

CONFINED SPACE ENTRY LIST

| Building | Space Location | Nature of Hazards | Safety Precautions | Equipment Required | Comments |
|--|--|--|---|--|--|
| 1600 Millrace | West side on riverfront drive | 1. Oxygen Deficiency | 1. Permit Posted 2. Atmospheric Test 3. Other (If standing water, then use sump pump) 4. Pedestrian Control | 1. Monitor 2. Compatible Communication Equipment | 1. Permit required 2. Attendant required |
| Agate Hall | North side auditorium (entrance at ground level - wooden grate in north parking lot) | 1. Oxygen deficiency 2. Electrical (sump pump) | 1. Permit posted 2. Atmospheric test 3. If water present lock out sump pump prior to entry | 1. Monitor 2. Compatible communication equipment-radio | 1. Permit required 2. Attendant required 3. Hard hat if entering beyond sump pump |
| Agate Hall Boiler Chimney (cleaning bird droppings inside the chimney) | Boiler room east side of Agate Hall | 1. Oxygen deficiency 2. Toxic gases/vapors- ammonia from bird droppings | 1. Permit posted 2. Atmospheric test 3. Ventilation/purge 4. Do not inhale dust from bird droppings 5. Follow clean up procedures for bird droppings from EHS 6. After clean up put disposable protective clothing into the plastic bag. 7. Remove the dust respirator last | 1. Respirator required/discuss with EHS prior to entry 2. Disposable coveralls 3. Rubber boots 4. Rubber gloves 5. Safety goggles 6. Compatible communication equipment-radio 7. Monitor 8. Ventilation equipment | 1. Permit required 2. Attendant required 3. Tools, rubber boots, rubber gloves, or other contaminated items that will be reused must be cleaned with a 10% bleach solution |
| Columbia Hall | Sidewalk on the south entrance of the building | 1. Oxygen Deficiency 2. Electrical Shock | 1. Permit Posted 2. Atmospheric Test 3. Pedestrian Control 4. Lock Out/Tag Out | 1. Monitor 2. Compatible Communication Equipment 3. Hard Hat | 1. Permit Required 2. Attendant required |
| Autzen Stadium | Electrical vault North berm directly behind North sky building outside of fence | 1. Oxygen deficiency 2. Electrical shock | 1. Permit posted 2. Atmospheric test 3. Traffic control 4. Pedestrian control 5. Lockout/tagout where applicable 6. Maintain 25" minimum approach distance. Two qualified high voltage electricians required if unable to main 25" clearance. | 1. Monitor 2. Hard hat 3. Compatible communication equipment-radio | 1. Permit required 2. Attendant required |
| Autzen Stadium | Electrical vault South berm East of grand staircase | 1. Oxygen deficiency | 1. Permit posted 2. Atmospheric test 3. Traffic control 4. Pedestrian control 5. Lockout/tagout where applicable | 1. Monitor 2. Hard hat 3. Compatible communication equipment-radio 4. Appropriate FR PPE and insulated tools 5. Barricade/cones 6. Block lids open or secure | 1. Permit required 2. Attendant required |
| Autzen Stadium | Electrical vaults x2 West end of field level inside stadium | 1. Oxygen deficiency 2. Electrical shock (sump pumps) 3. Engulfment | 1. Permit posted 2. Atmospheric test 3. Traffic control 4. Pedestrian control 5. Lockout/tagout where applicable 6. Maintain 25" minimum approach distance. Two qualified high voltage electricians required if unable to main 25" clearance. | 1. Monitor 2. Hard hat 3. Compatible communication equipment-radio | 1. Permit required 2. Attendant Required |
| Autzen Stadium | Restroom vent ducting near top of East berm of stadium | 1. Oxygen deficiency | 1. Permit posted 2. Atmospheric test | 1. Monitor 2. Compatible communication equipment-radio 3. Hard hat | 1. Permit required 2. Attendant Required |
| Autzen Stadium | Restroom vent ducting near top of West berm of stadium | 1. Oxygen deficiency | 1. Permit posted 2. Atmospheric test | 1. Monitor 2. Compatible communication equipment-radio 3. Hard hat | 1. Permit required 2. Attendant Required |
| Autzen Stadium | Sanitary sewer pump station room E148 (inside E154), East end of stadium field level | 1. Oxygen deficiency 2. Electrical shock | 1. Permit posted 2. Atmospheric test 3. Traffic control 4. Pedestrian control 5. Lockout/tagout where applicable | 1. Monitor 2. Hard hat 3. Compatible communication equipment-radio | 1. Permit required 2. Attendant Required |
| Autzen Stadium | Sanitary sewer pump station room W152 West end inside visitor locker room | 1. Oxygen deficiency 2. Electrical shock | 1. Permit posted 2. Atmospheric test 3. Traffic control 4. Pedestrian control 5. Lockout/tagout where applicable | 1. Monitor 2. Hard hat 3. Compatible communication equipment-radio | 1. Permit required 2. Attendant required |

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|---|---|---|--|---|---|
| Autzen Stadium | Storm water vaults x2 (field drainage collection sumps), West end zone in front of visitor's locker room (approx. 14' deep) | 1. Oxygen deficiency 2. Fall 3. Electrical shock 4. Engulfment | 1. Permit posted 2. Atmospheric test 3. Pedestrian control 4. Lockout/tagout sump pumps | 1. Monitor 2. Retrieval equipment 3. Harness 4. Lifeline for fall protection 5. Compatible communication equipment-radio 6. Hard hat 7. Barricades/cones 8. Ladder may be needed | 1. Permit required 2. Attendant required |
| Autzen Stadium | Water control valve North of Casanova Center, next to MLK Blvd | 1. Oxygen deficiency | 1. Permit posted 2. Atmospheric test 3. Ventilation/purge 4. Traffic control | 1. Monitor 2. Compatible communication equipment-radio 3. Hard hat 4. Barricades/cones | 1. Permit required 2. Attendant required |
