Construction Contractor Safety Orientation

Everyone is responsible for safety

S&MA
August 2009

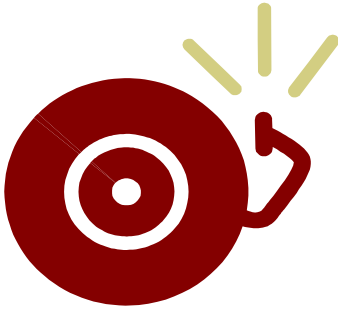
This presentation is designed to be used as a supplemental orientation to all established and existing safety plans and procedures for NASA, Stennis Space Center and Contractor/Subcontractor Safety Plans that are, “Submitted and Approved”.

It is NOT intended to substitute the contractor’s safety plan or program and does not release the contractor from their legal obligation of conforming to federal, state and local safety and health standards to provide their employees with a safe and hazard-free working environment.

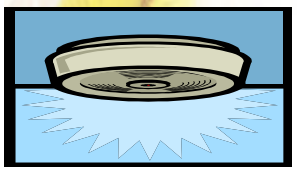
Contractor site managers/supervisors shall ensure **ALL contractor personnel** working at SSC view this presentation **PRIOR** to commencing contract duties.

A roster shall be provided to NASA Safety indicating names, signatures and dates of viewing and/or instruction.

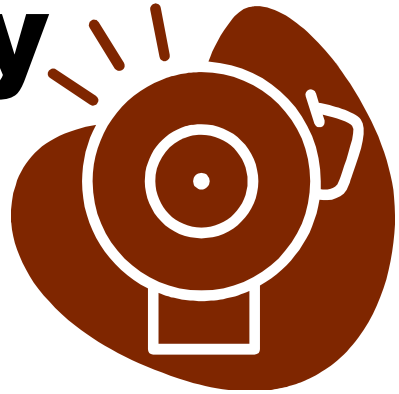
SSC Safety



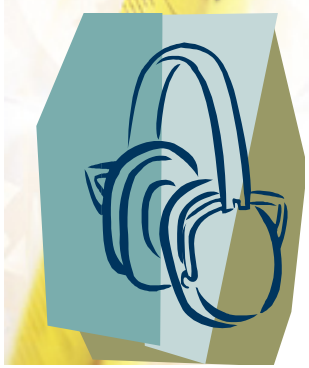
All contract personnel shall view the SSC safety video at the South Gate Visitors Center prior to badge issuance. Contractors shall be knowledgeable of the danger and hazard warning systems at SSC. Employees will not enter any area under such active warning, test or alarm without specific permission from test stand or facility manager. When applicable, contract personnel shall also view the test facility orientations prior to entering those facilities without an escort.

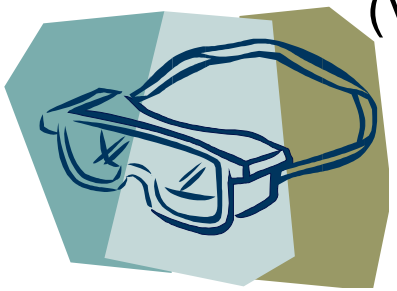


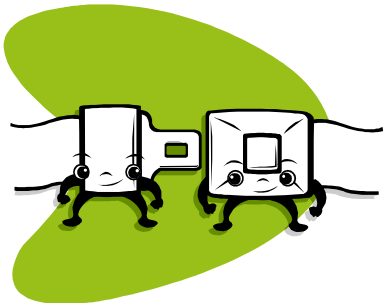
Contractor Safety Orientation



- Incident Reporting
- Buddy System
- Vehicle Operations
- Hazard Communication
- Respirators
- Personal Protective Equipment
- Hearing Conservation
- Fall Protection
- Scaffolding
- Lockout /Tagout
- Confined Space
- Electrical
- Aerial Work Platforms
- Fire / Fire Extinguishers
- Weather Conditions
- Basic First Aid (not certified training)
- Blood Borne Pathogens
- Personal Flotation Device
- Heat/Cold Stress
- Good Safety Practices
- Voluntary Protection Program (VPP)



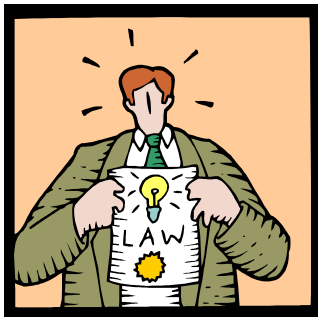


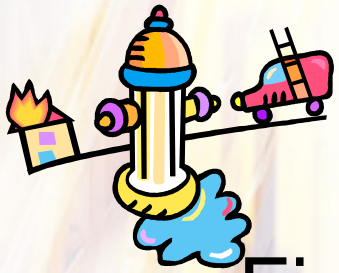


Regulatory Standards

All work performed on SSC will conform to the following standards:

- 29CFR1926 (Construction)
- 29CFR1910 (General Industry)
- NEC
- NFPA
- SPR 8715.1
- SSP-8715-0001
- Other state, local and federal safety, environmental and health standards as applicable to the project.

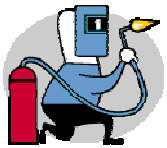




Important Phone Numbers

- Fire, Medical or Environmental Emergency
  - Call immediately upon suspicion of or actual emergency
  - ➢ **911**
  - ➢ **228- 688-3636**

- Hot Work Permit: **688-3639**



- Dig Permit: **688-2119**

- NASA Safety: **688-3152/1187/1025**

- Facility Operating Services Safety
  - ➢ **688-1500/7178/2213**

Communication Devices Driving Policy

- Use of a communication device by the driver of any vehicle is prohibited unless the vehicle is safely parked or the driver is using a hands-free device.
- Use of a communication device of any kind, whether hand-held or hands-free, by the driver of any vehicle entering or exiting through a security checkpoint is prohibited.

Hurt at Work?

- You've carefully thought out all the angles.
- You've done it a thousand times.
- It comes naturally to you.
- You know what you're doing.
- It's what you've been trained to do your whole life.
- Nothing could possibly go wrong, right?

Think Again !!!

Incident Reporting

- Close Calls
  - An event or condition that may have resulted in an accident, injury, or illness, but due to other factors, did not.
  - Reporting close calls is the best method to prevent accidents by correcting hazards BEFORE they result in injury, illness, or damage.
  - Use NASA/SSC Close Call Reporting System – posters/ forms in each building or report at 688-1249/3152.

- Incident Reporting
  - All injuries or illnesses, regardless of seriousness, shall be reported and referred to the SSC Clinic
  - Incidents shall be reported to NASA Safety on NASA Mishap Form 1627 with assistance from Construction Manager.
  - Incidents with no injury/illness or damage under $1,000 shall be reported as a Close Call on NASA Mishap Form 1627.

Buddy System

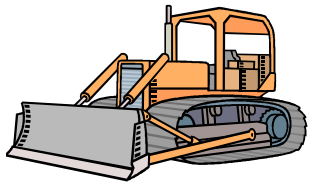
Contractors will utilize the ‘Buddy System’ when duties require an employee to work in remote, isolated, or otherwise non-observable locations. Supervisors will ensure such employees are readily observable or accounted for by other means, i.e., periodic radio/telephone check in.

