

1.0 PERMIT-REQUIRED CONFINED SPACES

(in compliance with 1910.146)

The purpose of this the site-specific written confined space entry program is to identify all permit-required confined spaces (permit spaces) at this workplace and to describe the procedures that were developed and implemented to ensure worker safety and health in permit-required confined spaces.

This permit-required confined space program (permit space program) includes the elements specified in 29 CFR 1910.146 and provides the following site-specific information:

- * identification and evaluation of permit spaces
- * measures to prevent unauthorized entry
- * entry permit system
- * entry equipment and personal protective equipment
- * entry procedures
- * permit spaces training
- * rescue and emergency procedures
- * employee participation

The person with overall responsibility for the permit space program is David Ruder. The permit space program is modified to reflect changing workplace conditions or work operations. This program is reviewed if any of the following conditions occur:

- * occurrence of unauthorized entry of a permit space
- * discovery of a permit space hazard not covered by the permit
- * detection of a condition prohibited by the permit
- * occurrence of a injury or near-miss during entry
- * change in the use or configuration of a confined space
- * employee complaints of permit space program ineffectiveness

Additionally, an annual review of all entries performed during the previous 12 month period is conducted. If no entries were made into a permit space, then no annual review is performed.

Note: If another employer (contractor) performs work that involves permit space entry, the host employer will comply with 1910.146(c)(8). The contractor must comply with 1910.146(c)(9).

1.1 Identification and Evaluation of Permit Spaces

This workplace was carefully evaluated by Loebel and it was determined that there are permit spaces at this workplace. All confined spaces are treated as permit spaces until it is determined otherwise.

All confined spaces are initially monitored by Responsible Supervisor to identify and evaluate any hazardous atmosphere that may exist. The monitoring data are recorded and retained on-site in B13.

In the evaluation testing of the confined spaces, the order of testing is as follows: oxygen, combustible gases, and toxic gases and vapors.

Employees who enter permit spaces at this workplace, or their designated representatives, are offered the opportunity to observe pre-entry testing and any subsequent testing. Results of testing are immediately provided to the entrants or their representatives. Permit spaces are reevaluated if entrants or their representatives believe that the permit space was inadequately tested.

Table 1-1b lists the permit spaces at this workplace and identifies the permit spaces' related entry hazards.

Permit Space Location	Meets Criteria for Alternative Entry (Y/N)	Hazardous Atmos. (note the haz. substance/conditions)	Engulfment Hazard (note the material)	Configuration Hazard (Y/N)	Any Other Recognized S/H Hazard
Access to sanitary sewer system	Yes	Oxygen levels below 19.5% Toxic gases (specify gas) CO, CO2, H2S Flammable/combustible gases (specify gas) Hydrocarbon fuels			
B1 AHU: McQuay on roof, (2) East Attic, (1) Rm 21, (2) 05A, (1) 10A, (1) Rm 5	No	N/A		No	Thermal Moving parts

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B1,4 (has two),9,29,48, 49, 50,51 water heaters	No	Low O2			Thermal
B111 AHU: (2) Attic	No	N/A		No	Moving parts Thermal
B1A sub-basement under lab: sewer access	Yes	Oxygen levels below 19.5% Toxic gases (specify gas) CO, CO2, H2S			
B1A sub-basement under lab: sump hole	Yes	Oxygen levels below 19.5% Sewer gases			
B1-Attic above 3rd floor	No	NOT A PRCS		No	N/A
B2 AHU: (4) in attic	No	N/A		No	Moving parts Thermal
B28 AHU: (4) Attic	No	N/A		No	Moving parts Thermal
B29 AHU: (4) Attic; (1) Rm 20	No	N/A		No	Moving parts Thermal
B29,48,49,50 & 51 Elevator machinery inspection spaces	No	N/A		Yes	Moving parts
B3 AHU: Sub-basement	No	N/A		No	Moving parts Thermal
B3 attic	No	NOT A PRCS		No	N/A
B4 AHU: Attic (2) incl. (1) for kitchen	No	N/A		No	Moving parts Thermal
B4,29,48,51 Traction Elevator machinery basement	No	N/A		Yes	Falling load Moving parts
B48 AHU: (4) attic	No	N/A		No	Moving parts Thermal
B49 AHU: (4) Attic (Units 6&3 not accessible)	No	N/A		No	Moving parts Thermal
B50 AHU: (2) Rm 17; (6) Attic	No	N/A		No	Moving parts Thermal
B50 Rm 17 (accessible also from Rm 19), Cart Washer	No	Steam		Yes	Moving parts Thermal Slips
B50 Rm 19B Steam sterilizers (2)	No	Steam		No	Thermal
B51 AHU: (1) Rm 15; (4) Attic	No	N/A		No	Moving parts Thermal
B51 Geothermal Valve Vault (underground) manhole E of B98	No	Oxygen levels below 19.5% Subterranean water		No	N/A
B54 Garage, sump adjacent to S wall	No	Oxygen levels below 19.5% Toxic gases (specify gas) CO Other (specify) vehicle exhaust		No	N/A