| Autzen Stadium | Water control valve Northeast of end zone terrace, concourse level (approximately 4' deep) | 1. Oxygen deficiency 2. Flammable gases/vapors | 1. Permit posted 2. Atmospheric test 3. Ventilation/purge 4. Traffic control | 1. Monitor 2. Compatible communication equipment-radio 3. Hard hat 4. Barricades/cones 5. Ventilation equipment | 1. Permit required 2. Attendant required |
| Backflow Preventer Vaults | All backflow preventer vaults | 1. Oxygen deficiency 2. Electrical (if sump pumps) | 1. Permit posted 2. Atmospheric test 3. If water present lock out sump pump to entry if applicable 4. Hard hat if entering beyond sump pump if applicable | 1. Monitor 2. Compatible communication equipment-radio | 1. Permit required 2. Attendant required |
| Backflow Preventer Vaults < 4 Feet Deep | All | If no hazard exists | None - No permit needed | None | If hazards exist then follow backflow preventer vaults - permit required |
| Bean Cistern | Off tunnels outside Bean mechanical room | 1. Oxygen deficiency 2. Flooding | 1. Permit posted 2. Atmospheric test 3. 2-person tunnel rule | 1. Monitor 2. Hard hat 3. Flashlight | 1. Permit required 2. Attendant required |
| Casanova Center Mechanic Room | Water heating tanks (3) | 1. Oxygen deficiency 2. Water engulfment | 1. Permit posted 2. Atmospheric test | 1. Compatible communication equipment-radio 2. Monitor 3. Ventilation equipment | 1. Permit required 2. Attendant required 3. Lockout/tagout water source |
| Casanova Center Mechanical Room | Heat furnaces (2) | 1. Oxygen deficiency 2. Flammable gases/vapors | 1. Permit posted 2. Atmospheric test | 1. Compatible communication equipment-radio 2. Monitor 3. Ventilation equipment | 1. Permit required 2. Attendant required 3. Lockout/tagout (blank bleed) gas source |
| Cascade Hall | Chemical exhaust, building roof | 1. Oxygen deficiency 2. Toxic gases/vapors 3. Material harmful to the skin | 1. Permit posted 2. Atmospheric test 3. Open all doors | 1. Monitor 2. Compatible communication equipment-radio 3. Eye protection 4. Protective clothing 5. SCBA | 1. Permit required 2. Attendant required |
| Cascade Hall/Cascade Annex | Oil separator in sidewalk between buildings | 1. Oxygen deficiency 2. Flammable gases/vapors 3. Toxic gases/vapors 4. Material harmful to the skin | 1. Permit posted 2. Atmospheric Test 3. Pedestrian control 4. Both doors open | 1. Monitor 2. Compatible communication equipment-radio 3. Hard hat 4. Barricades/cones 5. Both doors open | 1. Permit required 2. Attendant required |
| Central Kitchen | Room 110; rotary oven | 1. Oxygen Deficiency 2. Heat 3. Natural Gas 4. Other (tight space) | 1. Permit posted 2. Atmospheric test 3. Lockout/Tagout 4. Cooling time | 1. Monitor 2. Compatible Communication Equipment 3. Hard Hat and Knee Pads | 1. Permit Required 2. Attendant Required |
| Central Power Station | #1 boiler exhaust breeching | 1. Oxygen deficiency 2. Toxic gases/vapors | 1. Permit posted 2. Atmospheric test 3. Ventilation/purge | 1. Compatible communication equipment-radio 2. Monitor | 1. Permit required 2. Attendant required 3. Lockout/tagout gas lines, oil lines and steam atomizer lines |
| Central Power Station | #1 boiler fire box | 1. Oxygen deficiency 2. Toxic gases/vapors | 1. Permit posted 2. Atmospheric test 3. Ventilation/purge | 1. Compatible communication equipment-radio 2. Monitor | 1. Permit required 2. Attendant required 3. Lockout/tagout gas lines, oil lines and steam atomization lines |

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|-----------------------|--|--|--|--|---|
| Central Power Station | #1 boiler mud drum | 1. Oxygen deficiency 2. Steam/water engulfment 3. Toxic gases/vapors | 1. Permit posted 2. Atmospheric test 3. Ventilation/purge | 1. Compatible communication equipment-radio 2. Monitor 3. Ventilation equipment | 1. Permit required 2. Attendant required 3. Lockout/tagout on main steam, feedwater and steam blanket systems |
| Central Power Station | #1 boiler steam drum | 1. Oxygen deficiency 2. Steam/water engulfment 3. Toxic gases/vapors | 1. Permit posted 2. Atmospheric test 3. Ventilation/purge | 1. Compatible communication equipment-radio 2. Monitor 3. Ventilation equipment | 1. Permit required 2. Attendant required 3. Lockout/tagout on main steam, feedwater, and steam blanket system |
| Central Power Station | #1 horizontal D.A. tank (third level) | 1. Oxygen deficiency 2. Steam/water engulfment 3. Toxic gases/vapors | 1. Permit posted 2. Atmospheric test 3. Ventilation/purge | 1. Compatible communication equipment-radio 2. Monitor 3. Ventilation equipment | 1. Permit required 2. Attendant required 3. Lockout/tagout on steam condensate/make-up, feedwater systems and chemical feed lines |
| Central Power Station | #2 Boiler Exhaust Breeching | 1. Oxygen deficiency 2. Toxic gases/vapors | 1. Permit posted 2. Atmospheric test 3. Ventilate/purge | 1. Monitor 2. Compatible communication equipment-radio | 1. Permit required 2. Attendant required 3. Lockout/tagout gas lines, oil lines and steam atomization lines |
| Central Power Station | #2 Boiler Fire Box | 1. Oxygen deficiency 2. Toxic gases/vapors | 1. Permit posted 2. Atmospheric test 3. Ventilation/purge | 1. Compatible communication equipment-radio 2. Monitor | 1. Permit required 2. Attendant required 3. Lockout/tagout- gas lines, oil lines, and steam atomization lines |