Outdoor Hazards at SSC

- Always be aware of the following hazards at SSC:
  - Wasps/Bees/Hornets/Ticks/Mosquitoes (#1 cause of outdoor injuries at SSC)
  - Spiders – Indoor & outdoor hazard
  - Snakes – inhabit all wooded, grassy areas and wetlands
  - Poison Oak/Poison Ivy
  - Alligators – inhabit canals & lagoons
  - Deer – traffic hazard

Motor Vehicle / Equipment Operations

- Operators shall be properly trained & licensed.
- A daily inspection shall be conducted and documented to assure that all equipment is in safe operating condition.
- Seatbelts shall be worn at all times.
- Traffic signs and speed limits shall be obeyed.
- Parking in government spaces is prohibited. (Painted yellow)



- Parking of non-emergency vehicles in emergency areas is prohibited.
- Use spotter or perform a safety check before backing.
- Must yield to emergency vehicles.
- Vehicles/equipment shall be turned off when left unattended.
- Motor vehicle accidents shall be IMMEDIATELY reported.
- Slow moving vehicle signs shall be mounted on vehicles designed to be driven on roads at speeds $\leq$ 25mph.

Hazard Communication

- “The Right To Know” Standard
- Chemical Hazards
- Written Program
  - Training
  - Container Labels
  - Material Safety Data Sheets (MSDS)
  - Inventory List

Material Safety Data Sheets

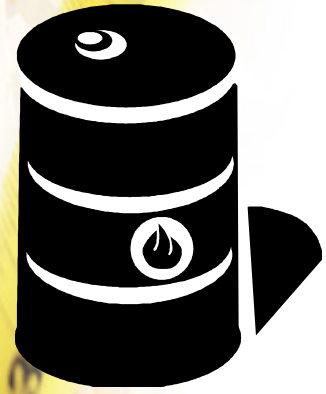
- Contractors shall provide all Material Safety Data Sheets (MSDS) to NASA for approval, prior to bringing any chemicals on site at SSC.
- Contractors shall maintain copies of MSDS on site in a location which is accessible to all employees.
- Contractors and their employees shall be aware of the location of the facility's MSDS book by checking with the Facility Manager prior to performing work in that facility.

Material Safety Data Sheets

- Contain the Following Information:
  - Chemical's common name
  - Hazardous Ingredients
  - Physical and Chemical Characteristics
  - Fire and Explosion Hazard Data
  - Reactivity Data
  - Health Hazard Data (Limits, Symptoms, etc.)
  - Precautions for Safe Handling
  - Control Measures and First Aid

Container Labels

- All chemical containers shall be labeled or tagged, in accordance with 29 CFR 1910.1200.
- As a minimum, the label shall identify the chemical as it appears on the MSDS and contain appropriate hazard warnings.
- It is preferred that the NFPA or the HMIS labeling system be used on transfer containers.
- Any container greater than 55 gallons, will be labeled with the NFPA labeling system.



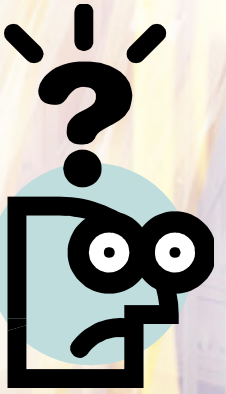
Respiratory Protection

- All contractor employees exposed to hazardous atmospheres, i.e. confined spaces, chemical vapors, asbestos abatement, etc., shall be provided appropriate respiratory protection by their employer.
- Employees shall be incorporated into a contractor's respiratory protection program.

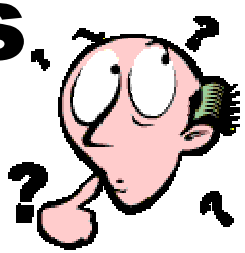
Respiratory Protection

- SSC has inventories of asbestos containing materials (ACM) located in test stands, mechanical equipment rooms, building ceilings, and other various locations throughout.
- Some materials that may contain asbestos are fireproofing, pipes, pipe insulation and certain types of floor tiles. (See next slide)
- Those areas have been identified and work in those areas that may disturb this material is regulated.
- If any employee suspects that they may have disturbed or come in contact with an asbestos containing material, they must stop work immediately and notify a supervisor. That supervisor will notify a staff Industrial Hygienist at SSC to asses that material.

EXAMPLES OF ASBESTOS CONTAINING MATERIALS

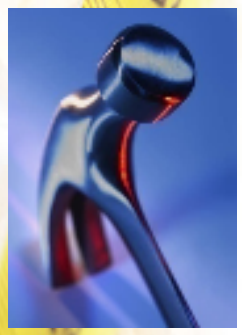


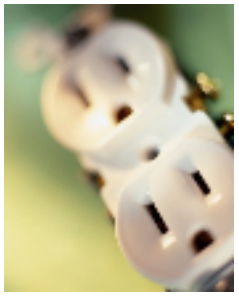
Construction Activities



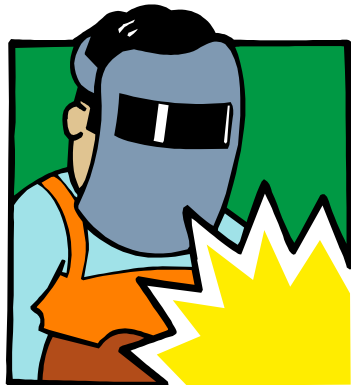
‘Construction activity’ is defined as employees involved in work for construction, alteration, changing configuration, installing, removing and/or repair, including painting and decorating.

Certain head, foot and eye protection (PPE) is required to enter any construction area at SSC.

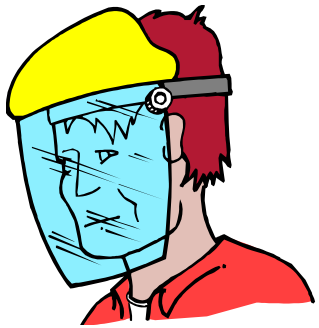




Personal Protective Equipment (PPE)

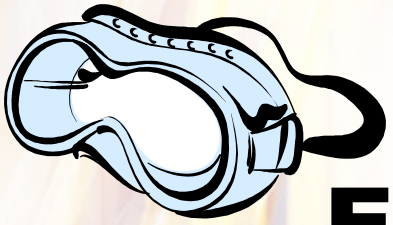


- PPE is required while engaged in, or in the immediate vicinity of, construction sites or activities at SSC.
- PPE is required when engineering or administrative controls are inadequate.
- PPE must be properly selected and worn correctly.
- Pre-Job analysis, also used in determining required PPE
  - Activity Hazard Analysis
  - Once PPE has been determined, the AHA should indicate the specific item(s) required. (Exp. Gloves – Leather, Protective clothing – TYVEK, etc.)
- Training is required for use.



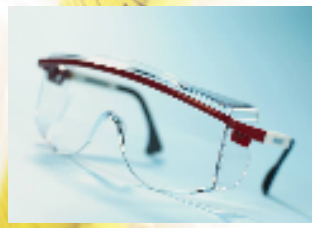
Head Protection

- Hard Hats (Head Protection) shall be worn during ***all construction activities***, in aerial man lifts or when in the vicinity of suspended loads or other potential overhead or bumping hazards at SSC.
- Hard Hats shall be ANSI Z89.1 approved.
- Hard Hats shall be worn and maintained according to the manufacturers recommendations.

