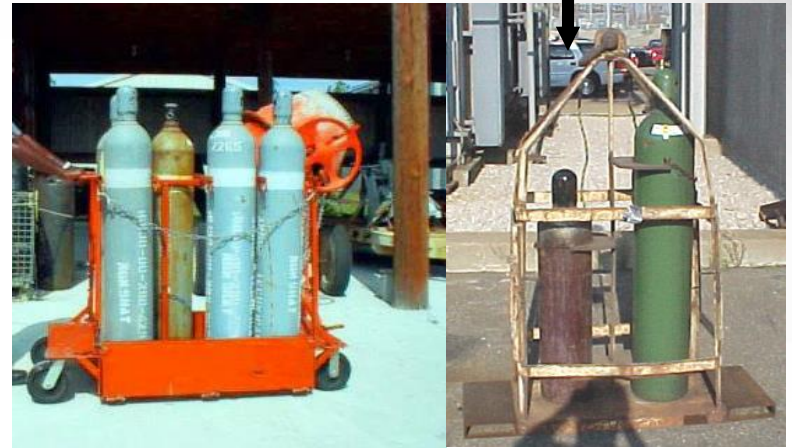


COMPRESSED GAS CYLINDERS

Always cap and secure cylinders when not in use and return them to their proper location.

If cylinders must be lifted to an upper or lower level they must be in a proper lifting device.

Do not transport them lying down in the beds of trucks.



GROUND FAULT PROTECTION (GFIS GFCIS)

- Employees are required to use GFCI protection on all electrical devices in accordance with OSHA 29 CFR 1910.269 standard.
- GFCI devices must be placed at the source (wall receptacle).
- Inspect all tools before use
- Any electrical device that shows damage shall be taken out of service.



ELECTRICAL CORD PROTECTION

- Employees are expected to comply with OSHA 29 CFR 1910.334 standard in addition to CPS Energy work standards.
- Do not run any of this equipment through door ways. (Find an alternate route.)
- Do not run electrical cords, hoses or welding leads across walk ways or stairs.
- String them safely overhead.



HOUSEKEEPING

- Keep work areas clean to eliminate all fire and tripping hazards.



Clean before doing hot work / Clean as you go

FIRE PREVENTION

- Proper fire protection must be maintained at all job sites.
 - Clean
 - Safe
 - Protected
 - Prepared



FIRE EXTINGUISHERS

- Fire extinguishers are strategically placed throughout the facilities and on job sites where there are flammable gases.
- Any employee may have the occasion to put out an incipient stage fire.
- All employees must be trained to recognize what an incipient stage fire is and how to select and use the appropriate fire extinguisher.
- The employees must know when to fight a fire and when to flee.

SMOKING

- CPS Energy Smoke-Free Workplace Policy
- With this new policy, smoking and the use of “e-cigarettes” *is prohibited* at all CPS Energy facilities with the exception of established smoking areas.
- In addition, the policy restricts the use of smoking and e-cigarette use in areas of customer interaction, including company vehicles, personal vehicles when used in company business with direct customer interaction, and at customer locations.
- Creating a Smoke-Free workplace supports the health of our entire employee/contractor/vendor population and promotes tobacco cessation with an eye toward becoming a tobacco-free campus in the future.



PERSONAL CONDUCT

- Horseplay will not be tolerated.
- Theft will be reason for immediate dismissal from the site.



WEAPONS AND FIRE ARMS

No firearms nor weapons of any type shall be allowed inside an **CPS Energy building** or inside any customer's home at any time.



PERSONAL PROTECTIVE EQUIPMENT

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PERSONAL PROTECTIVE EQUIPMENT

- Employees are expected to comply with OSHA 29 CFR 1910 Subpart I and 1910.269 in addition to CPS Energy work standards.
- Before performing any work, the employees shall have been trained and qualified in the specific personal protective equipment pertinent to the job processes in which they are to participate.



PERSONAL PROTECTIVE EQUIPMENT

- This equipment may include, but not limited to:
 - Hardhat
 - Safety glasses
 - Goggles
 - Face shields
 - Fire Retardant (FR) clothing
 - Gloves for various applications
 - Electrical protective sleeves
 - Shoes or boots for various applications
 - Animal deterrents
 - Respirators

HARDHATS

- Hard hats shall be worn whenever an overhead hazard exists.
- Hard hats shall be worn correctly with the brim to the front.
- Chinstraps shall be worn when necessary to keep the hard hat in place.

In order that maximum protection be obtained by company employees through the use of hard hats, and to comply with the Occupational Safety and Health Act, the following compulsory safety rules shall be observed.

HARDHATS (CONT'D)

Hard hats shall be worn:

- a. By all employees when in or near construction work of any kind.
- b. By all employees while within the boundaries of a substation.
- c. By all employees while working on or around electrical equipment.
- d. By all employees while climbing or working on poles.

HARDHATS (CONT'D)

(Hard hats shall be worn)

- e. By all employees while working under or around poles or structures.
- f. By all employees while working in or around cranes, derricks, aerial lifts, industrial trucks or other material handling equipment.
- g. By all employees while working under or near any type of maintenance or repair work both overhead and underground work.

HARDHATS (CONT'D)

- h. By all employees while engaged in handling explosives and blasting.
- i. By all employees while engaged in supervising, inspecting or observing tree trimming or right-of-way clearing.
- j. By all power plant employees at all times, except in the offices areas, control rooms, break rooms, locker rooms and company vehicles.
- k. By all employees while working in storage areas where material could fall from overhead racks or storage compartments.

EYE PROTECTION

- Approved eye protection must be worn at all times while on the job site.
- This eye protection will meet CPS Energy Standards and ANSI Z87.1 Standard.
- Additional eye protection is required where the job dictates.



Face shields when required to protect the face.

HEARING PROTECTION

- Hearing protection is required where the noise level exceeds 85dB
- Hearing protection must meet or exceed ANSI standards and in accordance with OSHA 1910.95 or 1926.101.



"If I was wearing my 'what' ?!"

CLOTHING

- Clothing shall meet the requirements of the work duties of employees.
- All employees are expected to be in full compliance with OSHA 29 CFR 1910.269 standards, NFPA-70E, and NESC regulations relative to the work to be performed.
- All conductive apparel shall be removed, covered or otherwise rendered non-conductive when working around parts or lines energized at greater than 50 volts.

CLOTHING (CONT'D)

- Where employees are exposed to welding and cutting operations, employees must wear shirts with long sleeves.
- Where employees are exposed to electric arc they shall wear clothing in compliance with OSHA 1910.269, NFPA70-E, and NESC.
- Any employee that is exposed to high voltage must wear full FR clothing on all exposed clothing.
- Any additional clothing worn under the FR must not increase chance of injury.



FOOTWEAR

- All required foot wear must be made of leather or leather-type material on the upper part of shoes and foot wear must have stiff nonskid soles and heels.
 - Steel toes to prevent a crush injury
 - Electrical Hazard (EH) rated boots to prevent against electrical exposure of above 50 volts.