| Central Power Station | #2 Boiler Mud Drum | 1. Oxygen deficiency 2. Steam/water engulfment 3. Toxic gases/vapors | 1. Permit posted 2. Atmospheric test 3. Ventilation/purge | 1. Compatible communication equipment-radio 2. Monitor 3. Ventilation equipment | 1. Permit required 2. Attendant Required 3. Lockout/tagout on main steam, feedwater, and steam blanket systems |
| Central Power Station | #2 Boiler Steam Drum | 1. Oxygen deficiency 2. Steam/water engulfment 3. Toxic gases/vapors | 1. Permit posted 2. Atmospheric test 3. Ventilation/purge | 1. Compatible communication equipment-radio 2. Monitor 3. Ventilation equipment | 1. Permit required 2. Attendant required 3. Lockout/tagout on main steam, feedwater, steam blanket system |
| Central Power Station | #2 horizontal D.A. tank (third level) | 1. Oxygen deficiency 2. Steam/water engulfment 3. Toxic gases/vapors | 1. Permit posted 2. Atmospheric test 3. Ventilation/purge | 1. Compatible communication equipment-radio 2. Monitor 3. Ventilation equipment | 1. Permit required 2. Attendant required 3. Lockout/tagout on steam condensate/make-up, feedwater and chemical feed systems |
| Central Power Station | Boiler blowdown sump pumping tank | 1. Oxygen deficiency 2. Water engulfment | 1. Permit posted 2. Atmospheric test | 1. Compatible communication equipment-radio 2. Fall protection equipment 3. Monitor 4. Barricades for walkway protection 5. Hard hat | 1. Permit required 2. Attendant required 3. Lockout/tagout of electrical equipment (480V sump pump) |
| Central Power Station | Emergency standby generators access panels | 1. Oxygen deficiency 2. Diesel fumes 3. Electrical shock | 1. Permit posted 2. Atmospheric test 3. Lockout/tagout where applicable. 4. Maintain 25" minimum approach distance. Two qualified high- voltage electricians required if unable to maintain 25" clearance 5. Open access door and allow air to flow at least 10 minutes prior to entry | 1. Monitor 2. Hard hat 3. Compatible communication equipment-radio | 1. Permit required 2. Attendant required |
| Central Power Station | Heat Recovery and Steam Generation (HRSG) | 1. Oxygen deficiency 2. Heat | 1. Permit posted 2. Atmospheric test 3. Ventilation/purge 4. Lockout/tagout 5. Open stack cover and ALL manhole doors | 1. Compatible communication equipment-radio 2. Monitor 3. Fans and ventilation equipment 4. Flashlight and/or appropriate lighting | 1. Permit required 2. Attendant required 3. Lockout/tagout on main steam, steam blanket systems and connection between gas turbine. 4. Ensure fire box is at room temperature. |

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| Central Power Station | RO make-up tank – ground level | <ol style="list-style-type: none"> Oxygen deficiency Engulfment Toxic gases/vapors | <ol style="list-style-type: none"> Permit posted Atmospheric test Ventilation/purge if needed | <ol style="list-style-type: none"> Communication equipment Hard hat Harness Lifeline Ventilation equipment Retrieval equipment | <ol style="list-style-type: none"> Permit required Attendant required Harness with lifeline Hard hat Lockout/tagout water supply |
| Central Power Station | Steam intertie | <ol style="list-style-type: none"> Oxygen deficiency Steam Heat | <ol style="list-style-type: none"> Permit posted Atmospheric test | <ol style="list-style-type: none"> Compatible communication equipment-radio Hard hat Monitor | <ol style="list-style-type: none"> Permit required Attendant required |
| Central Power Station Chiller Building | Various external e- vaults South and East side of building – under transformers | <ol style="list-style-type: none"> Possible stagnant air High voltage connections Electrical shock | <ol style="list-style-type: none"> Permit posted Atmospheric test Lockout/tagout where applicable Maintain 25" minimum approach distance. Two qualified high- voltage electricians required if unable to maintain 25" clearance Open access doors and allow air to flow at least 10 minutes prior to entry Perform visual check for presence of water on the floor. Do not enter if water is visible. Take added precaution as necessary to remove water prior to entry. | <ol style="list-style-type: none"> Monitor Hard hat Compatible communication equipment-radio Appropriate FR PPE and insulated tools | <ol style="list-style-type: none"> Permit required Attendant required |
| Central Power Station | 11 Underground Storage Tanks (9 deisel, 1 gasoline, 1 automotive diesel) | <ol style="list-style-type: none"> Oxygen deficiency Diesel/Gasoline vapors Engulfment Electrical Shock | <ol style="list-style-type: none"> Permit Posted Atmospheric Test Lockout/Tagout if required after opening inner lid wait 60 seconds to allow for any accumulated vapors to disperse. | <ol style="list-style-type: none"> Monitor Compatible communication equipment - radio Hard Hat Barricades/cones Tool to open inner lid Magnet to aid in opening outer steel cover | <ol style="list-style-type: none"> Permit Required Attendant required |
| Central Power Station Electrical Vault (Switch House) | Entrances at Northeast edge of building and Northwest edge of building - switch house underground electrical vault | <ol style="list-style-type: none"> Possible stagnant air Electrical shock | <ol style="list-style-type: none"> Permit posted Atmospheric test Lockout/tagout where applicable Open both access doors and allow air to flow at least 10 minutes prior to entry Barricade entrances | <ol style="list-style-type: none"> Monitor Compatible communication equipment-radio Barricades | <ol style="list-style-type: none"> Permit posted Atmospheric test |