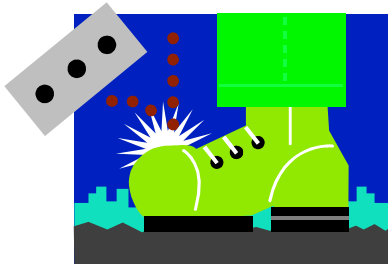


Eye and Face Protection

- All protective eye and face devices must comply with ANSI Standard Z87.1 - 2003 and all safety glasses must be worn with firmly affixed side shields.
- Goggles - better protection for chemicals, splashes, dusts, or projectiles.
- Face Shield - better for splashes or projectiles. Special requirements for electrical arc flash protection (NFPA 70E) <u>Safety glasses shall be worn under face shields</u>
- Chemical Splash Hood
  - shoulder length or longer



Hand and Foot Protection



- **Shoes / Boots**
  - Safety shoes shall be worn on all construction sites at SSC
    - Compression, puncture
    - Slip resistant soles
    - Electrical work requires Non-conductive toe caps
    - ANSI Z41 approved
  - Metatarsal guards
  - Chemical resistant
    - Prevents contact with chemicals
    - Protects top of foot behind toe

- **Gloves / sleeves**
  - General duty
    - Cotton, leather
  - Sharp objects
    - Leather, Kevlar
  - Cut hazards
    - Kevlar
  - Chemical hazards
    - Multiple types
  - Electrical hazards
    - Flame/Arc flash resistant (NFPA 70 E)

Protective Clothing

- Tyvek (white suits)
  - dusts, dirt, grease
- Saranex
  - coated Tyvek, better for mild chemicals
- Polyethylene
  - alternative to Tyvek
- PVC
  - rain suits, splash suits
  - moderate chemicals
- Neoprene
  - acids, caustics, solvents
- Butyl rubber
  - resists gases
- Nomex
  - flame protection (NFPA 70E)
- Kevlar
  - cut protection
- MANY OTHERS

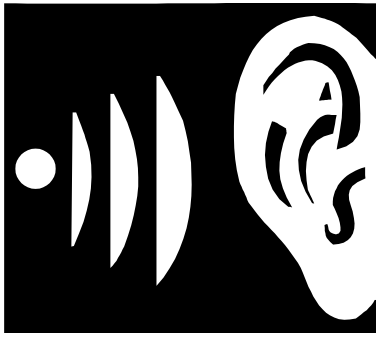
Noise Hazards

Hearing Protection shall be worn in all posted or other noise hazard areas

- Noise hazard areas on site include, but are not limited to:
  - Mechanical/electrical equipment rooms.
  - Test stands
  - Pressure vessel & pressure release areas
  - High pressure gas
  - High pressure water
  - Other posted noise hazard areas
  - Performing or near operations generating high noise levels

<u>Noise Levels</u>

- Measured in decibels (dB)
  - Whisper- 10-20 dB
  - Speech- 60 dB
  - Noisy Office- 80 dB
  - Lawnmower- 95 dB
  - Passing Truck- 100 dB
  - Jet Engine- 150 dB
- NASA Limit (PEL) - 85 dB



Hearing Protectors

- Ear Plugs - preferred (NRR* 20-30 dB)
- Ear Muffs - 2nd choice (NRR 15-30 dB)
- Double Hearing Protectors (plugs and muffs) (NRR 30-40 dB) used for levels over 115 dB

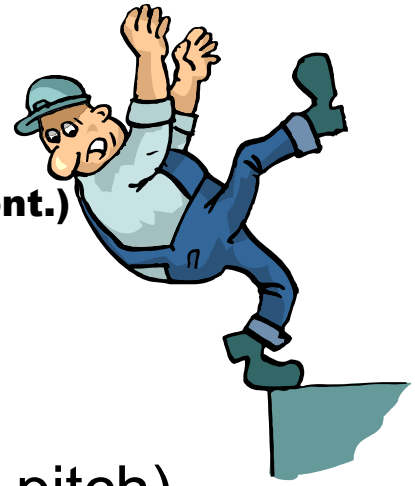
(*NRR = Noise Reduction Rating - an approximate decibel reduction provided by the protector in lab conditions. Subtract 7 dB for approximate "real world" attenuation)

For assistance with monitoring noise levels at SSC, you may contact an Industrial Hygienist at, 688-7993

Fall Protection

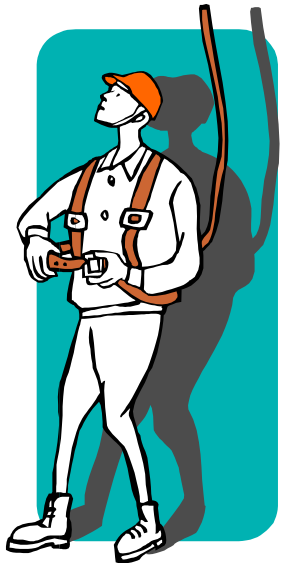
- Required on any unprotected edge six (6) feet above a lower surface
  - Guardrail Systems (handrail & mid-rail) or,
  - Safety Net Systems, or
  - Travel restriction system, or
  - Personal Fall Arrest Systems
- On any fixed ladder higher than 20 feet
  - Ladder Safety Device (with body harness), or
  - Safety Cage with offset landings every 30 feet

Fall Protection (cont.)



- Working on low-sloped roofs (<1:4 pitch).
  - Warning line 6’ from unprotected edge
  - Monitor system alone **NOT** authorized at SSC
  - Personal Fall Arrest System or Travel Restraint System shall be used within 6’ of unprotected edges.
- Fall protection Competent Person required for inspection of equipment and training.

Personal Fall Arrest System



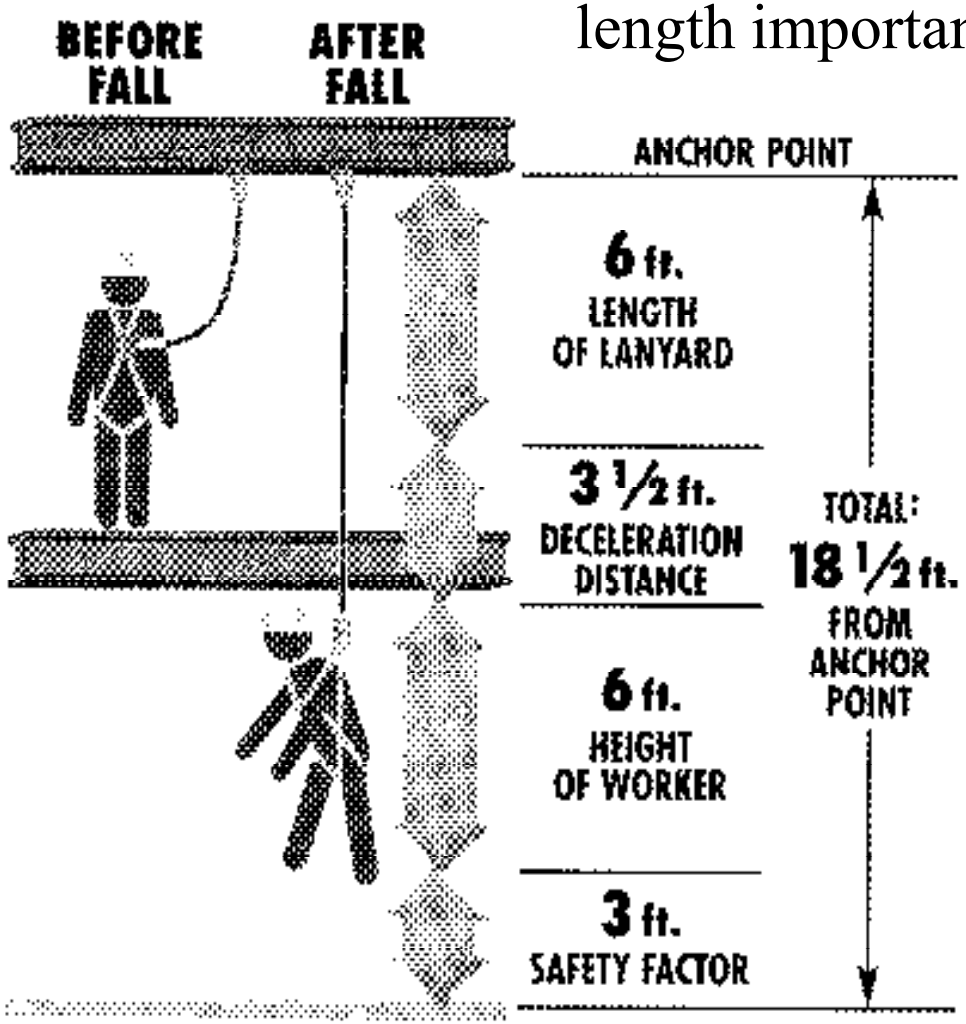
Consists of the following elements:

- Full Body Harness (body belts are **prohibited**)
- Lanyard (regular or self-retracting life line)
- Shock Absorber
- Double locking Snap Hooks (no single action)
- Lifeline (as needed)
- Anchorage point
  - Must be capable of sustaining an arresting force of 5000 lbs per employee attached
  - Can be engineered at 3600 lbs per employee.
- Training & Certification for review by Safety & Contracting Office
- Rescue Plan for review by Safety & Fire Departments

Fall Clearance (not a sale!)

