

UNCP-Pembroke Permit Required Confined Spaces Campus Summary Sheet

Revised 4/2018

Building	Description	Hazard	Permit Required	Hazard Control	Atmospheric Monitoring	Comments
Entire Campus	Sanitary and Storm Sewer Pump Lift Stations	Toxic Gases - Hydrogen Sulfide, Sewer Gas, Methane, Insufficient Oxygen, Bacteria Potential	YES	Lift station pump system must be fully de-energized (LO/TO) according to the applicable procedure. Forced air ventilation is required before entry unless the space is proven to be free of atmospheric hazards or no atmospheric changes will occur due to work operations or lift station conditions. Full Tyvek suit and gloves before entry, body harness and retraction device required.	Continuous 4 Gas Monitoring with 4 gas meter, check atmosphere in space by using stratified method before allowing entry.	Always check atmosphere from top to bottom before entering a sanitary sewer lift station. Full Permit Completion Required.
Entire Campus	Electrical Manholes & Vaults (Depending on Configuration)	Electrical Hazards, Potential for Insufficient Oxygen, carbon monoxide from engines running	YES	Cordon/barricade area to prevent pedestrian traffic/entry. Check manhole lid for elevated temp before removing, crack lid slightly to relieve pressure, if any. Full Ventilation may be required before entry depending on atmosphere test. Full harness and retraction device required. Electrical Hazard must be eliminated or controlled (LO/TO) before entry. All watches, rings and other jewelry must be removed. Follow all high voltage and NFPA arc flash control procedures. All person/s and public must be back safe distance from work location when re-energization occurs.	Continuous 4 Gas Monitoring with 4 gas meter, check atmosphere in space by using stratified method before allowing entry.	Manholes are located around campus. Depths of manholes may vary greatly. Always check atmosphere from top to bottom before entering. Full Permit Completion Required.
Entire Campus	Storm Sewer/Greywater Manholes	Toxic Gases - Hydrogen Sulfide, Sewer Gas, Methane, Insufficient Oxygen, Bacteria Potential	YES	Forced air ventilation is required before entry unless the space is proven to be free of atmospheric hazards or no atmospheric changes will occur due to work operations or manhole conditions. Full Tyvek suit, gloves, body harness and retraction device required. If at all possible, do not enter manhole if there is any possibility of precipitation occurring during the manhole entry period.	Continuous 4 Gas Monitoring with 4 gas meter, check atmosphere in space by using stratified method before allowing entry.	Manholes are located around campus. Depths of manholes may vary greatly. Always check atmosphere from top to bottom before entering. Full Permit Completion Required.
Entire Campus	Telecommunication Manholes	Electrical Hazards, Potential for Insufficient Oxygen, carbon monoxide from engines running	YES	Cordon/barricade area to prevent pedestrian traffic/entry. Ventilation may be required before entry depending on atmosphere test. Ventilate space fully if hazardous atmosphere is present. Full harness and retraction device required. Any Electrical / Energy Hazards must be eliminated or controlled (LO/TO) before entry.	Continuous 4 Gas Monitoring with 4 gas meter, check atmosphere in space by using stratified method before allowing entry.	High Voltage hazard controls may be required additionally if manhole contains high voltage circuits & feeds. Full Permit Completion Required.
Oxendine Science/Chancellors Residence	Crawl Space	Tight entry to all areas of the space. Potential for hazardous atmosphere if a sewer leak occurs. Potential for bacteria exposure if sewer leak occurs.	YES	Ventilation may be required before entry depending on atmosphere test. Full Tyvek suit, gloves and goggles required before entry. Due to tight, crawling access required, attendant/s need to keep in contact with entrants. Flashlights or other portable lighting will be needed. Polyethylene plastic sheeting is helpful to have to place on crawl space floor in work area.	Continuous 4 Gas Monitoring with 4 gas meter, check atmosphere before entering through crawl space vent (if available in area where work is to be done) check air on the way in to the work area upon initial entry.	This confined space has narrow passages from one area of the building to the next. Always keep an adequate open path behind you so that emergency removal can be conducted as easily as possible.