| Central Power Station Oil/Water Separator (3 water chambers) | Southwest side of Chiller Building | <ol style="list-style-type: none"> Oxygen deficiency Engulfment | <ol style="list-style-type: none"> Permit posted Atmospheric test Traffic control Pedestrian control | <ol style="list-style-type: none"> Monitor Compatible communication equipment-radio Hard hat Retrieval equipment | <ol style="list-style-type: none"> Permit required Attendant required Lockout/tagout pumps |
| Electrical Vault | All | <ol style="list-style-type: none"> Oxygen deficiency Electrical shock | <ol style="list-style-type: none"> Permit posted Atmospheric test Traffic control Pedestrian control Lockout/tagout where applicable. Maintain 25" minimum approach distance. Two qualified high- voltage electricians required if unable to maintain 25" clearance. | <ol style="list-style-type: none"> Monitor Hard hat Compatible communication equipment-radio Appropriate FR PPE and insulated tools Barricades/cones | <ol style="list-style-type: none"> Permit required Attendant required |
| Fine Arts Studio | Vault with backflow devices on West side of building | <ol style="list-style-type: none"> Oxygen deficiency | <ol style="list-style-type: none"> Permit posted Atmospheric test | <ol style="list-style-type: none"> Monitor Hard hat | <ol style="list-style-type: none"> Permit required Attendant required |
| Ford Alumni Center | NE sidewalk corner of East 13th and Columbia Street, backflow preventer vault | <ol style="list-style-type: none"> Oxygen deficiency Electrical shock | <ol style="list-style-type: none"> Permit posted Atmospheric test Pedestrian control Lock out sump pump prior to entry if applicable | <ol style="list-style-type: none"> Monitor Barricades/cones Compatible communication equipment-radio Hard hat | <ol style="list-style-type: none"> Permit required Attendant required Due to pedestrian traffic on sidewalk – ensure adequate barricades are up and attendant keeps pedestrians from area around vault. |

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| Ford Alumni Center (By Hamilton) | NW sidewalk corner of E 13th and Columbia St, backflow preventer vault | 1. Oxygen deficiency 2. Electrical Shock 3. Other: This space is known to have black widow spiders | 1. Permit Posted 2. Atmospheric test 3. Pedestrian control 4. Lock out sump pump prior to entry if applicable | 1. Monitor 2. Barricades/cones 3. Compatible communication equipment - radio 4. Hard Hat | 1. Permit Required 2. Attendant Required 3. Due to pedestrian traffic on sidewalk - ensure adequate barricades are up an attendant keeps pedestrians from area around vault. |
| Franklin/Onyx Backflow Vault | NE Corner of Franklin and Onyx in the parking lot E of Knight Campus | 1. Oxygen deficiency 2. Toxic gases/vapors (from traffic) 3. Electrical shock (sump pump) | 1. Permit posted 2. Ventilate 3. Atmospheric test 4. Pedestrian control 5. If water present – pump out prior to entering | 1. Monitor 2. Compatible communication equipment-radio 3. Barricades/cones | 1. Permit required 2. Attendant required |
| Friendly Hall | Sump pump vault west central | 1. Oxygen deficiency 2. Electrical shock 3. Engulfment | 1. Permit posted 2. Atmospheric test | 1. Compatible communication equipment – radio/cell 2. Lockout/tagout if applicable 3. Monitor | 1. Permit required 2. Attendant required |
| Frohnmayr Music | Domestic and fire water check valves manhole – Northwest corner of building | 1. Oxygen deficiency 2. Electrical shock 3. Engulfment | 1. Permit posted 2. Atmospheric test 3. Pump out prior to entry 4. Lockout/tagout sump pump 5. Pedestrian control 6. Barricades | 1. Monitor 2. Hard hat 3. Communication equipment-radio | 1. Permit required 2. Attendant required |
| Frohnmayr Music | Fire water check valves vault – Southeast corner of building at 18th Street parking lot | 1. Oxygen deficiency 2. Electrical shock | 1. Permit posted 2. Atmospheric test 3. Pump out prior to entry 4. Lockout/tagout sump pump 5. Pedestrian control 6. Barricades | 1. Monitor 2. Communication equipment-radio 3. Hard hat 4. Barricades/cones | 1. Permit required 2. Attendant required |
| Frohnmayr Music | Storm sewer pump station manhole – North side of building against center wall | 1. Oxygen deficiency 2. Electrical shock 3. Engulfment 4. Fall from ladder | 1. Permit posted 2. Atmospheric test 3. Pump out prior to entry 4. Lockout/tagout sump pump 5. Barricades | 1. Monitor 2. Retrieval equipment 3. Harness 4. Lifeline 5. Communication equipment-radio 6. Hard hat | 1. Permit required 2. Attendant required 3. Harness with lifeline |
| Gerlinger Hall | Chemical mixing pit in exterior building West end | 1. Oxygen deficiency 2. Toxic gases/vapors | 1. Permit posted 2. Atmospheric test | 1. Monitor 2. Compatible communication equipment-radio 3. Tripod 4. Harness | 1. Permit required 2. Attendant required |
| Global Scholars Fire Backflow and Sprinkler System Vault | 15th Street, NW corner of Global Scholars Housing next to walkway near sidewalk | 1. Oxygen deficiency 2. Electrical | 1. Permit posted 2. Atmospheric test 3. If water present-pump out- un-plug sump pump prior to entry | 1. Monitor 2. Compatible communication equipment-radio 3. Barricades/cones | 1. Permit required 2. Attendant required |
| Hayward Field | Mehcanical room, 491 pit | 1. Sewer gas 2. Electrical shock 3. Fall from ship ladder 4. Pressurized steam 4. Water Pipes | 1. Permit posted 2. Atmospheric test 3. If water present - pump out prior to entering | 1. Monitor 2. Compatible communication equipment - radio 3. Hard hat | 1. Permit required 2. Attendant required |