Why is lanyard length important?

NOTE: ALWAYS attach to an anchor point **at or above** your harness back D-ring. Anchoring below this point will cause you to exceed OSHA's 6 foot free-fall limitation when using a 6 foot lanyard. Shorter lanyards may be used to limit free-fall to less than 6 feet.



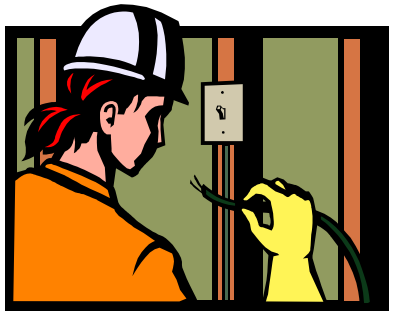
Scaffolding

- Shall be erected under supervision of "Competent Person" (CP)
- Inspected and documented by CP prior to shift
- Shall be leveled on sound, rigid footing
- No overloading (must support 4x max intended load)
- Scaffold grade planking
- Railings / toe-boards shall be per OSHA requirements
- Fall protection if no railing
- Access ladders
- Get down from "mobile" scaffold to move it
- No portable ladders on scaffolding
- 1-inch max gap between planks
- Cross braces may be used as handrail or mid-rail, but **NOT** both.

Portable Ladders

- Use only industrial type rated ladders
- Inspect before each use
- 3 points of contact for climb
- One person only
- Firm, level footing
- Do not use as platform or scaffold
- Ladders > 20 ft. used to access scaffolds shall be provided fall protection.
- Secure top of extension ladders
- Extend 3 feet above access or working level
- Use 4:1 lean ratio
- Ladders will have non-conductive railings when used near energized circuits
- Top rung and top of ladder not to be used as a step.

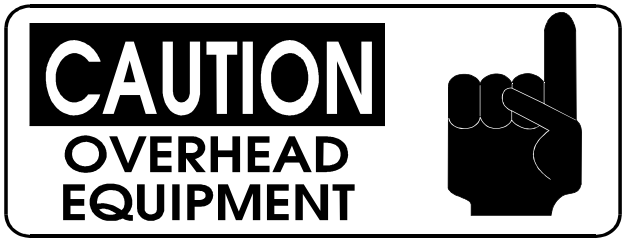
Electrical Safety



- A Ground Fault Circuit Interrupter (GFCI) or an Assured Equipment Grounding Program shall be used on all construction sites at SSC to protect employees from electrical shock hazards.
- Industrial rated extension cords shall be used.
- Electrical tape repairs are NOT authorized.
- Portable/hand held power tool cords will have ground prong or be labeled double insulated.
- NO work on exposed energized circuits, unless required for testing/trouble shooting.
- NFPA 70E PPE required for <u>ALL</u> exposure to energized circuits.
- All temporary electrical service will conform to NEC and SSC standards
- All cords/cases shall be free from defects.
- GFCIs shall be used with all extension cords

Aerial Lifts

- Full body harness required at all times
- Secure lanyard or self-retracting lifeline to anchor
- Never use a ladder from a lift
- Do not over extend boom lifts
- Stay away from overhead lines
- Follow manufacturer's safety notices
- Always have qualified operator on the ground
- Documentation of proper equipment training & certifications required



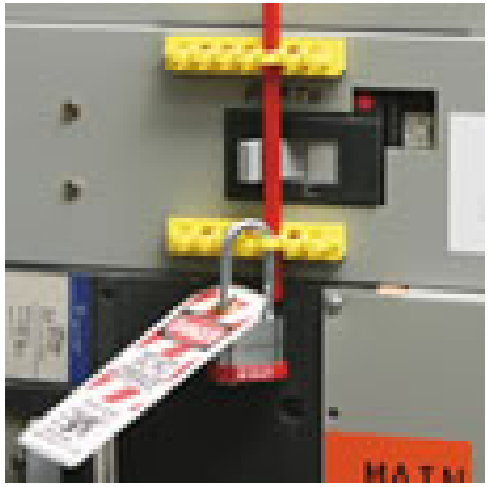
Lockout/ Tagout

- Required Control of Hazardous Energies
  - Electrical
  - Mechanical
  - Thermal
  - Pressure
  - Chemical
  - Kinetic / Gravity

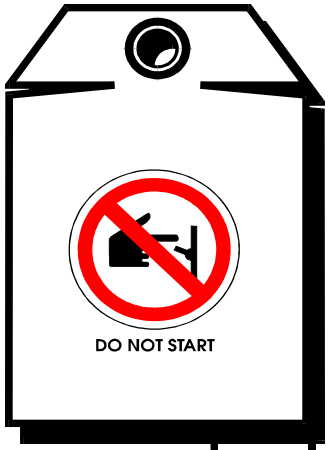
- Injuries are caused by the release of <u>hazardous energy</u>

Lockout

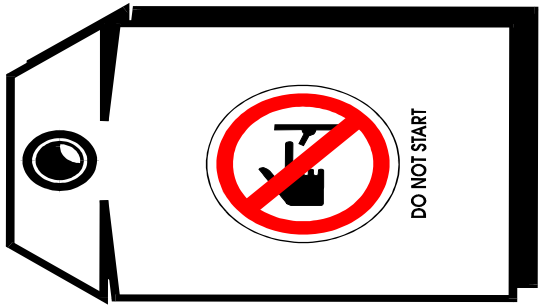
- Preferred method over Tag Out
- Locking device is applied to the energy control point
- A positive means to secure isolation point
- Individuals responsible for own lock & key



Tagout

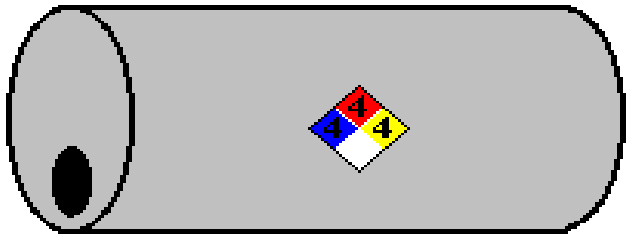


- Tag is device applied to energy control point
- Used in conjunction with Lockout
- Used when Lockout not feasible
- Insert name, date, time, purpose, etc. on tag



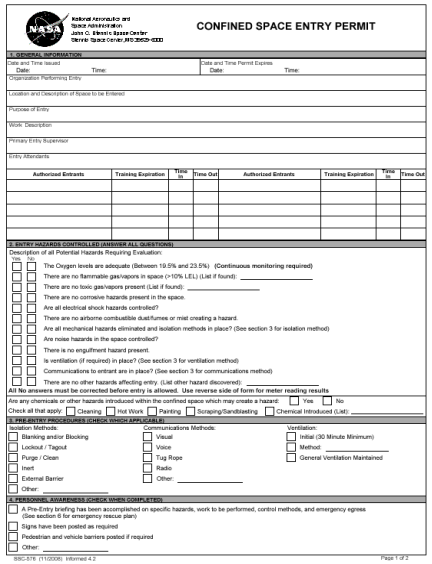
Atmospheric Hazards

- Oxygen Deficiency / Enrichment –
  below 19.5% or above 23.5%
- Flammable / Explosive - LEL above 10%
- Toxic - above established Permissible Exposure Limit, unknown, or Immediately Dangerous to Life or Health
- Control with testing, ventilation, and/or PPE



Confined (Permit) Space Entry

- Meets all of OSHA definitions
  - Limited means of entry or exit
  - Not intended for human occupancy
  - May / could contain a hazardous atmosphere
  - Contains engulfment or entrapment hazards
  - Contains other hazards
- Tanks, vessels, lift stations, pipelines, manholes, tankers, bins, excavations, etc.