FOOTWEAR (CONT'D)

- The following types of foot wear are unacceptable at the worksite:
 - Tennis or other athletic shoes
 - Canvas, cloth, or thin soft-shoes
 - Open toe shoes
 - Sandals
 - Shoes with a mesh type material anywhere on the upper part of shoes
 - Shoes with a soft or sponge material for the soles or heels

EQUIPMENT SAFETY

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DOT COMMERCIAL DRIVER'S LICENSE

- Employees who will drive vehicles greater than 26,001 pounds off company property must hold a current DOT Commercial Drivers License.
- Drivers of vehicles greater than 10,000 GVW and less than 26,001 are required to have a medical card, if required by TX dot





BUCKET TRUCK / DIGGER / DERRICK OPERATION

Employees shall not operate aerial work platforms, bucket trucks or digger derricks until they have been trained and are competent in the use of the specific equipment they will operate.



Ensure that you anchor your personal fall protection to the manufacturer's specified point.



FORKLIFT TRAINING

- In addition to CPS Energy work practices employees are expected to comply with 29 CFR 1910.178 Powered Industrial Trucks
- Employees shall not operate forklifts unless they are specifically trained and qualified to operate that specific type of forklift.
- Qualified operators must be **evaluated every 3 years.**



FORKLIFT TRAINING

REMEMBER! Do not operate this equipment unless you are specifically trained and qualified.

- Always wear your seat belt and hard hat.
- Watch your speed.
- Turn slowly.
- Always know the capacity of your machine.
- Ensure floor/surface loading capacity.



BOBCAT / BACKHOE OPERATION

Employees shall not operate this equipment unless they are specifically trained and qualified.



Shall wear seat belts, eye,
and head protection



CRANES & DERRICKS IN CONSTRUCTION

Subpart CC

OSHA 1926.1400 / An overview of
the significant sections of the standard.

Ensure that your employees that operate and
signal cranes are Trained and Certified by the
required dates as specified by this standard.

ASME B30.5 section 5-3.1 requires that mobile crane
operators pass a physical examination at least every 3
years.





CRANES AND POWER LINE SAFETY

KEEP YOUR Distance as directed in 1926 Subpart CC

- Every power line has an absolute limit of approach.
- Do not move any part of the crane boom, load line, or load into this area unless the power line has been de-energized and grounded!

NO EXCEPTIONS!



CRANE AND POWER LINE SAFETY (CONT'D)

- Initial approach distance:
 - up to 350,000 volts – 20ft

- Follow 1910.269 guidance





CRANE AND POWER LINE SAFETY (CONT'D)

- Notify CPS Energy when where the crane is to be working in the vicinity of power lines.
- Treat all wires and electrical equipment as energized unless an CPS Energy representative at the job site de-energizes and grounds the line.
- Use a competent signalman whenever the crane is within a boom length of the limit of approach.
- Do not rely on ground rods for safety.
- Don't rely on proximity warning devices.



CRANE AND POWER LINE SAFETY (CONT'D)

- Except for the operator, keep all personnel well away from the crane, whenever it is working in the vicinity of power lines.
- Don't allow anyone to touch the load, the crane, or crane hook until the signalman indicates it is safe to do so.
- Avoid using taglines except when it is possible for the load to spin into a power line.
- Slow down the operating cycle of the machine by reducing speeds.

LIFTING AND RIGGING (CONT'D)

- Before participating in any lifting and rigging process, employees must be trained and competent in the selection, inspection and use of appropriately sized lifting and rigging devices.



LIFTING AND RIGGING (CONT'D)

- Determine the weight of the load - don't guess. Inspect all rigging gear before each use.
- Slings must have tags.

Rigger's Capacity Card © C.I.A. Inc.

Crane Institute of America, Inc.
1063 Maitland Center Commons, Suite 105, Maitland, FL 32751 | 800-832-2726

Shackles Screw Pin Anchor Type				Forged Eye Bolts			
Nominal Shackle Size (inches)	Working Load Limit (pounds)	Nominal Shackle Size (inches)	Working Load Limit (pounds)	Shank Size (inches)	90 Deg. To Horiz.	45 Deg. To Horiz.	Shoulder Nut 45 Deg. To Horiz.
3/16	660	1	17,000	1/4	500	175	125
1/4	1,000	1 1/8	19,000	5/16	900	280	200
5/16	1,500	1 1/4	24,000	3/8	1,200	420	300
3/8	2,000	1 3/8	27,000	1/2	2,200	770	550
7/16	3,000	1 1/2	34,000	5/8	3,500	1,225	875
1/2	4,000	1 3/4	50,000	3/4	5,200	1,820	1,300
5/8	6,500	2	70,000	7/8	7,200	2,520	1,800
3/4	9,500	2 1/4	80,000	1	10,000	3,500	2,500
7/8	13,000	2 1/2	110,000	1 1/4	15,200	5,320	3,800

Wire Rope Slings 6 X 19 or 6 X 37 IWRC IPS							
Rope Diameter (Inches)	Vertical (1)	Choker (1)	Vertical Basket (2)	80 Deg. to Horiz.	45 Deg. to Horiz.	30 Deg. to Horiz.	Rope Diameter (Inches)
3/8	3,120	840	2,200	1,940	1,500	1,120	3/8
1/2	4,400	1,100	3,000	2,600	2,000	1,400	1/2
5/8	6,500	1,600	4,300	3,800	2,900	2,000	5/8
3/4	9,800	2,300	6,400	5,600	4,200	3,000	3/4
7/8	13,200	3,100	8,600	7,500	5,600	4,000	7/8
1	17,500	4,100	11,500	10,000	7,500	5,400	1
1 1/8	22,000	5,400	15,000	13,000	9,800	7,000	1 1/8
1 1/4	27,000	7,000	19,000	16,500	12,500	9,000	1 1/4
1 3/8	32,000	8,900	23,000	20,000	15,000	11,000	1 3/8
1 1/2	38,000	11,000	27,000	23,000	17,000	12,500	1 1/2
1 5/8	44,000	13,400	32,000	27,000	20,000	14,500	1 5/8
1 3/4	50,000	16,000	37,000	31,000	23,000	17,000	1 3/4
2	60,000	19,000	44,000	37,000	28,000	20,000	2