| Hayward Field | Backflow preventer vault, Lot 32 SE entrance | 1. Oxygen deficiency | 1. Permit posted 2. Ventilate 3. Atmospheric test 4. If water present- pump out prior to entering 5. Pedestrian control 6. Traffic control | 1. Monitor 2. Compatible communication equipment-radio 3. Barricades/cones | 1. Permit required 2. Attendant required |
| HEDCO Education | SW side of building- Fire backflow preventer vaults | 1. Oxygen deficiency 2. Electric shock | 1. Permit posted 2. Atmospheric test 3. If water present- pump out prior to entering 4. Lock out sump pump prior to entry if applicable | 1. Monitor 2. Compatible communication equipment-radio | 1. Permit required 2. Attendant required |

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|---|--|--|---|---|--|
| HEDCO Parking Garage | Exhaust fans at North side #8 and Southeast corner #10 | <ol style="list-style-type: none"> Oxygen deficiency (car fumes) Limited access/egress Electrical Moving parts | <ol style="list-style-type: none"> Permit posted Atmospheric test Lockout fan prior to entry | <ol style="list-style-type: none"> Monitor Compatible communication equipment-radio | <ol style="list-style-type: none"> Permit required Attendant required |
| Huestis Food Prep Room #4-Sump Pump Vault SP- 2 | Huestis basement, Zebrafish Facility (vault is approx. 18'x5'x7' deep) | <ol style="list-style-type: none"> Oxygen deficiency Electrical Shock Deep/standing water | <ol style="list-style-type: none"> Permit posted Atmospheric test Ventilate/purge vault prior to entry Fan and/or other ventilation equipment should be used to provide extra ventilation Lockout pumps Attach air monitor close to entrant's breathing zone | <ol style="list-style-type: none"> Full Face Shield OR Surgical Mask and Safety Glasses Disposable rain gear Rubber wader boots Rubber or Neoprene gloves Head light and or/battery operated portable light Compatible communication equipment-radio Monitor | <ol style="list-style-type: none"> Permit required Attendant required |
| Huestis Hall | Backflow preventer valve vault in 13th Avenue sidewalk | <ol style="list-style-type: none"> Oxygen deficiency | <ol style="list-style-type: none"> Permit posted Atmospheric test | <ol style="list-style-type: none"> Monitor Compatible communication equipment-radio | <ol style="list-style-type: none"> Permit required Attendant required |
| Jacqua Academic Center | Reclamation pump vault for water feature East side of building | <ol style="list-style-type: none"> Oxygen deficiency Electrical shock Engulfment Fall from ladder | <ol style="list-style-type: none"> Permit posted Atmospheric test Pump out water prior to entry Lockout/tagout water supply and sump pump Check pH of water prior to entering if water isn't completely removed. Ventilate Pedestrian control Use buddy system down - 1 space, 1 to do work, 1 person to assist | <ol style="list-style-type: none"> Monitor Retrieval equipment Harness Lifeline Communication equipment Hard hat Rope Ladder Barricades/cones | <ol style="list-style-type: none"> Permit required Attendant required |
| Jane Saunders Stadium | Backflow Preventer Pump at the SE Corner of JSS | <ol style="list-style-type: none"> Oxygen Deficiency Other (water in bottom of vault) Electrical Shock | <ol style="list-style-type: none"> Permit Posted Atmospheric Test Lockout Pumps | <ol style="list-style-type: none"> Monitor Compatible communication equipment hard hat Other (boots) | <ol style="list-style-type: none"> Permit Required Attendant Required fixed ladder in place |
| Jordan Schnitzer Museum of Art | Backflow device in vault | <ol style="list-style-type: none"> Oxygen deficiency Flooding | <ol style="list-style-type: none"> Permit posted Atmospheric test | <ol style="list-style-type: none"> Monitor Compatible communication equipment | <ol style="list-style-type: none"> Permit required Attendant required |
| Klamath Hall | Chemical exhaust – building roof | <ol style="list-style-type: none"> Oxygen deficiency Toxic gases/vapors Material harmful to the skin | <ol style="list-style-type: none"> Permit posted Atmospheric test Open all doors to ventilate | <ol style="list-style-type: none"> Monitor Compatible communication equipment-radio Eye protection Retrieval Equipment Protective clothing | <ol style="list-style-type: none"> Permit required Attendant required |
| Knight Campus | Mechanical room 007 - Acid waste neutralization put | <ol style="list-style-type: none"> Atmospheric hazards Acidic or caustic liquids Flooding | <ol style="list-style-type: none"> Permit posted Atmospheric test Avoid contact with skin Gloves Splash protection for eyes (goggles or face shield) | <ol style="list-style-type: none"> Monitor Compatible communication equipment - radio Retrieval equipment | <ol style="list-style-type: none"> Permit required Attendant Required |
| Knight Law School | 164A - Locker Room | <ol style="list-style-type: none"> Oxygen deficiency Limited access/egress | <ol style="list-style-type: none"> Permit posted Atmospheric test | <ol style="list-style-type: none"> Monitor Compatible communication equipment - radio Flashlight Pole to monitor each level of space | <ol style="list-style-type: none"> Permit required Attendant required Pole/yardstick to measure air in breathing zone |