National Aeronautics and Space Administration
John C. Stennis Space Center
Stennis Space Center, MS 39529-6000

CONFINED SPACE ENTRY PERMIT

1. GENERAL INFORMATION

Date and Time Issued — Date: Time:
Date and Time Permit Expires — Date: Time:
Organization Performing Entry
Location and Description of Space to be Entered
Purpose of Entry
Work Description
Primary Entry Supervisor
Entry Attendants

Authorized Entrants	Training Expiration	Time In	Time Out	Authorized Entrants	Training Expiration	Time In	Time Out

2. ENTRY HAZARDS CONTROLLED (ANSWER ALL QUESTIONS)

Description of all Potential Hazards Requiring Evaluation:

Yes No
- ☐ ☐ The Oxygen levels are adequate (Between 19.5% and 23.5%) **(Continuous monitoring required)**
- ☐ ☐ There are no flammable gas/vapors in space (>10% LEL) (List if found): _____
- ☐ ☐ There are no toxic gas/vapors present (List if found): _____
- ☐ ☐ There are no corrosive hazards present in the space.
- ☐ ☐ Are all electrical shock hazards controlled?
- ☐ ☐ There are no airborne combustible dust/fumes or mist creating a hazard.
- ☐ ☐ Are all mechanical hazards eliminated and isolation methods in place? (See section 3 for isolation method)
- ☐ ☐ Are noise hazards in the space controlled?
- ☐ ☐ There is no engulfment hazard present.
- ☐ ☐ Is ventilation (if required) in place? (See section 3 for ventilation method)
- ☐ ☐ Communications to entrant are in place? (See section 3 for communications method)
- ☐ ☐ There are no other hazards affecting entry. (List other hazard discovered): _____

All No answers must be corrected before entry is allowed. Use reverse side of form for meter reading results

Are any chemicals or other hazards introduced within the confined space which may create a hazard: ☐ Yes ☐ No

Check all that apply: ☐ Cleaning ☐ Hot Work ☐ Painting ☐ Scraping/Sandblasting ☐ Chemical Introduced (List): _____

3. PRE-ENTRY PROCEDURES (CHECK WHICH APPLICABLE)

Isolation Methods:
- ☐ Blanking and/or Blocking
- ☐ Lockout / Tagout
- ☐ Purge / Clean
- ☐ Inert
- ☐ External Barrier
- ☐ Other: _____

Communications Methods:
- ☐ Visual
- ☐ Voice
- ☐ Tug Rope
- ☐ Radio
- ☐ Other: _____

Ventilation:
- ☐ Initial (30 Minute Minimum)
- ☐ Method _____
- ☐ General Ventilation Maintained

4. PERSONNEL AWARENESS (CHECK WHEN COMPLETED)

- ☐ A Pre-Entry briefing has been accomplished on specific hazards, work to be performed, control methods, and emergency egress (See section 6 for emergency rescue plan)
- ☐ Signs have been posted as required
- ☐ Pedestrian and vehicle barriers posted if required
- ☐ Other: _____

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Confined Space Permits

- Facility issued
- Supervisor prepares
- Sign In / Out
- Atmospheric testing
- Hazard controls
- Good for only 12 hours max
- Renew when expired
- No confined space entry if temperature is less than 40° F or more than 120° F

National Aeronautics and Space Administration
John C. Stennis Space Center
Stennis Space Center, MS 39529-6000

CONFINED SPACE ENTRY PERMIT

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Check all that apply: ☐ Cleaning ☐ Hot Work ☐ Painting ☐ Scraping/Sandblasting ☐ Chemical Introduced (List): _____

3. PRE-ENTRY PROCEDURES (CHECK WHICH APPLICABLE)

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- ☐ Visual
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- ☐ Initial (30 Minute Minimum)
- ☐ Method: _____
- ☐ General Ventilation Maintained

4. PERSONNEL AWARENESS (CHECK WHEN COMPLETED)

- ☐ A Pre-Entry briefing has been accomplished on specific hazards, work to be performed, control methods, and emergency egress (See section 6 for emergency rescue plan)
- ☐ Signs have been posted as required
- ☐ Pedestrian and vehicle barriers posted if required
- ☐ Other: _____

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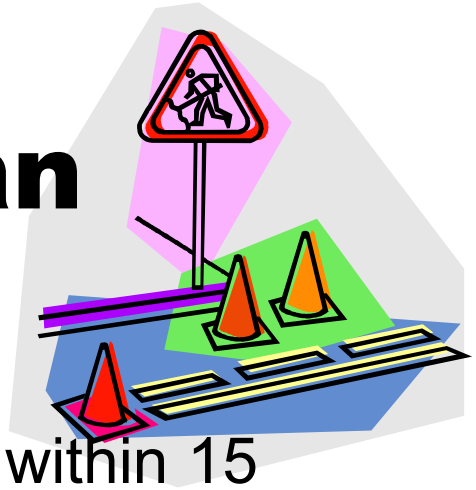
Other Hazards of Confined Space Entry

- Hazardous Energy - Lockout / Tagout
  - Electrical, Thermal, Mechanical, Pressure, Chemical
- Entrapment - plan for avoidance and retrieval
- Engulfment - plan for avoidance and retrieval
- Rescue - plan for retrieval, must have **attendant** and communications

Trenching / Excavation

- Dig Permit required if >12 inches
- Sloping / shoring required at 4 feet
- Competent (trained) person inspection before use & as required
- Ladder egress available to worker with 25’ maximum travel
- SSC type B & C soils
- Traffic control required near roads
- Designed by engineer when >20’ deep

Traffic Control Plan

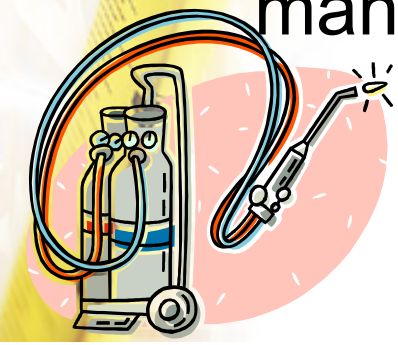


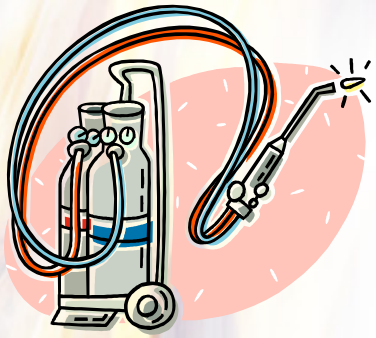
- Contractor activities on SSC conducted on or within 15 feet of a roadway shall be protected by temporary traffic control methods as described in Department of Transportation Manual on Uniform Traffic Control Procedures.

- Such activity will be conducted by written permit only.
- Contractors will submit Traffic Control Plans for such operations for review and approval by NASA / FOSC Safety and FSD Engineering departments.