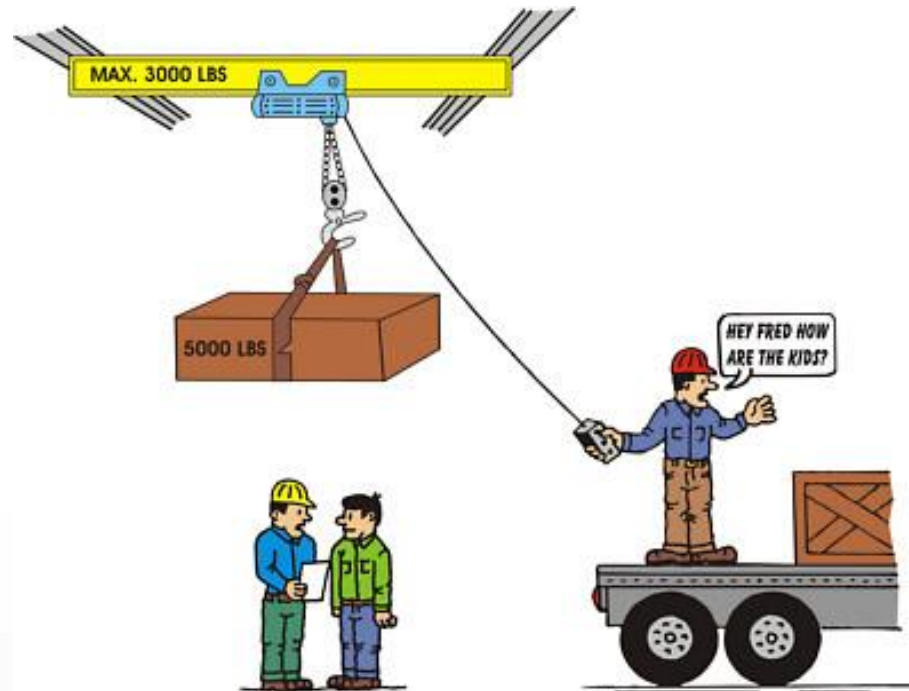
Alloy Steel Chain Slings							
Chain Size (Inches)	Minimum Allowable Chain Size to Horiz.	Double sling vertical angle (1)			Triple/quadruple sling vertical angle (2)		
		80 Deg. to Horiz.	45 Deg. to Horiz.	30 Deg. to Horiz.	80 Deg. to Horiz.	45 Deg. to Horiz.	30 Deg. to Horiz.
1/4	13/64	3,250	5,800	4,800	3,900	6,400	4,800
3/8	19/64	6,600	11,400	9,300	6,600	17,000	9,500
1/2	25/64	11,200	19,500	15,800	11,200	29,000	17,000
5/8	31/64	16,500	28,500	23,000	16,500	43,000	24,500
3/4	37/64	23,000	39,800	32,500	23,000	59,500	34,500
7/8	43/64	29,750	49,800	40,600	29,750	74,500	43,000
1	49/64	36,750	61,100	49,000	36,750	91,000	53,000
1 1/8	55/64	44,500	74,000	59,000	44,500	111,500	64,500
1 1/4	61/64	53,000	88,500	70,000	53,000	134,000	77,000
1 3/8	67/64	62,000	104,000	82,000	62,000	158,000	91,000
1 1/2	73/64	71,500	120,000	95,000	71,500	183,000	105,000
1 5/8	79/64	81,500	137,000	109,000	81,500	209,000	121,000
1 3/4	85/64	92,000	155,000	124,000	92,000	236,000	138,000

If the tag is missing or illegible it cannot be used.



LIFTING AND RIGGING (CONT'D)

- Those performing the lift shall ensure that the area is clear and controlled and never allow anyone to work under a suspended load



POWERED HAND TOOLS

Employees utilizing any powered tools must be trained in their safe use. Must meet OSHA 29 CFR 1910 Subpart Q.

- Circular saws
- Saber saws
- Drills
- Planes
- Chain Saws



The specifications for use, care, and therefore the training comes from the manufacturer “in the box.”



FALL PROTECTION AND PREVENTION

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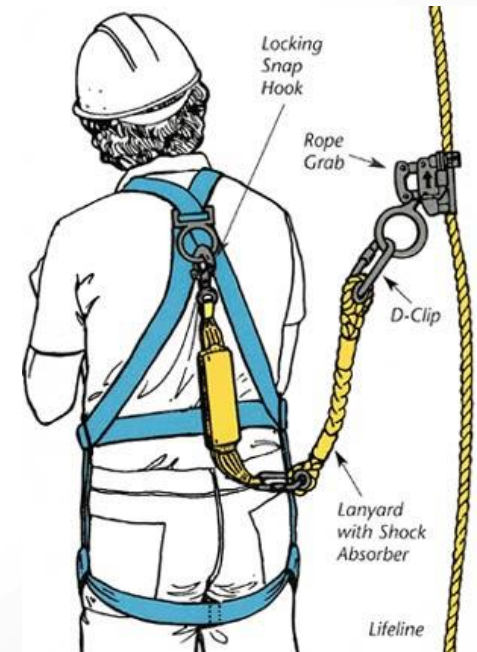
FALL PROTECTION AND PREVENTION

- Employees are expected to comply with OSHA 29 CFR 1910.269 and 1910.66 in addition to CPS Energy work practices.
- Where an employee may be exposed to a fall of greater than 4 (four) feet (including poles and towers) the employees shall be trained and competent in the following:
 - When fall protection or prevention is required.
 - The types of fall protection available.
- **100% Fall Protection shall be applied for all wood poles**

FALL PROTECTION AND PREVENTION

- Requirements for lifelines and their anchorage points.
- How to properly wear and when to inspect personal fall protection.
- The maintenance of personal fall protection devices

Note: It must be understood that all of these fall protection and prevention requirements apply 100% to roofing work as well.



POLE SAFETY

- Ensure you perform a utility pole inspection prior to ascending a wood utility pole.
- All required climbing gear shall be inspected before use.
- Follow your company's training practices on Fall Protection



TREE TRIMMING

- The standard [1910.269\(r\)](#) addresses both personnel and equipment requirements.
- The line-clearance tree trimming equipment requirements in 1910.269[®] apply to 1910.269 qualified employees and line-clearance tree trimmers who are clearing lines with brush clippers, sprayers, stump cutters, chain saws, backpack power cutters, climbing ropes, or safety saddles.



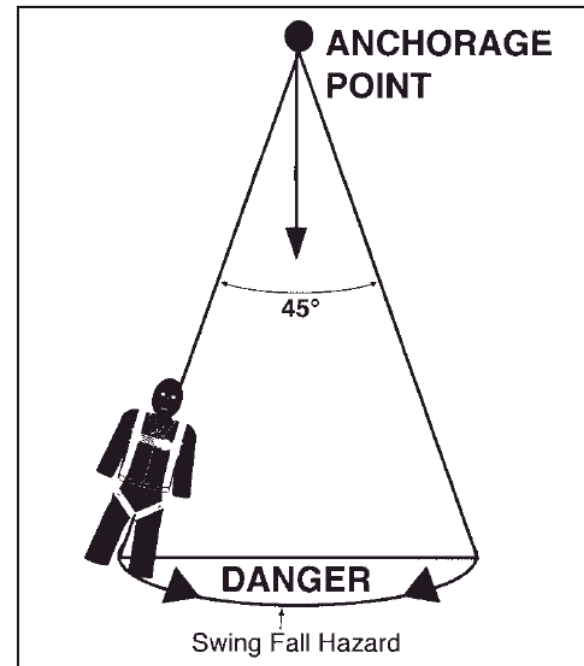
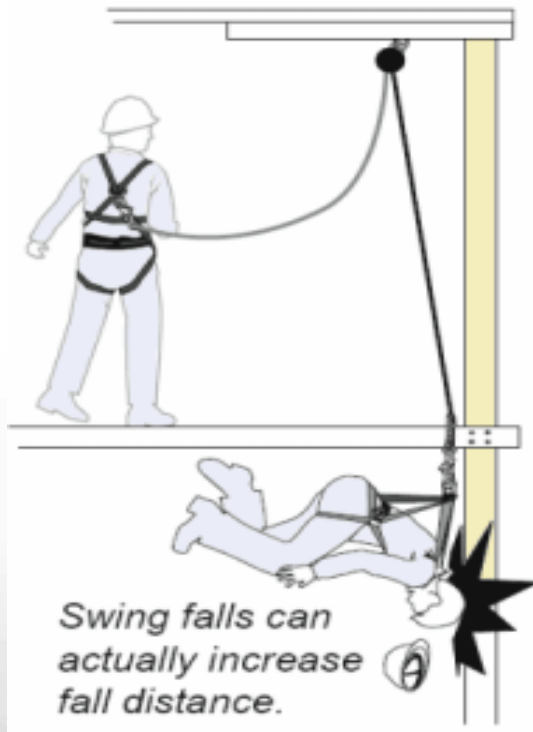
TREE TRIMMING

- OSHA recognizes three different qualification levels for line-clearance tree trimmers:
 - Unqualified employees (that is, electrically unqualified)
 - 269-qualified employees
 - Line-clearance tree trimmers



PERSONAL FALL PROTECTION AND PREVENTION

- Anchorage and attachment of personal fall protection systems requires the avoidance of "swing" hazards.



