F. Confined Spaces

1. Confined Space is intended to mean a relatively small or restricted space such as a tank, boiler, manhole, or any place where entry or exit is limited or ventilation is poor. A confined space is normally not intended for human occupancy or entry when the process/equipment is in operation. An "enclosed space" is a confined area that is suitable for human entry during operation, such as a manhole.

2. A Permit Required Confined Space is one where there is an atmosphere, or the threat of an atmosphere, that is dangerous to life, or in which a hazard exists that may impede escape of an individual if an accident occurs. Exposed electrical hazards in a confined space will cause the space to become a permit required confined space. Fall hazards in the space can cause the space to be declared a permit required confined space.

   LSU has identified several permit required confined spaces located on campus. Work in these areas requires that the procedures listed below are followed by all personnel. Permit required confined spaces are located in the following areas:

   -LSU Power House (6 boilers)

   -Highland Road Utilities (3 Boilers)

   -Sewer Lift Stations (3 on campus)

3. Training

   All employees who enter confined spaces must be properly trained.

4. Hazards of Confined Spaces

   a. Lack of oxygen can cause a worker to collapse almost instantly.
   b. Toxic gases or vapors can poison or suffocate workers.
   c. Combustion, a buildup of flammable/combustible gases or vapors, can burn or explode.
   d. Heat can cause heat exhaustion, cramps, etc.e. Noise intensifies in small spaces and can cause hearing loss, as well as interfere with communication.
   e. Mechanical equipment can cause sparks to ignite flammable or combustible gases, or cause physical injury.
   f. Falls can cause injury-falls from one level to another or by slips and trips.

5. Procedures

a. Review Guidelines

i. Determine potential hazards.
ii. Determine the classification, permit required or not.
iii. Review safety equipment required.
iv. Review emergency measures.

b. Get Proper Approval

i. Obtain an entry permit from your supervisor.
ii. Post it at worksite, if required.

c. Lockout/Tagout Sources of Danger (See "Lockout/Tagout")

d. Test for Potential Hazards

i. All confined spaces shall be tested for possible oxygen deficiency and flammable/combustible gas/vapor content by a qualified person.
ii. If hazardous gases/vapors are detected, ventilate and clean the space, then test again.

e. Ventilate

If inadequate ventilation is suspected, a blower shall be made available to assure sufficient air supply.

f. Assemble Proper Equipment and Post Observers

i. Required respirators, lifelines, tools, etc., shall be gathered before entering.
ii. An observer shall be posted near the entrance in case an emergency rescue is needed.
iii. In a permit required space, rescue equipment must be at the worksite, and a life line must be used. Also, a log of entries must be kept, and unauthorized people must be prohibited from entering.

g. Miscellaneous

i. Before welding, burning, cutting, or brazing work starts, a hot work permit shall be obtained.
ii. If asbestos pipe insulation is to be removed in a confined space, it shall be done by employees trained in asbestos removal techniques using proper personal protective equipment.

h. Never

i. Enter a confined space unless authorized.
ii. Enter a confined space unless an observer is posted near the entrance.
iii. Smoke in a confined space.

Note: See Appendix for Confined Space Entry Checklist