Hot Work

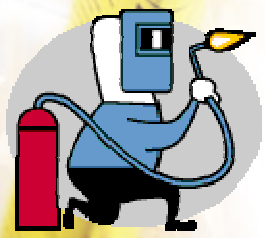
- Hot Work Permit is required for all SSC jobs involving:
  - Welding, cutting, grinding, brazing or other flame / spark producing operations
  - Atmospheric analysis is required for these operations when within 100 feet of a propellant or fuel line.
- Hot Work Permits – Call your construction manager or SSC Fire Department at 688-3639
- Atmospheric Analysis – Call your construction manager or FOS Safety at 688-2213/7993/2141





Welding Safety

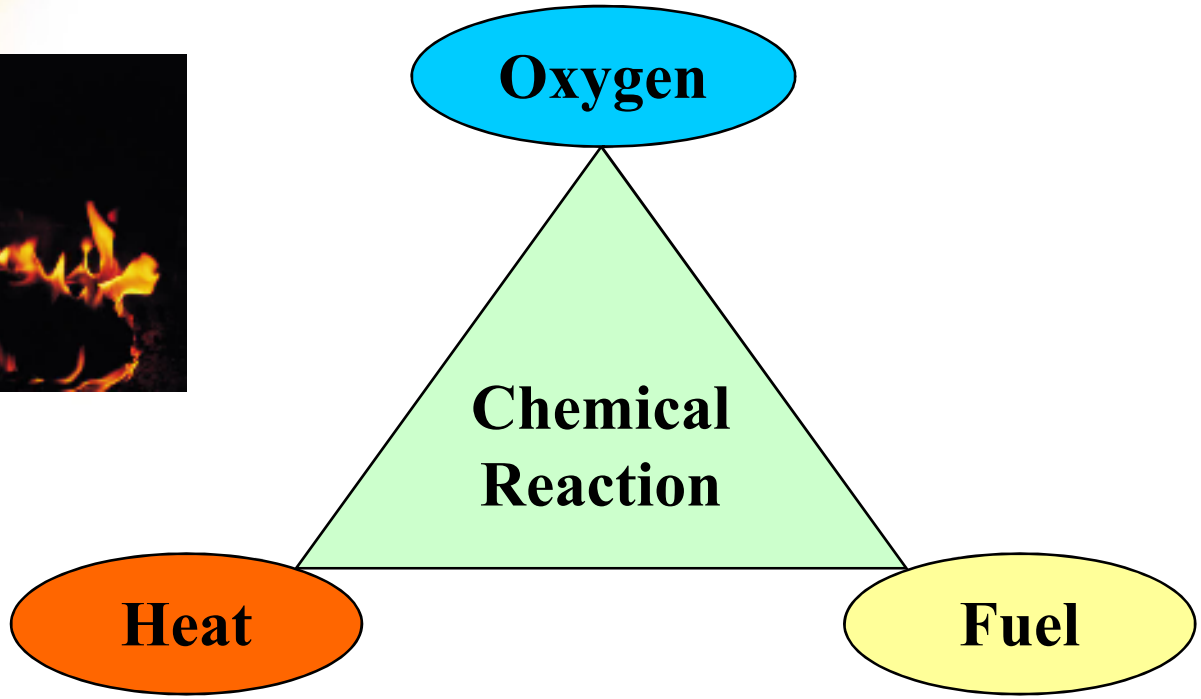
- Inspect all equipment prior to use.
- Obtain SSC Hot Work Permit for each job.
- No damage allowed on first 10 feet of lead cable.
- Remove or cover all combustibles within 35 feet.
- No electrical tape repairs on cables.



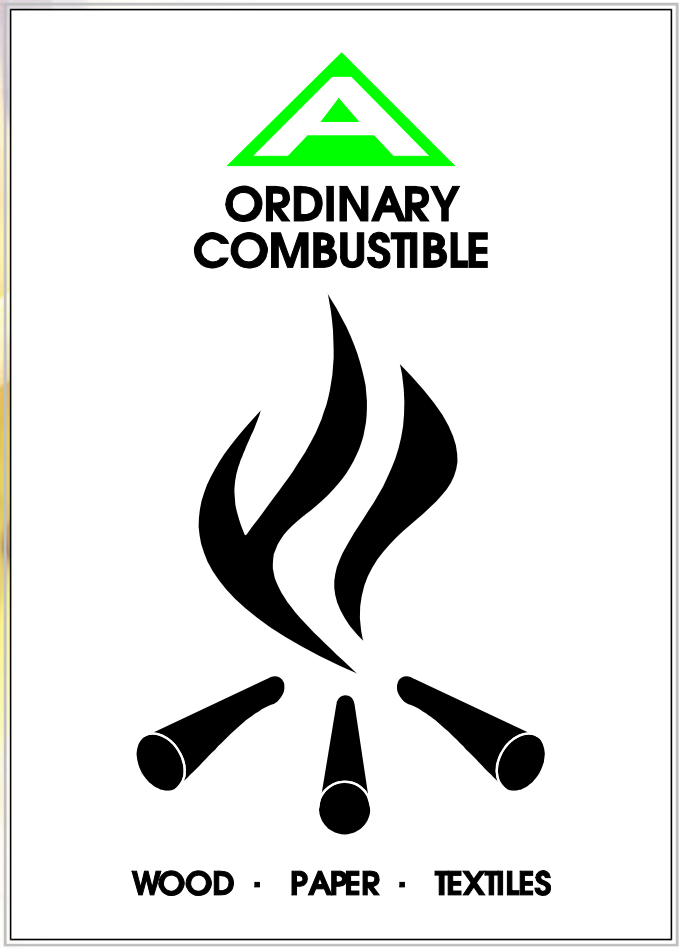
- GFCI protection on machines and generators
- Secure compressed gas cylinders for transportation with caps installed. (except on weld truck)
- Store oxygen & acetylene bottles 20’ apart.
- Use proper PPE for welding; face shield and/or goggles, gloves, flame resistant clothing, safety shoes and welding curtains if needed.

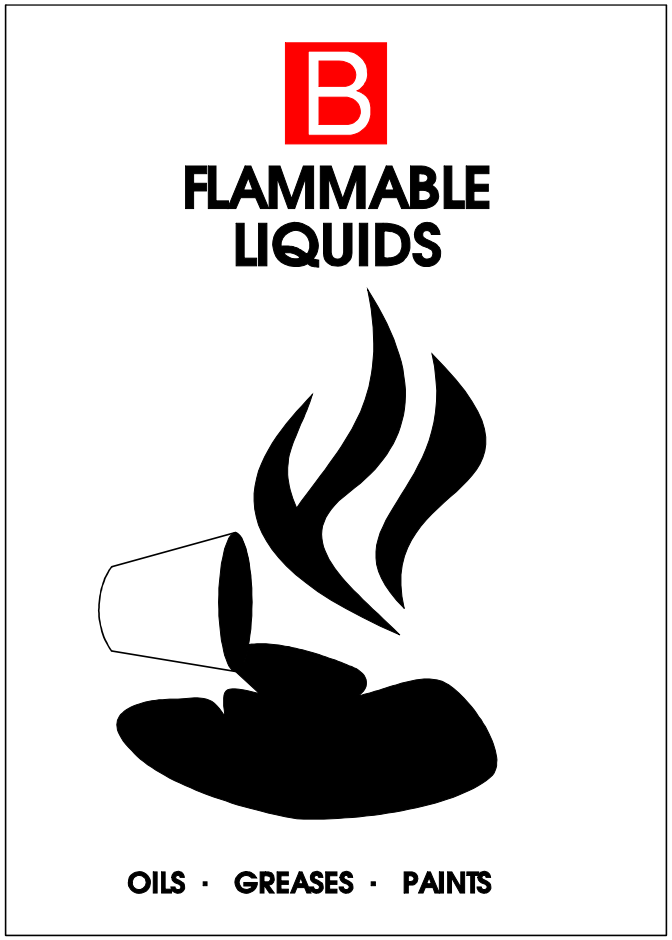
Elements of Fire

- Elements of Combustion (Fire Triangle)
- All required for a fire to occur.
- Trend is to include “Chemical Reaction” as fourth element (Fire Tetrahedron).