LADDERS

- Ladders must be inspected and used in accordance with all OSHA requirements, 1910.25 / 1910.27 / 1910.269
- For portable ladders:
 - Ladders shall be inspected before each use.
 - Ladders shall never be placed against moveable objects.



LADDERS (CONT'D)

- Never climb higher than the third rung from the top on extension ladders, or the second tread from the top on step ladders.
- Ensure good footing of the ladder (any ladder). It must be on good non-skid feet and dry solid flat surface or be tied off or be held/spotted by another worker.
- Ladders must extend at least 3 feet above the next working surface.

LADDERS (CONT'D)

- Ladders shall be tied off as close as possible to the top of the ladder. (This is not applicable to step ladders.)
- The feet of extension ladders shall be set back 1 foot for every 4 feet of height.
- Ladders shall not be constructed of conductive materials.
- Conductive ladders may be necessary in specialized work and shall be prominently marked.



NATURAL GAS

ZERO
HARM
THROUGH SAFETY

NATURAL GAS

1. General
 - Governed by Federal and State Regulations
 - Personnel shall not smoke or permit others to smoke where the possibility of fire or explosion exists.
2. Working on Customer's Premises
 - Personnel shall NOT compromise their safety or the customers safety by using customers tools.
3. Line stopping and tapping work
 - Only experienced and Qualified personnel shall direct the use of line stopping and tapping work.

NATURAL GAS (CONT'D)

- 4 Construction of gas pipelines and services
 - Follow your approved safety precautions for handling, loading, hauling and unloading pipe
 - Follow your approved safety precautions for working with coal tar pipe
 - Gasoline shall NOT be used for cleaning surfaces.
 - **When working directly in the path of blowing gas do NOT hold breath. In such circumstances all personnel are required to wear and utilize supplied air respirators.**

NATURAL GAS (CONT'D)

- Characteristics –
 - colorless, odorless and tasteless
 - lighter than air
 - non-poisonous and non-toxic
- Hazards
 - Will ignite – fuel, heat, oxygen and chemical reaction
 - 1100* -1200*
 - 5% - 15% Explosive Limit

PHMSA & RRC CH18

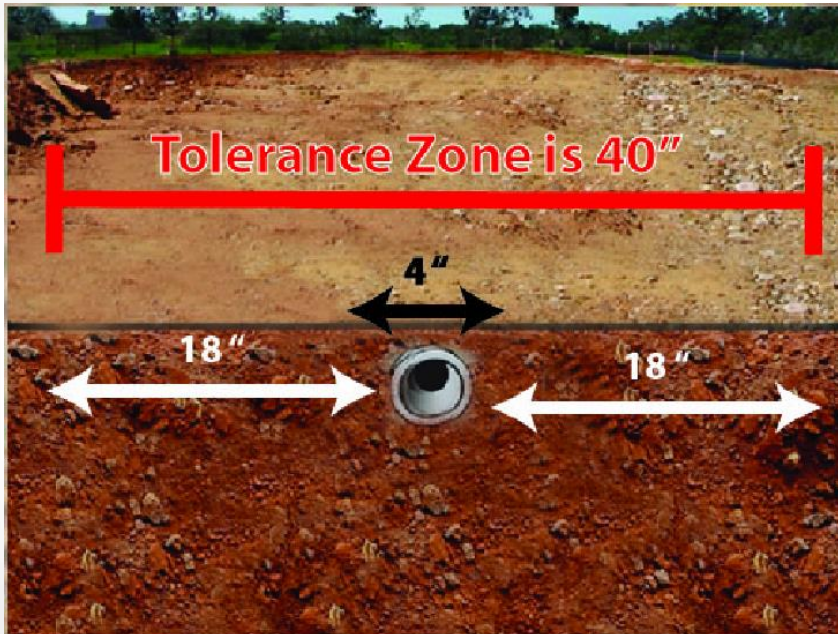
- Pipeline & Hazardous Materials Safety Administration (PHSMA).
- Develops and enforces regulations for the safe, reliable, and environmentally sound operation of the nation's Natural Gas pipeline transportation systems.
- RRC Chapter 18 defines excavation as movement of earth by any means
- Wait the required 48 hours (2 working days)

LOCATES

- Call 811 – It's the Law
 - Each excavator will need their own locate request.
 - Typically Water Utilities are not part of 811. They need to be contacted directly.

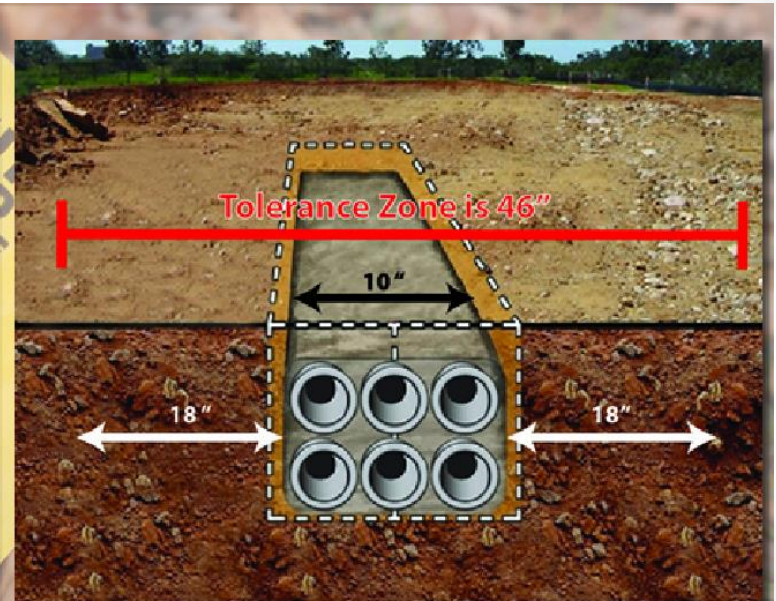


TOLERANCE ZONE



Example A

The Tolerance Zone in example A is 3 feet 4 inches because it is based on the width of the pipe and 18 inches on either side of the outside edge of the pipe.



Example B

The Tolerance Zone for example B is 3 feet 10 inches because the facility located is much larger. Remember, the Tolerance Zone is not measured from the locate marks, it is measured from the outside edge of the facility being marked. Be sure to pothole the facility to know the Tolerance Zone and Dig Safely.