Entire Campus	Air Handlers (Fans and Motor Compartments) Housings that allow for personnel entry	Mechanical Parts - Rotating Fans and associated equipment, electrical hazards	NO	Air Handlers are non-permit required confined spaces for normal entries if the equipment is fully de-energized (LO/TO) per the applicable procedure. The air handler becomes permit required if any kind of welding, cutting or burning is completed or chemicals are used that release fumes or vapors within the air handler enclosure. Ventilate with portable fans as necessary to remove any fumes or vapors from work processes.	4 Gas Meter and continuous air monitoring required if any kind of atmospheric hazard is present or created (burning, cutting, welding, solvent, combustible, flammables) within the space.	All access doors should be opened whenever possible to allow for air circulation within smaller air handling units. An air Handler becomes a Permit Required Confined Space when welding, brazing or cutting or chemical usage produces the potential for change in the atmosphere within the area where work is being completed.
Entire Campus	Cooling Towers	Mechanical Parts - Rotating Fans and associated equipment, electrical hazards, Heat (during summer), water hazard within sump, pressurized water hazard.	NO	Cooling Towers are non-permit required confined spaces for normal entries if the equipment is fully de-energized (LO/TO) per the applicable procedure. All electrical energy, make up supply water (if applicable) and chemical pumps (if applicable) to associated cooling tower equipment must be de-energized and controlled before entry. The cooling tower becomes permit required if any kind of welding, cutting or burning is completed or chemicals are used that release fumes or vapors within the cooling tower enclosure. Ventilate with portable fans as necessary to remove any fumes or vapors from work processes.	4 Gas Meter and continuous air monitoring required if any kind of atmospheric hazard is present or created (burning, cutting, welding, solvent, combustible, flammables) within the space.	All access doors should be opened whenever possible to allow for air circulation within the cooling tower. A Cooling Tower becomes a Permit Required Confined Space when welding, brazing or cutting or chemical usage produces the potential for change in the atmosphere within the area where work is being completed.
Entire Campus	Sanitary Sewer Manholes	Toxic Gases - Hydrogen Sulfide, Sewer Gas, Methane, Insufficient Oxygen, Bacteria Potential	YES	Forced air ventilation is required before entry unless the space is proven to be free of atmospheric hazards or no atmospheric changes will occur due to work operations or manhole conditions. Full Tyvek suit and gloves before entry, body harness and retraction device required.	Continuous 4 Gas Monitoring with 4 gas meter, check atmosphere in space by using stratified method before allowing entry.	Manholes are located around campus. Depths of manholes may vary greatly. Always check atmosphere from top to bottom before entering. Full Permit Completion Required.
Entire Campus	Boilers (any entry inside the cavity of a boiler unit)	Extremely tight space for entry and work, potential for oxygen deficient atmosphere, electrical hazards, heat and burn hazards if boiler has not fully cooled prior to entry.	YES	Allow Boiler to cool at least 72 hours before entry. Electrical, mechanical and fuel energy source to the equipment must be de-energized and controlled (LO/TO) before entry, ventilation to be used if any kind of welding, cutting or burning completed within the enclosure. Non-permit confined space ONLY when the entire boiler housing end cap is removed for full boiler access. Boiler interior access through hatchway or manway opening is a permit required confined space entry.	Continuous 4 Gas Monitoring with 4 gas meter, check atmosphere in space by using stratified method before allowing entry. Use ventilation if conditions warrant or welding, cutting, brazing or solvent usage is undertaken.	All hatchways/manways should be opened whenever possible to allow for air circulation within the boiler. Full Permit Completion Required for entry into a boiler unit through a hatchway or manway. Full boiler end cap removal is a non-permit required confined space entry.
Entire Campus	Mechanical Room Sumps/pits	slip / electrical / illumination /water	YES	Electrical energy to the equipment must be de-energized and controlled (LO/TO) before entry, ventilation must be used if any kind of welding, cutting or burning completed within the enclosure. Wear body harness and use retraction device in the event that entrant must be removed from space in emergency.	Continuous 4 Gas Monitoring with 4 gas meter, check atmosphere in space by using stratified method before allowing entry. Use ventilation if conditions warrant or welding, cutting, brazing or solvent usage is undertaken.	Hot work permit needed for any cutting, welding or brazing within the sump if any materials in the sump are combustible/flammable. Full Permit Completion Required for entry into a mechanical room sump.