UNC Charlotte – Permit Required Confined Space (PRCS) Summary Sheet – 03/2025 Revision						
Building	**Description**	**Hazard**	**PRCS**	**Hazard Control Procedure**	**Atmospheric Monitoring**	**Comments**
Entire Campus	Air Handlers (fans and motor compartments) Housings that allow for personnel entry	Mechanical parts - rotating fans and associated equipment, electrical hazards. Atmospheric hazards-vapors, fumes, VOCs	N	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 if 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, cutting or chemical usage produces the potential for change in the atmosphere within the area where work is being completed.**
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.	Y	Allow boiler to cool at least 72 hours before entry. Electrical, mechanical and fuel energy sources to the equipment must be de-energized and controlled (LO/TO) before entry. Ventilation is to be used if any kind of welding, cutting or burning is 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 if 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.
Burson	Roof Monitors (Dog Houses)	Mechanical parts - rotating fans and associated equipment, electrical hazards, heat (during summer), very confined, congested work area. Atmospheric hazards-vapors, fumes, VOCs	Y	Notify lab(s) of ventilation service interruption. Electrical energy to the equipment being serviced must be de-energized and controlled (LO/TO) initially upon entry. At least two people are required to be present at all times while working inside a roof monitor or associated enclosures. Loose fitting clothing or hair should be removed or controlled due to rotating equipment hazards. Personnel are required to have two-way radios. Protective gloves should be worn whenever exposure to ductwork interior surfaces or chemical residue can occur.	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.	This confined space is considered to be permit required due to the rotational hazards present with the operation of the exhaust fan units. Guards on fan units must remain in place except for the units that are de-energized and being serviced.
CAB Dining Hall	Crawl Space	Tight entry to all areas of the space. Potential for hazardous atmosphere if a sewer leak occurs. Potential for bacteria exposure if a sewer leak occurs.	Y	Ventilation may be required before entry depending on atmosphere test. Full Tyvek suit, gloves and goggles are 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	Cooling Towers	Mechanical parts - rotating fans and associated equipment, electrical hazards, heat (during summer), water hazard within sump, pressurized water hazard.	N	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 if 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.**
Facilities Management (main boiler, RUP #1 & RUP #2)	Fuel Tanks (Heating and Diesel Fuel)	Lack of easy entry due to access through manways/hatchways. Potential for hazardous atmosphere and fire due to petroleum contents.	Y	Electrical pumping equipment must be de-energized and controlled (LO/TO). Fully drain all fuel from tank to be entered. Open all hatches, if possible, to allow ventilation; space must have forced ventilation before entry. Entrant must have body harness with rope held by attendant at hatch opening for emergency retrieval.	Continuous 4-gas monitoring with 4-gas meter. Check atmosphere in space by using stratified method before allowing entry.	Hot work permit needed for any cutting, welding or brazing on the interior of the tank. Tank interior must be protected from sparks if residual petroleum remains. Full permit completion required for entry into a tank.

Entire Campus	Dust Collectors and Cyclones	Converging walls/engulfment, electrical hazards, dust hazards	Y	Electrical energy and compressed air must be de-energized and controlled (LO/TO). If hopper or dust collector/cyclone housing is large enough to be entered, all electrical and mechanical equipment must be de-energized. 1/2 face respirators with HEPA filters must be worn to make entry.	Continuous 4-gas monitoring with 4-gas meter. Check atmosphere in space by using stratified method before allowing entry.	Hot work permit needed for any cutting, welding or brazing on the hopper or collection unit if material is combustible/ flammable. Full permit completion required for entry into a dust collector/cyclone.
Entire Campus	Electrical Manholes & Vaults (depending on configuration)	Electrical hazards, potential atmospheric hazards such as insufficient oxygen and carbon monoxide	Y	Cordon/barricade area to prevent pedestrian traffic/entry. Check manhole lid for elevated temperature 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 persons and public must be back a 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	Mechanical Room Steam Line Sumps/pits	Electrical hazards, lack of illumination, water accumulation, slip, trip, and fall	Y	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 is completed within the enclosure. Body harness must be worn and connected to a retraction device in the event the entrant must be removed from the space in an 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.
Entire Campus	Sanitary and Storm Sewer Pump Lift Stations	Toxic gases - hydrogen sulfide, sewer gas, methane, insufficient oxygen, bacteria potential	Y	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	Sanitary Sewer Manholes	Toxic gases - hydrogen sulfide, sewer gas, methane, insufficient oxygen, bacteria potential	Y	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 must be worn 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	Steam & Hot Water Supply Manholes	Heat, burn hazards, potential for insufficient oxygen, carbon monoxide from vehicles and equipment usage	Y	Cordon/barricade area to prevent pedestrian traffic/entry. Ventilation may be required before entry depending on atmosphere test. Body harness and retraction device required. Steam service must be off in the manhole (LO/TO) before entry, or special precautions must be taken for hot tap/work. All persons and public must be back a 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	Stormwater Manholes	Toxic gases - hydrogen sulfide, sewer gas, methane, insufficient oxygen, bacteria potential	Y	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 atmospheric hazards such as insufficient oxygen and carbon monoxide	Y	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 and feeds. Full permit completion required.