RRC FINES

- **Violations and Penalties will be Cited by RRC**
 - Failure to Comply with Chapter 18 rules - \$2,000
 - Failure to Notify Notification Center 811 - \$2,500
 - Failure to Excavate with Reasonable Care within Tolerance Zone - \$2,500
 - Failure to Submit a TDRF Form to RRC in 10 days - \$2,000
 - Failure of Excavator to Report Pipeline Damage to Operator - \$2,000
 - Failure to Wait the Required Time to Excavate - \$1,000



IMPORTANT NUMBERS

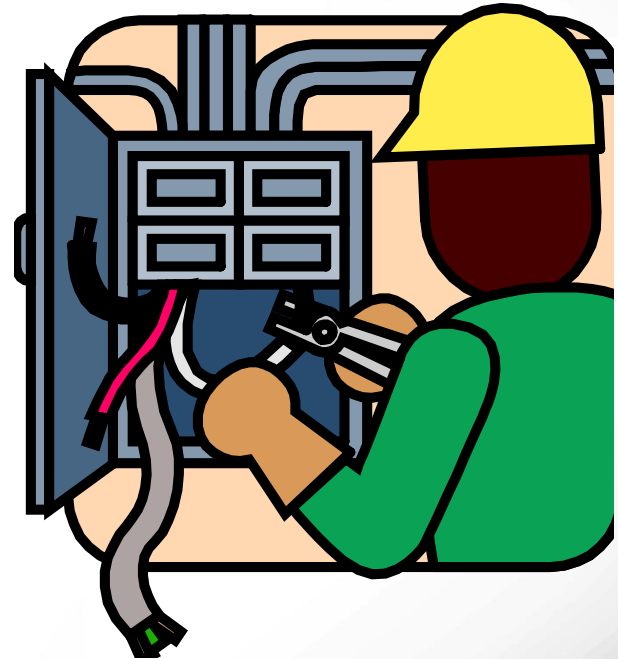
- 811 – Call Before You Dig
- 210-353-HELP(4357) 24 HR Gas or Elec. EMERGENCY
- 210-353-3575 CPS Energy Locate Office
(gaslocatoroffice@cpsenergy.com)
- 210-353-2222 CPS Energy Customer Service
- 210-353-2970 To schedule your FREE Safety presentation

GENERATION, TRANSMISSION & DISTRIBUTION (1910.269)

ZERO
HARM
THROUGH SAFETY

Generation, Transmission & Distribution Standard 1910.269

- Before employees perform work on CPS Energy property or equipment they must understand the limitations of their qualifications in regard to:
 - Electrical exposures
 - Equipment access
 - Job briefing requirements



Generation, Transmission & Distribution Standard 1910.269

- Transmission Voltages
 - 345kV
 - 138kV
- Primary Voltages
 - 7.6kV/15kV
 - 19.9kV/34.5kV
 - 2.4kV/4.16kV
- Secondary Voltages
 - 331V/575V
 - 277V/480V
 - 120V/208V
 - 120V/240V





GENERATION, TRANSMISSION & DISTRIBUTION STANDARD 1910.269

- Only qualified (documented) personnel shall have exposures to 50 volts or more.
- Low voltage gloves are required above 50 volts
- Class 3 **gloves and sleeves** are required for exposures greater than 600 volts (mats when required)
- Two qualified workers are required above 600 volts

GENERATION, TRANSMISSION & DISTRIBUTION STANDARD 1910.269

Grounding

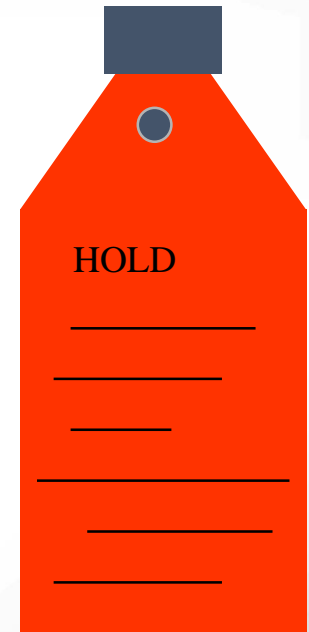
- Compliant grounding procedures shall be followed.
- If the conductor or parts are not grounded they are to be worked as energized.





LOCKOUT / TAGOUT 29 CFR 1910.269

- All workers who work with energized or potentially energized lines and equipment shall be trained in to work with LOTO Procedures.
- While working on CPS Energy system personnel should work with the CPS Energy Field Rep.



LOCKOUT / TAGOUT 1910.147 / 1910.269

- All violations of Lockout and Tagout Procedures shall be considered **serious safety violations** and shall be dealt with appropriately as directed by the appropriate CPS Energy manager.

These procedures protect human life.

DAMAGE PLANS

- Examples used by some Utilities:
 - Potholing and Exposing Facilities
 - Backfilling
 - Locate Mark Preservation
 - APWA Uniform Color Codes
 - Overhead Power Lines
 - Procedures to Control Power Line Hazards

SERVICE METERS

- All personnel shall be trained to work on and, install and removal of Service Meters.
- Possible hazards include:
 - Cracked meter blocks
 - Aged conductive lubricant
 - Fused meter leads
 - Damaged meter jaws

ELECTRICAL SAFETY

Electrical Safety Precautions for Distribution & Transmission.

- Prior to working on electrical lines and equipment, personnel shall determine existing conditions including:
 - Nominal voltages of lines and equipment
 - Switching transient voltages
 - Integrity of grounds
 - Condition of poles
 - Environmental conditions relative to safety (e.g. high winds, ice...)
 - Locations of circuits and equipment including power & communication line
 - Fault current availability
 - Presence of possible back-feeds

BATTERY SAFETY

- Ensure all personnel handling or servicing batteries are properly trained and your SDS has been reviewed and available.
- When working with station batteries, wear appropriate personal protective equipment. (e.g., chemical resistant gloves, apron, face shield, and eye protection.)
- Perform battery storage areas visual inspections.
- Maintain ventilation sufficient to prevent build-up of explosive fumes.
- Keep unauthorized persons out of battery storage areas.
- Post keep out signs to warn unauthorized persons.
- Ensure all persons handling or servicing batteries are properly trained.
- Take extreme caution when carrying or using conductive materials around batteries. Use insulated hand tools.
- Do not smoke or create sparks, arcs, or flames in battery areas.
- If eyes or skin is splashed with acid, wash the affected areas immediately and see a doctor.



RAILROAD & RAIL CARS

- All personnel working in and around the coal yard railroad and rail cars shall be trained on the following hazards.
 - When you are required to work around live tracks, stay alert, Expect movement from on-track equipment at any time.
 - Before approaching a track, look in both directions. Make sure its safe to get on or cross the track.
 - Never cross a track in front of oncoming traffic unless you are absolutely certain there is sufficient time and space to do so safely.
 - When on-track equipment is approaching, stay at least 30 feet from the track while the equipment is passing and warn co-workers.
 - Watch for protruding structures on passing equipment as well as other hazards.
 - Never sit, walk, step, stand, or lay on rails; including other track components such as switch points, frogs, guard rails, derails, and wheel stops.
 - Do not lean on, climb on, or go under any on-track equipment unless your job requires it. Then do so only after all required safety procedures, such as lockout / tagout procedures have been put in place.
 - Do not walk between two pieces of on-track equipment unless they are separated by at least 50 feet.
 - Keep at least 25 feet from the end of standing trains, cars, or locomotives. This will allow you time to react safely to any movement of the equipment.
 - Avoid being trapped between on-track equipment passing on adjacent tracks.