| Knight Law School | Backflow vault sidewalk, NW corner of building | <ol style="list-style-type: none"> Oxygen deficiencies Electrical (sump pump) | <ol style="list-style-type: none"> Information sheet Atmospheric test Lock out sump pump prior to entry if applicable Pedestrian control | <ol style="list-style-type: none"> Monitor Compatible communication equipment-radio Barricade/cones | <ol style="list-style-type: none"> Permit required Attendant required High traffic area |
| Knight Law School | Three vaults in West side front lawn (backflow, irrigation controls and EWEB connection) | <ol style="list-style-type: none"> Oxygen deficiencies Electrical (sump pump) | <ol style="list-style-type: none"> Permit posted Atmospheric test Lockout sump pump prior to entry if applicable Pedestrian control | <ol style="list-style-type: none"> Monitor Compatible communication equipment-radio | <ol style="list-style-type: none"> Permit required Attendant required |
| Lawrence Hall | Utility vault woodshop building NW corner room 185 | <ol style="list-style-type: none"> Oxygen deficiency Electrical shock Steam Heat | <ol style="list-style-type: none"> Permit posted Atmospheric test Traffic control Pedestrian control Lockout sump pump and steam valves if applicable | <ol style="list-style-type: none"> Monitor Hard hat Compatible communication equipment-radio | <ol style="list-style-type: none"> Permit required Attendant required |

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| Lawrence Hall | Room 196 crawl space under building | <ol style="list-style-type: none"> Oxygen deficiency Heat Piping and tight spaces Areas that slope upward create potential for entrant to get stuck | <ol style="list-style-type: none"> Permit posted Atmospheric test | <ol style="list-style-type: none"> Monitor Compatible communication equipment-radio Hard hat Flash light Ventilation equipment if necessary | <ol style="list-style-type: none"> Permit required Attendant required |
| Lillis Business Complex | Backflow device in vault at SW corner of Peterson Hall | <ol style="list-style-type: none"> Oxygen deficiency | <ol style="list-style-type: none"> Permit posted Atmospheric test Pedestrian control | <ol style="list-style-type: none"> Monitor Compatible communication equipment-radio Barricades/cones Flashlight | <ol style="list-style-type: none"> Permit required Attendant required High traffic area |
| LISB | Roof-chemical exhaust x2 | <ol style="list-style-type: none"> Oxygen deficiency Toxic gases/vapors Material harmful to skin | <ol style="list-style-type: none"> Permit posted Atmospheric test Other-open all doors | <ol style="list-style-type: none"> Monitor Compatible communication equipment-radio Eye protection Protective clothing | <ol style="list-style-type: none"> Permit required Attendant required |
| Living Learning Center | Water control valve vault North side | <ol style="list-style-type: none"> Oxygen deficiency Flood Electrical (sump pump) | <ol style="list-style-type: none"> Permit required Atmospheric test Traffic/pedestrian control If water present lockout sump pump prior to entry | <ol style="list-style-type: none"> Monitor Compatible communication equipment Hard hat if working below sump Barricades/cones | <ol style="list-style-type: none"> Permit required Attendant required |
| Living Learning Center | Water control valve vault South side along 15th Avenue | <ol style="list-style-type: none"> Oxygen deficiency Flood Electrical (sump pump) | <ol style="list-style-type: none"> Permit required Atmospheric test Traffic/pedestrian control If water present lockout sump pump prior to entry | <ol style="list-style-type: none"> Monitor Compatible communication equipment Hard hat if working below sump Barricades/cones | <ol style="list-style-type: none"> Permit required Attendant required |
| Lokey Education | Hatch door in the crawl space. Located in Lokey A. | <ol style="list-style-type: none"> Oxygen Deficiency Flammable Gases or Vapors Toxic Gases or Vapors Electrical Shock | <ol style="list-style-type: none"> Permit Posted Atmospheric Test Pedestrian Control | <ol style="list-style-type: none"> Monitor Compatible communication equipment Hard hat (optional) Hand Protection Protective Clothing Lighting G. F. C. I. Barricades and Cones | <ol style="list-style-type: none"> Permit Required Attendant Required |
| Manholes <5 Feet Deep | All, except tunnel accesses | <ol style="list-style-type: none"> Oxygen deficiency Electrical if sump pump | <ol style="list-style-type: none"> Permit posted Atmospheric test Traffic control Pedestrian control Lockout sump pump prior to entry if applicable | <ol style="list-style-type: none"> Monitor Hard hat Barricades/cones | <ol style="list-style-type: none"> Permit required Attendant required |
| Manholes >5 Feet Deep | All, except tunnel accesses | <ol style="list-style-type: none"> Oxygen deficiency Electrical if sump pump | <ol style="list-style-type: none"> Permit posted Atmospheric test Traffic control Pedestrian control Lockout sump pump prior to entry if applicable | <ol style="list-style-type: none"> Monitor Hard hat Barricades/cones Retrieval equipment Harness Lifeline | <ol style="list-style-type: none"> Permit required Attendant required |