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B57 SW corner access to tunnels	No	NOT A PRCS		No	N/A
B59 AHU attic (2)	No	N/A		No	Moving parts Thermal
B59 Washers 200#	No	N/A		No	Hot components Moving parts
B59 Washers 600#	No	N/A		No	Hot components Moving parts
B59, Large Dryers EE3958 and EE3957	No	N/A		No	Hot components Moving parts
B7 AHU: makeup air	No	N/A		No	Moving parts Falls
B7: Salt storage room (101-1A-007)	No	NOT A PRCS	Salt	No	N/A
B8 AHU: Basement	No	N/A		No	Moving parts Thermal
B8 Rm 13 sump hole	No	NOT A PRCS		No	N/A
B86, Water Tower	No	N/A	Water	Yes	Single access vessel with smooth, round sides filled with water to varying levels
B9 AHU: attic	No	N/A		No	Moving parts Thermal
B9 Attic	No	NOT A PRCS		No	N/A
B95 AHU	No	N/A		No	Moving parts Thermal
Behind B4 kitchen: grease sump	No	Oxygen levels below 19.5% Biological hazard (specify) grease Toxic gases (specify gas) CO2, H2S Flammable/combustible gases (specify gas) Hydrocarbon fuels	Grease & water mixture	Yes	Slips Connecting drains
Behind B4 near loading dock: grease sump	No	Oxygen levels below 19.5% Toxic gases (specify gas) CO2, H2S Toxic vapors (specify vapor) potential vehicle exhaust Flammable/combustible gases (specify gas) Hydrocarbon fuels	Grease and water mixture	Yes	Slips Connecting drains
Boiler plant: condensate surge tank	No	Oxygen levels below 19.5% Other (specify) Steam	Hot condensate	Yes	Thermal
Boiler Plant: de-aerator tank	No	Oxygen levels below 19.5% Steam	Hot water	Yes	Thermal Smooth sided tubular construction with one aperture
Boiler tube	No	Low O2		Yes	Thermal

Buildings 1,2,4,8,9,28,48,49,50,51,59 Hydraulic Elevator machinery basements	No	N/A		Yes	Falling load Moving parts
Manhole under water tower	No	NOT A PRCS		No	N/A
SE Corner B49 lift station	No	Biological hazard (specify sewage Oxygen levels below 19.5% Toxic gases (specify gas) H2S	Liquid water and sewage	No	Electrocution Slips
Steam tunnel N of B59	Yes	Oxygen levels below 19.5% High pressure steam (thermal)			
Steam tunnel under sidewalk NW corner B29 to B54	Yes	Oxygen levels below 19.5% Steam (thermal)			
Steam tunnel under sidewalks B8 to B57	Yes	Oxygen levels below 19.5% Steam (thermal)			
Storm sewer accesses including manholes, grates, and catchbasins	Yes	Oxygen levels below 19.5% Flammable/combustible gases (specify gas) hydrocarbon fuels Toxic gases (specify gas) CO, CO2			
Sump below elevator B9	No	N/A		No	Falling load
Sump pump hole in tunnel to B7	No	NOT A PRCS		No	N/A
Switchgear vault (S11,12,13,14,15,16,17,18,1, 2,3,4,5,6,7,8,10	No	N/A		Yes	Electrocution
UST adjacent to B54	No	Oxygen levels below 19.5% Flammable/combustible vapors (fuel oil) CO CO2	Fuel oil	Yes	N/A
Utility access subspaces: B1,2,3,4,14,28,48,49,50,51,1 11	No	NOT A PRCS		No	N/A
Wind Turbine Nacelle Access	No	N/A		Yes	Moving parts Falls

When the use or configuration of a confined space is changed so that the hazards to entrants may be increased, the space will be reevaluated to determine if it should be re-classified as a permit space.

1.2 Prevention of Unauthorized Entry

All permit spaces at this workplace are clearly labeled by Signage or stencil 'DANGER: Permit Required Confined Space' and workers are trained that entry into a permit space without an authorized permit is prohibited. The permit space entry supervisor, Phil Sletten, is responsible for verifying that all entrants named on an entry permit are "authorized entrants".