CPR AND FIRST AID TRAINING 1910.269

- Employees with exposure to conductors energized at 50 volts or more shall maintain current certification in CPR and First Aid.
- For field workers involving two or more employees at a work location, at least two trained persons shall be available.



CPR AND FIRST AID TRAINING 1910.269

- For fixed locations, the number of trained persons available shall be sufficient to ensure that each employee exposed to electric shock can be reached within 4 minutes by a trained person.
- Where the number of employees is insufficient to meet this requirement, all employees at the work location shall be trained.



BLOODBORNE PATHOGENS

- All employees shall successfully complete Blood borne pathogens training because it is recognized that they have the potential for exposure to human blood and other contaminated body fluids while on the job.
- This training shall cover:
 - Specific Bloodborne pathogens
 - How they are transmitted
 - Precautions
 - Disposal
 - Labeling requirements



Safety Procedures

ZERO
HARM
THROUGH SAFETY



CONFINED SPACE ENTRY

Employees must comply with the OSHA 29 CFR 1910.146 and 1910.269 standards in addition to CPS Energy safe work practices.



ENTRY PERMIT		
CONFINED SPACE	HAZARDOUS AREA	PERMIT NO. _____
* EITHER HOUR FOR ENTRY RECORD ONLY ALL COPIES OF PERMIT WILL REMAIN AT JOB SITE UNTIL JOB IS COMPLETED		
SITE LOCATION/DESCRIPTION _____		
PURPOSE OF ENTRY _____		
DATE _____	PERMIT EXPIRATION DATE/TIME _____	PHONE NO. _____
SUPERVISORS IN CHARGE OF CREW		TYPE OF CREW _____
REQUIREMENTS TO BE COMPLETED PRIOR TO ENTRY		
<input type="checkbox"/> Lock Out / Tag Out (Try Out)	<input type="checkbox"/> Ladders	
<input type="checkbox"/> Limited Entry - Categorized - Restricted	<input type="checkbox"/> Resuscitator - Inhalator	
<input type="checkbox"/> PPE - Buck and Vest	<input type="checkbox"/> Remote Safety Personnel	
<input type="checkbox"/> Breathing Apparatus	<input type="checkbox"/> Fall Risk Assessment (6" or more)	
<input type="checkbox"/> Emergency Escape/Rescue Equipment	<input type="checkbox"/> Lighting (incandescent) (prior)	
<input type="checkbox"/> Communications System(s)	<input type="checkbox"/> Potable Drinking	
<input type="checkbox"/> Atmospheric Monitoring System(s)	<input type="checkbox"/> Respirator(s) (air purifying)	
<input type="checkbox"/> Rescue Kit (test and tag)	<input type="checkbox"/> Rescuing and Recovery Plan(s)	
CONTINUOUS MONITORING (insert results every 2 hours)		
TEST TO BE RUN	PERMISSIBLE ENTRY LEVEL	MONITORING RESULTS
Percent Oxygen	19.5 to 23.5%	
Lower Flammable Limit	50% LFL	
Carbon Monoxide	0.005 ppm	
Airborne Hydrocarbon	+ 1 ppm - 1 ppm	
Hydrogen Sulfide (H ₂ S)	+ 10 ppm - 10 ppm	
Sulfur Dioxide	+ 2 ppm - 2 ppm	
Ammonia	30 ppm	
Other _____		
* Short term exposure limit (Employee can work in the area up to 15 minutes) + 8 hour time-weighted average (Employee can work in the area 8 hours longer with appropriate respiratory protection)		
REMARKS _____		
DATE TESTER MADE A CHECK NO. _____	INSTRUMENTS USED _____	MODEL, MANUFACTURER SERIAL, APPROX. DATE/NO.
RESCUE PROCEDURE		
ADDITIONAL INFORMATION _____		EMERGENCY PHONE NUMBERS
PERMIT AUTHORIZATION (only used in Sublet)		Fire Department _____
Name of contractor or subletting company _____		Police _____
Name of employee _____		Site Coordinator _____
Signature _____		DATE _____
Contractor _____		PHONE NO. _____



CONFINED SPACE ENTRY

All employees shall understand what a confined space is and what constitutes entry.

- **In order to qualify as a confined space, the space must meet all three of the following criteria.**
 - The space must be large enough to bodily enter, and
 - It must have limited or restricted means of entry or exit, and
 - It must not be designed for human occupancy.

CONFINED SPACE ENTRY

- Employees shall not enter a confined space nor participate in any confined space entry work under any circumstance until they have been trained and qualified.
- Entry is defined as any part of the employee's body crossing a plane through any entryway into the space.



CONFINED SPACE ENTRY

- Examples of confined spaces may include:
 - Vaults
 - Man Holes
 - Transformers
 - Breakers
 - and more



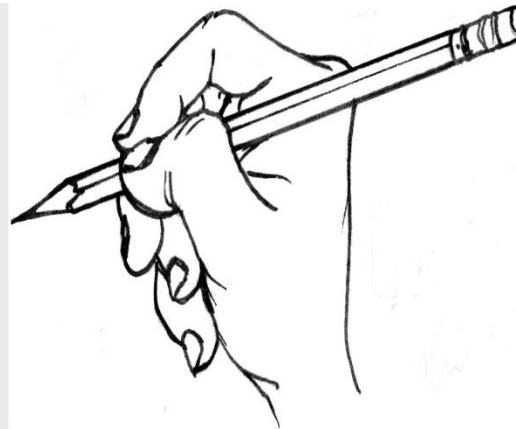
CONFINED SPACE ENTRY

- Ensure that your air monitoring is completed and documented by trained personnel.
- Ensure that non-entry rescue devices such as tag lines are used in Permit Required Entries.
- Ensure that ventilation and LOTO is applied.

Air Sampling Worksheet
U. S. Department of Labor
Occupational Safety and Health Administration

1. Reporting ID: _____ 2. Sampling Location: _____ 3. Sampling Agent: _____
 4. Sampling Date: _____ 5. Sampling Time: _____ 6. Sampling Device: _____
 7. Sampling Method: _____ 8. Sampling Duration: _____
 9. Sampling Location: _____ 10. Sampling Agent: _____ 11. Sampling Device: _____
 12. Sampling Method: _____ 13. Sampling Duration: _____

14. Sample Number	15. Sample Volume	16. Sample Type	17. Sample Date	18. Sample Time	19. Sample Location	20. Sample Agent	21. Sample Device	22. Sample Method	23. Sample Duration





CONFINED SPACE ENTRY

- Ensure that Permits are filled out, signed and posted for Permit Required Entries.
- Ensure that all entrants, attendants, and authorizing officials have completed documented confined space entry training.