| Many Nations Longhouse | Vaults (electrical and utilities) on West side of Vivian Olum Child Care next to Knight Law parking lot | <ol style="list-style-type: none"> Oxygen deficiency Electrical shock | <ol style="list-style-type: none"> Permit posted Atmospheric test Traffic control Pedestrian control Barricades Lockout/tagout where applicable Maintain 25" minimum approach distance. Two qualified high- voltage electricians required if unable to maintain 25" clearance. | <ol style="list-style-type: none"> Monitor Hard hat Compatible communication equipment-radio Appropriate FR PPE and insulated tools Barricades/cones | <ol style="list-style-type: none"> Permit required Attendant required |
| Matthew Knight Arena | East side fire pump station and backflow preventer vaults along Villard Street | <ol style="list-style-type: none"> Oxygen deficiency Electric shock | <ol style="list-style-type: none"> Permit posted Ventilate Atmospheric test If water present – pump out prior to entering Lockout sump pump prior to entry if applicable Pedestrian Control | <ol style="list-style-type: none"> Monitor Compatible communication equipment-radio Barricades/cones | <ol style="list-style-type: none"> Permit required Attendant required due to close proximity to sidewalk and pedestrian traffic. |

| Building | Space Location | Nature of Hazards | Safety Precautions | Equipment Required | Comments |
|----------------------|---|---|--|--|---|
| Matthew Knight Arena | Oil/water separator – Arena parking level P3 – manhole near parking space 290 | 1. Oxygen deficiency | 1. Permit posted 2. Ventilate/purge 3. Atmospheric test 4. Traffic control 5. Pump out prior to entry | 1. Monitor 2. Hard hat 3. Compatible communication equipment-radio 4. Barricades/cones 5. Retrieval equipment 6. Harness 7. Lifeline for fall protection | 1. Permit required 2. Attendant required |
| Matthew Knight Arena | Oil/water separator – manhole in Arena loading dock area | 1. Oxygen deficiency | 1. Permit posted 2. Ventilate/purge 3. Atmospheric test 4. Traffic control 5. Pump out prior to entry | 1. Monitor 2. Hard hat 3. Compatible communication equipment-radio 4. Barricades/cones 5. Retrieval equipment | 1. Permit required 2. Attendant required |
| Matthew Knight Arena | Room 28 sewage ejector pit (SEP 2) | 1. Oxygen deficiency 2. Sewer gas 3. Electrical shock | 1. Permit posted 2. Ventilate/purge 3. Atmospheric test 4. Lockout/tagout where applicable | 1. Monitor 2. Hard hat 3. Compatible communication equipment-radio 4. Barricades/cones 5. Retrieval equipment 6. Harness 7. Lifeline for fall protection 8. Rubber boots 9. Disposable Tyvek coveralls 10. Neoprene gloves | 1. Permit required 2. Attendant required 3. For work on sump pump – remove w/wire cable. 4. If work in space, pump out sewage, decontaminate – wash and flush out space and pump out prior to entry. |
| Matthew Knight Arena | Room 73 sewage ejector pit (SEP 3) | 1. Oxygen deficiency 2. Sewer gas 3. Electrical shock | 1. Permit posted 2. Ventilate/purge 3. Atmospheric test 4. Lockout/tag out where applicable | 1. Monitor 2. Hard hat 3. Compatible communication equipment-radio 4. Barricades/cones 5. Retrieval equipment 6. Harness 7. Lifeline for fall protection 8. Rubber boots 9. Disposable Tyvek coveralls 10. Neoprene gloves | 1. Permit required 2. Attendant required 3. For work on sump pump – remove w/wire cable. 4. If work in space, pump out sewage, decontaminate – wash and flush out space and pump out prior to entry. |
| Matthew Knight Arena | Room 85 sewage ejector pit (SEP 4) | 1. Oxygen deficiency 2. Sewer gas 3. Electrical shock | 1. Permit posted 2. Ventilate/purge 3. Atmospheric test 4. Lockout/tag out where applicable | 1. Monitor 2. Hard hat 3. Compatible communication equipment-radio 4. Barricades/cones 5. Retrieval equipment 6. Harness 7. Lifeline for fall protection 8. Rubber boots 9. Disposable Tyvek coveralls 10. Neoprene gloves | 1. Permit required 2. Attendant required 3. For work on sump pump – remove w/wire cable. 4. If work in space, pump out sewage, decontaminate – wash and flush out space and pump out prior to entry. |
| Matthew Knight Arena | Sanitary sewer pump station- pump 1 and 2 - Arena parking level P3 cage | 1. Oxygen deficiency 2. Sewer gas 3. Electrical shock | 1. Permit posted 2. Ventilate/purge 3. Atmospheric test 4. Traffic control 5. Pedestrian control 6. Lockout/tagout where applicable | 1. Monitor 2. Hard hat 3. Compatible communication equipment-radio 4. Barricades/cones 5. Retrieval equipment 6. Harness 7. Lifeline for fall protection 8. Rubber boots 9. Disposable Tyvek coveralls 10. Neoprene gloves 11. Goggles | 1. Permit required 2. Attendant Required 3. For work on sump pump – remove w/wire cable. 4. If work in space, pump out sewage, decontaminate – wash and flush out space and pump out prior to entry. |

| Building | Space Location | Nature of Hazards | Safety Precautions | Equipment Required | Comments |
|---|---|--|---|---|---|
| Matthew Knight Arena | Storm water sump pump pit (SP-2) – Southeast ramp to loading dock | 1. Oxygen deficiency | 1. Permit posted 2. Ventilate/purge 3. Atmospheric test 4. Traffic control 5. Pump out prior to entry | 1. Monitor 2. Hard hat 3. Compatible communication equipment-radio 4. Barricades/cones 5. Retrieval equipment 6. Harness 7. Lifeline for fall protection | 1. Permit required 2. Attendant required 3. For work on sump pump – remove w/wire cable. 4. If work in space, pump out sewage, decontaminate – wash and flush out space and pump out prior to entry. |
| Matthew Knight Arena | Storm water sump pumps 1, 2 & 3 – arena parking level P3 cage | 1. Oxygen deficiency | 1. Permit posted 2. Ventilate/purge 3. Atmospheric test 4. Traffic control 5. Pump out prior to entry | 1. Monitor 2. Hard hat 3. Compatible communication equipment-radio 4. Barricades/cones 5. Retrieval equipment | 1. Permit required 2. Attendant required 3. For work on sump pump – remove w/wire cable. |