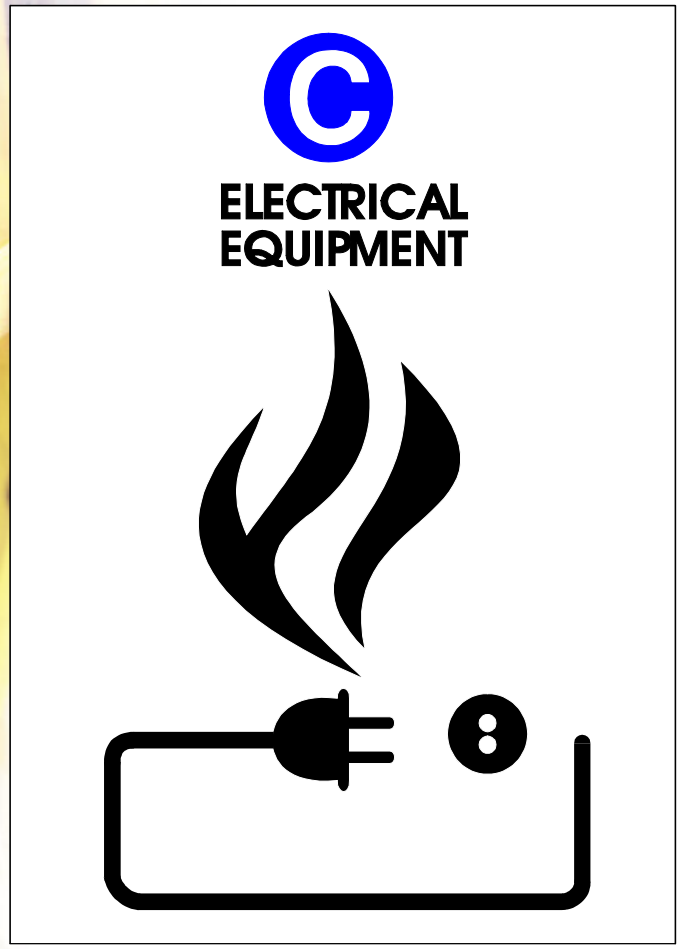


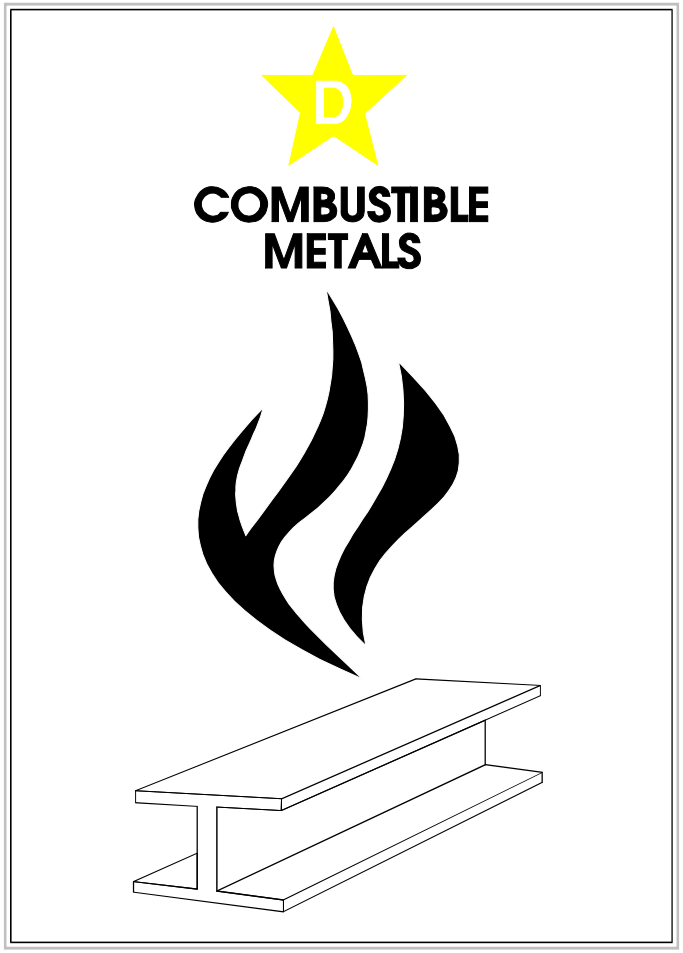
Classes of Fires

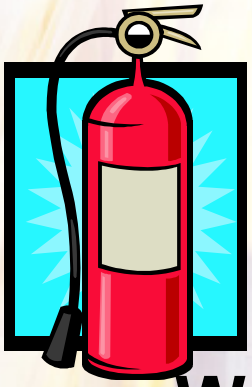




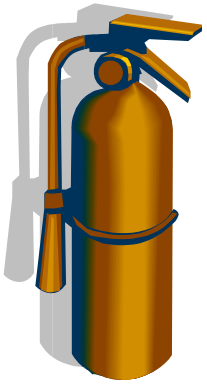
Classes of Fires



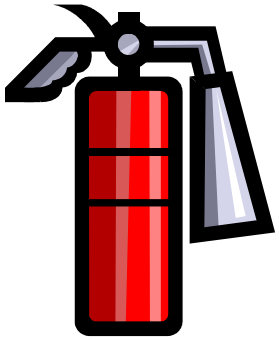




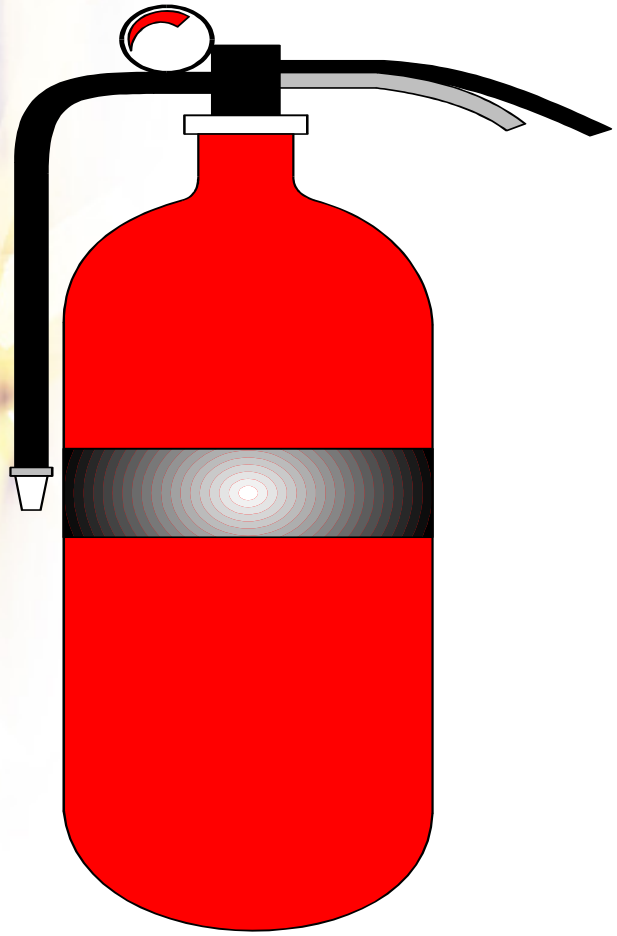
Fire Extinguisher Materials



- **Water** - class A only - cools /removes heat
- **Dry Chemical** - class A, B, or C - interferes with chemical reaction
- **Carbon Dioxide** - class A, B, or C (usually C) - removes Oxygen / smothers fire
- **Halon** – (being phased out - ozone) class A, B, or C (usually C) - removes Oxygen / smothers fire
- **Metl-X** - class D only - specialized dry chemical for metal fires
- **Foam** – Class B, holds down vapors