ENTRY PERMIT									
CONFINED SPACE _____			HAZARDOUS AREA _____			PERMIT NO. _____			
- PERMIT VALID FOR EIGHT HOURS ONLY			- ALL COPIES OF PERMIT WILL REMAIN AT JOB SITE UNTIL JOB IS COMPLETED						
SITE LOCATION/DESCRIPTION _____									
PURPOSE OF ENTRY _____									
DATE _____			PERMIT EXPIRATION DATE/TIME _____						
SUPERVISOR(S) IN CHARGE OF CREWS _____				TYPE OF CREW _____			PHONE NO. _____		
REQUIREMENTS TO BE COMPLETED PRIOR TO ENTRY (ONLY DENOTES MINIMUM REQUIREMENTS TO BE COMPLETED AND REVIEWED PRIOR TO ENTRY)									
ENTER N/A FOR ITEMS THAT DO NOT APPLY									
		DATE	TIME	DATE	TIME	DATE	TIME	DATE	TIME
Lock Out / De-Energize / Try-Out	_____	_____	_____	Lifelines	_____	_____	_____	_____	_____
Line(s) Broken - Capped - Blanked	_____	_____	_____	Resuscitator - Inhalator	_____	_____	_____	_____	_____
Purge - Flush and Vent	_____	_____	_____	Standby Safety Personnel	_____	_____	_____	_____	_____
Ventilation	_____	_____	_____	Full Body Harness (with "D" ring)	_____	_____	_____	_____	_____
Breathing Apparatus	_____	_____	_____	Fire Extinguishers	_____	_____	_____	_____	_____
Emergency Escape Retrieval Equipment	_____	_____	_____	Lighting (explosive proof)	_____	_____	_____	_____	_____
Communication Device(s)	_____	_____	_____	Protective Clothing	_____	_____	_____	_____	_____
Atmosphere Monitoring Device(s)	_____	_____	_____	Respirator(s) (air purifying)	_____	_____	_____	_____	_____
Secure Area (post and tag)	_____	_____	_____	Burning and Welding Permit	_____	_____	_____	_____	_____
CONTINUOUS MONITORING (record results every 2 hours)									
TESTS TO BE TAKEN		PERMISSIBLE ENTRY LEVEL		MONITORING RESULTS					
Percent of Oxygen	19.5%-23.5%			DATE	TIME	DATE	TIME	DATE	TIME
Lower Flammable Limit	Under 10%								
Carbon Monoxide	+35 PPM								
Aromatic Hydrocarbon	+ 1 PPM * 5 PPM								
Hydrogen Cyanide (Skin)	+ 4 PPM								
Hydrogen Sulfide	+ 10 PPM * 15 PPM								
Sulfur Dioxide	+ 2 PPM * 5 PPM								
Ammonia	* 35 PPM								
Other									
* Short-term exposure limit. Employee can work in the area up to 15 minutes + 8 hour time-weighted average. Employee can work in the area 8 hours (longer with appropriate respiratory protection)									
REMARKS									
GAS TESTER NAME & CHECK NO.		INSTRUMENT(S) USED		MODEL AND/OR TYPE		SERIAL AND/OR UNIT NO.			
_____		_____		_____		_____			
RESCUE PROCEDURE _____									
ADDITIONAL INFORMATION _____						EMERGENCY PHONE NUMBERS			
_____						Ambulance _____ Safety _____			
_____						Fire _____ Rescue _____			
_____						Gas Coordinator _____			
PERMIT AUTHORIZATION (mark only to Safety)									
I certify that all required precautions have been taken and necessary equipment is provided for safe entry and work in this space.									
NAME (print) _____		DATE _____		REQUIRED SAFTY STANDBY PERSON(S)		CHECK NO.		AUTHORIZED ENTRANTS	
SIGNATURE _____		_____		_____		_____		CHECK NO. _____	
DEPARTMENT _____		PHONE NO. _____		_____		_____		CHECK NO. _____	



EXCAVATION COMPETENT PERSON

- Employees responsible for the direction of any excavation shall be trained and competent in such activities prior to the initiation of such work.
- Excavation protection is absolutely required at 5 feet
- A means of entry and exit is required in all excavations more than 4 feet in depth



EXCAVATION COMPETENT PERSON

- Excavation, trenching, and shoring shall be performed in accordance with the OSHA Standards 1926.956.
- All underground utilities must be located prior to digging. 811 shall be notified and any others who have or may have facilities in the ground shall be notified directly.
- Spoil piles for excavations must be located at least 2 feet from the edge of the excavation





SCAFFOLD COMPETENT USER

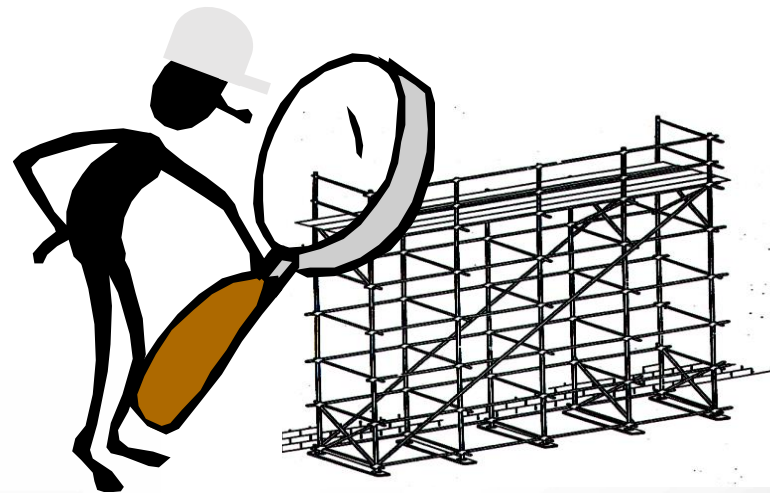
Before constructing any scaffold, employees shall have been trained and qualified in the proper selection and construction of the specific type of scaffold which they will construct.

Scaffolds not displaying a signed scaffold tag shall not be used.



SCAFFOLD COMPETENT USER

Before working on/from any scaffold, the employees shall have been trained and qualified in the proper inspection and working requirements / limitations for the specific type of scaffold on which they will work.

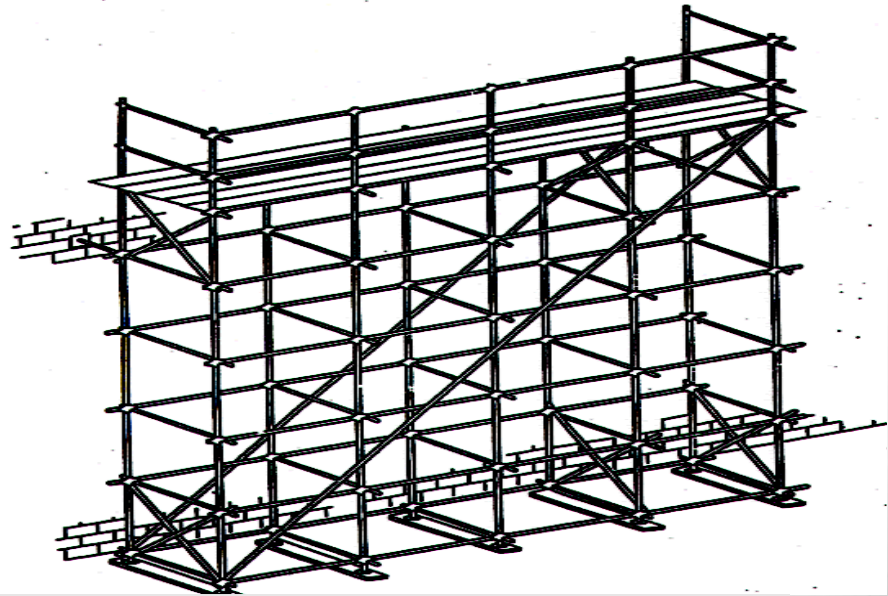


SCAFFOLD COMPETENT USER

- Work is defined as a hand or foot on the scaffold or platform.



← First →



Environmental Compliance

ZERO
HARM
THROUGH SAFETY



ENVIRONMENTAL COMPLIANCE

In Case of Emergencies

- Notify CPS Energy site emergency contact personnel
 - within 15 minutes of discovering spills of
 - petroleum products and hazardous substances or
 - other emergencies.
- Spills need to be cleaned up quickly and thoroughly and always coordinated by CPS Energy.



ENVIRONMENTAL COMPLIANCE

In Case of Emergencies

- Have SDS Sheets on site for all materials prior to entry to the site.
- CPS Energy personnel and outside agencies require immediate access to your SDS Sheets.
- CPS Energy personnel need your 24/7 contact names and number(s).



ENVIRONMENTAL COMPLIANCE

- CPS Energy strives for the highest standards of environmental compliance.
- We are committed to protecting and improving our environment today and in the future.
- What you do on the job can affect our compliance status, financial health and corporate reputation.



ENVIRONMENTAL COMPLIANCE

What Workers Need to Know

- Keep areas orderly and clean.
- Trash should go into trash containers (not on the ground).
- Do not put any inappropriate materials or chemicals in the drains or water sources.

HAZCOM

- Employees shall have completed Hazard Communications training including:
 - The Contractor's Written Program and how employees may access it.
 - Hazard evaluation
 - SDS's (Specific to their expected exposures on the job.)
 - Refer to your Field Rep for specific exposures.

HAZCOM

.....
OSHA Hazard Communication Standard major changes include:

Hazard Classification – provides specific criteria for health & physical hazards

Labels – must include signal word, pictogram, hazard statement and precautionary statement for each hazard class

Safety Data Sheets – the new format requires 16 specific sections in a consistent format

Information and Training – workers must be trained by 12/1/13 on new label elements and the new SDS format.





ASH & COAL HANDLING

-
- See S
 - Focusing on nearby heavy equipment operations.
 - Work with Coal Yard operators to avoid falling into voids.
 - No open flames.



ASBESTOS

-
- All employees must comply with OSHA 29 CFR 1910.1001 Asbestos Standard in addition to CPS Energy work standards.
 - All employees who may be exposed to asbestos-containing or suspect asbestos-containing materials on our sites must be made aware of the health and physical effects associated with asbestos exposure.

ASBESTOS

- Awareness training must include:
- Health and physical effects
- Routes of entry
- Specific materials at a facility that may contain asbestos



ASBESTOS

- Thermal insulation
- Wire insulation
- Valve packing
- Transite
- Cementitious grout
- Flooring materials
- Gasket material
- Tar pipe wrap
- Transite siding
- Cementitious wall coverings

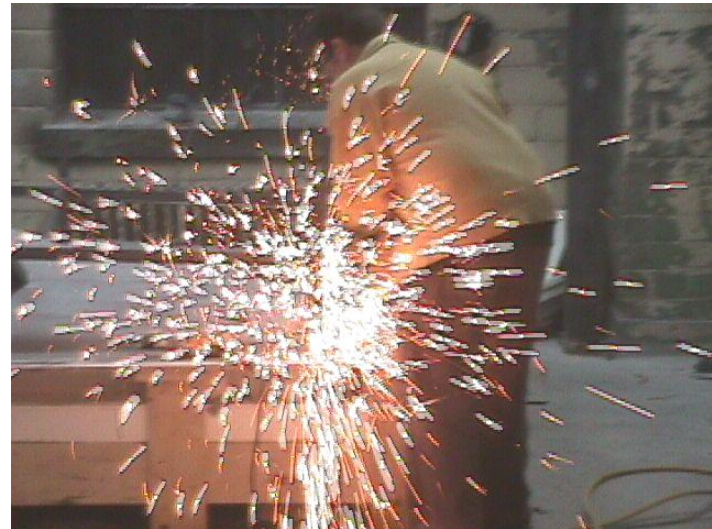
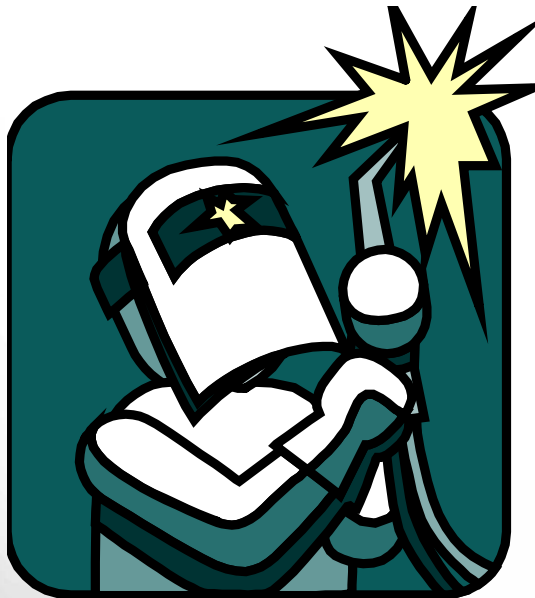


ASBESTOS

-
- Employees shall be instructed that they shall not disturb asbestos-containing or suspect asbestos-containing materials unless they are specifically qualified and instructed to do so.
 - Before an employee comes in contact with any of the previously mentioned potential asbestos-containing materials, the contractor must stop work and contact an CPS Energy representative immediately.
 - Job Briefings / Hazard Analysis with the employee is required PRIOR to the initiation of ALL work.

TOXIC METALS

Employees should pay particular attention to toxic metal concerns if they will be doing the following types of work:



TOXIC METALS

- Manual demolition of structures
- Manual scraping
- Manual sanding
- Heat gun applications
- Power tool cleaning
- Spray painting
- Metal burning
- Rivet busting



TOXIC METALS

- Clean up activities where dry expendable abrasives are used
 - Abrasive blasting enclosure movement or removal
 - Abrasive blasting
 - Welding
 - Cutting
 - Grinding
 - Torch burning
 - Sanding



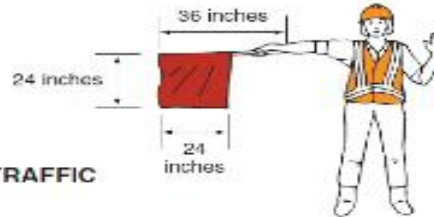
Traffic Safety & Flagging Operations

ZERO
HARM
THROUGH SAFETY

TYPES OF SINGLING DEVICES

**PREFERRED METHOD
STOP/SLOW Paddle**

**EMERGENCY SITUATIONS ONLY
Red Flag**



TO STOP TRAFFIC



TO LET TRAFFIC PROCEED



TO ALERT AND SLOW TRAFFIC

WORK ZONE AND FLAGGER SAFETY

- All personnel working within 15' of a driving lane must be wearing a class 2 or class 3 traffic vest.
- Class 3 vests will be worn at all times for nighttime conditions and speeds greater than 55 mph



Questions

ZERO
HARM
THROUGH SAFETY