Fire Extinguisher Features



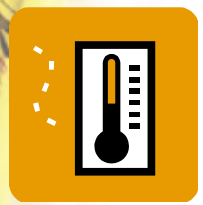
- Operating lever
- Locking pin
- Pressure gauge
- Discharge nozzle
- Label
  - type of extinguisher (A,B,C,D)
  - instructions

Fire Extinguisher Use

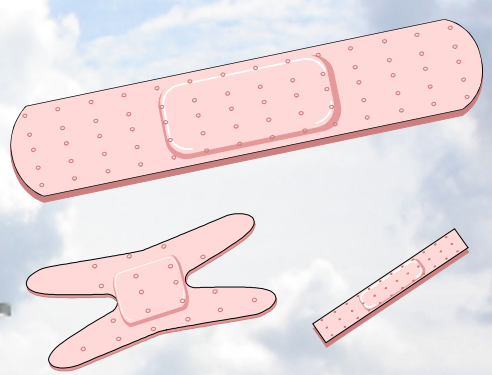
- Select correct extinguisher for class of fire
- **P**ull the locking pin
- **A**im at base of fire
- **S**queeze and hold the discharge lever
- **S**weep from side to side
- CAUTION - monitor the area, the fire could re-ignite
- Always notify supervisor of extinguisher use so it can be replaced or recharged and the fire investigated

Weather Conditions

- Lightning – seek shelter when observed within 5 miles or notified of an SSC Lightning Alert.
- High Winds – no scaffold or elevated work.
- Rains or Storms – no work in trenches or excavations until water is removed and inspected by competent person



On-Site Medical Care



- ALL employees suffering any injury and/or illness, regardless of severity, between the hours of 8:00 am & 4:30 pm will be taken to the SSC Clinic by their supervisor or foreman for evaluation.
- Injuries/illnesses experienced before or after clinic hours will report to the SSC Fire Department for initial evaluation and will be referred to off site treatment facilities as necessary.

11 11:35AM

Bloodborne Pathogens

- Aids
- Hepatitis
  - Hep-B vaccines for designated persons
- No contact with blood or body fluids
- Wear protective equipment, especially gloves & safety glasses
- Hospital / Laboratory Waste - “Red Bag”

Personal Flotation Devices

SSC has numerous canals and barges which pose potential fall exposure from unprotected edges.

USCG requires all vessels have life saving devices available for use.

Types of PFDs:

Type I - greatest buoyancy, will turn unconscious people upright in the water, required off-shore, must have man-overboard whistle and personal marker light

Type II - turns wearer to vertical, backward position, turning not as pronounced as Type I devices, more comfortable, used near-shore, must have man-overboard whistle and marker light

Type III - wearer can place himself in vertical, backward position, same buoyancy as Type II, most comfortable, used for recreational activities.

Type IV - A device that can be thrown, intended for calm, inland waters, not designed to be worn, including cushions/rings

Type V - work vest, used by workers aboard vessels while mooring/ unmooring, performing work, etc.

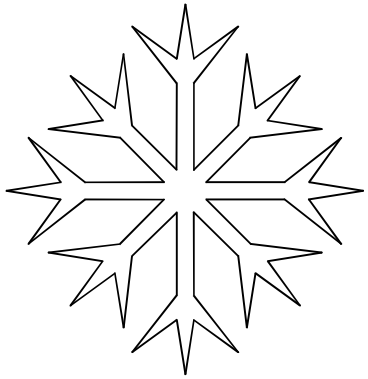
Personal Flotation Devices

– Fitting and Donning:
- Wear only PFDs that fit appropriately.
- Secure all straps, buckles and zippers on PFDs.

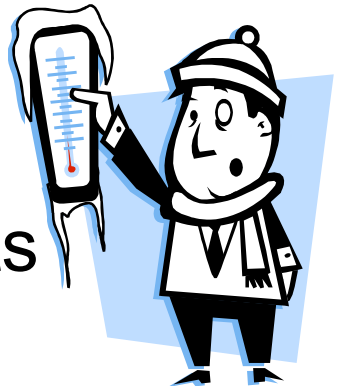
– Inspection and Maintenance:
- Inspect prior to and during every use.
- Check for tears, cuts, deterioration, leaks and excessive damage due to use.
- Keep away from sharp objects.
- Store PFDs after drying - do not dry in direct sunlight.

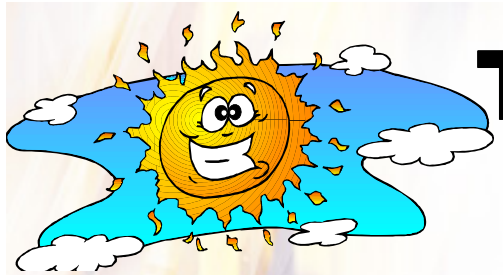
Temperature Stress – Cold

Open Test Stands or Vessels can expose employees to winds and wind chill



- Dress in layers
- Limit exposed skin
- Frostbite - localized frozen tissue
  - Do not rub area, limit motion, warm slowly
- Hypothermia - lowered body temperature
  - Remove wet clothing, use dry blankets
- Seek medical attention

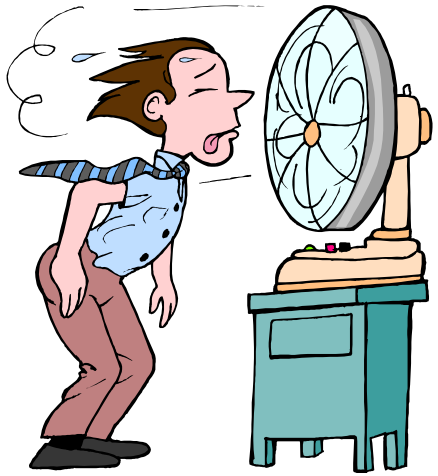




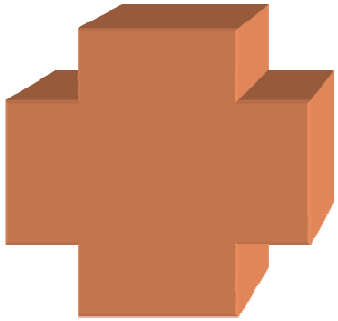
Temperature Stress – Heat

The majority of contractor work at SSC is outdoor job sites.

- Sunburn - keep skin covered and/or use sun block
- Heat Cramps - drink water / dilute “Gatorade”
- Heat Exhaustion - heavy sweating, cool skin
  - Cool victim, seek medical attention if vomiting
- Heat Stroke - medical emergency – **Call 911**
  - Hot, dry skin, rapid then weakening pulse
  - Cool victim immediately



Good Safety Practices



- Inspect work area daily
- Be an observer - stay alert
- Housekeeping, Housekeeping, Housekeeping
- Use your best safety device - THINK
- If you're not sure - ASK someone!!
- Report Injuries/Incidents/Illnesses

Good Safety Practices

- SSC Emergencies (from SSC land line): 911 or 688-3636.
- Report all incidents and close calls to Construction Manager and NASA Safety.
- Housekeeping & jobsite sanitation.
- Daily tool box talks.

Thank You for Your Time and Attention

If you have any questions or concerns pertaining to worksite safety and health, please contact the NASA Safety at 688-3152 or the FOSC contractor Safety & Industrial Hygiene Office at any of these telephone numbers: 688-2141/7993/7178/1500

Visit the SSC Construction Website:

www.constructionsafety.ssc.nasa.gov

Please ensure you sign the class roster indicating your viewing of this contractor safety orientation training.