| Matthew Knight Arena Manholes < 5 Feet Deep | All – inside and outside of Arena | 1. Oxygen deficiency 2. Electrical if sump pump | 1. Permit posted 2. Atmospheric test 3. Traffic control 4. Pedestrian control 5. Lockout sump pump prior to entry if applicable | 1. Monitor 2. Hard hat 3. Barricades/cones | 1. Permit required 2. Attendant required |
| Matthew Knight Arena Manholes > 5 Feet Deep | All – inside and outside of Arena | 1. Oxygen deficiency 2. Electrical if sump pump | 1. Permit posted 2. Atmospheric test 3. Traffic control 4. Pedestrian control 5. Lockout sump pump prior to entry if applicable | 1. Monitor 2. Hard hat 3. Barricades/cones 4. Retrieval equipment 5. Harness 6. Lifeline if > 5 feet depth for fall protection | 1. Permit required 2. Attendant required |
| Millrace | Backflow preventer vault in sidewalk next to Onyx Street and Millrace | 1. Oxygen deficiency | 1. Permit posted 2. Ventilate 3. Atmospheric test 4. If water present- pump out prior to entering | 1. Monitor 2. Compatible communication equipment-radio | 1. Permit required 2. Attendant required |
| Millrace – Sewage Lift Station | Sanitary sewage lift station and two 5000 gallon surge tanks in sidewalk next to Onyx Street and Millrace | 1. Oxygen deficiency 2. Electrical shock 3. Engulfment | 1. Permit posted 2. Atmospheric test 3. Traffic control 4. Pedestrian control 5. Lockout/tagout where applicable | 1. Monitor 2. Hard hat 3. Compatible communication equipment-radio 4. Barricades/cones 5. Retrieval equipment 6. Harness 7. Lifeline or block opening for fall protection | 1. Permit required 2. Attendant required 3. If using forklift with chain, remove one arm or move arms close enough so no one works underneath loaded arm. |
| Millrace Studio II | Steam connection vault in road to North | 1. Oxygen deficiency 2. Steam 3. Water | 1. Permit posted 2. Atmospheric test | 1. Monitor 2. Compatible communication equipment-radio 3. Hard hat | 1. Permit required 2. Attendant required |
| Millrace Studio III | Water valve box Northwest end | 1. Oxygen deficiency 2. Steam 3. Water | 1. Permit posted 2. Atmospheric test | 1. Monitor 2. Compatible communication equipment-radio 3. Hard hat | 1. Permit required 2. Attendant required |
| Mobile Shop | Oil/water separator NW corner outside Mobile Shop | 1. Oxygen deficiency 2. Electrical | 1. Permit posted 2. Atmospheric test 3. Traffic control 4. Pedestrian control 5. Lockout sump pump prior to entry | 1. Monitor 2. Hard hat 3. Barricades/cones 4. Retrieval equipment 5. Harness 6. Lifeline for fall protection | 1. Permit required 2. Attendant required |
| Moss Street Child Care | Water control valve vault along 17th Avenue | 1. Oxygen deficiency 2. Electrical (sump pump) | 1. Permit posted 2. Atmospheric test 3. Lockout sump pump if applicable 4. Traffic/pedestrian control | 1. Monitor 2. Compatible communication equipment 3. Barricades/cones | 1. Permit required 2. Attendant required |

| Building | Space Location | Nature of Hazards | Safety Precautions | Equipment Required | Comments |
|---|--|--|--|--|---|
| Moss Street Tunnel Sump Pump Manhole | Moss Street roadway between lots 33 and 34 on South side of Arena (approx. 17' deep) | <ol style="list-style-type: none"> Oxygen deficiency Fall Electrical shock | <ol style="list-style-type: none"> Permit posted Atmospheric test Traffic control Pedestrian control Remove water if sump pump is submerged Lockout sump pump prior to entry if applicable | <ol style="list-style-type: none"> Monitor Compatible communication equipment-radio Hard hat Barricades/cones Ventilation equipment Harness Lifeline Retrieval equipment | <ol style="list-style-type: none"> Permit required Attendant required |
| Motor Pool | Oil/water separator, South side of facility near fence (approx. 12.5' deep) | <ol style="list-style-type: none"> Oxygen deficiency | <ol style="list-style-type: none"> Permit posted Atmospheric test Traffic control Pump out prior to entry | <ol style="list-style-type: none"> Monitor Hard hat Compatible communication equipment-radio Barricades/cones Retrieval equipment Harness | <ol style="list-style-type: none"> Permit required Attendant required |
| Motor Pool/Fleet Services | located inside of the sign for motor pool | <ol style="list-style-type: none"> Oxygen Deficiency Other (carbon monoxide from vehicle traffic) | <ol style="list-style-type: none"> Permit posted Atmospheric test Other (a ladder is needed to access the space, a fall exposure) | <ol style="list-style-type: none"> Monitor Compatible communication equipment Hard Hat Ladder | <ol style="list-style-type: none"> Permit required Attendant Required |
| Motor Pool Manholes | 330 Franklin Blvd car wash, NE corner of building, West of settling tanks – overflow and sanitary sewer (2 manholes), continuation of car wash | <ol style="list-style-type: none"> Oxygen deficiency | <ol style="list-style-type: none"> Permit posted Atmospheric test Traffic control | <ol style="list-style-type: none"> Monitor Compatible communication equipment-radio Hard hat Barricades/cones Ventilation equipment Harness Lifeline Retrieval equipment | <ol style="list-style-type: none"> Permit required Attendant required |
| Motor Pool Manholes | 330 Franklin Blvd, car wash settling tanks x4, NE corner of building | <ol style="list-style-type: none"> Oxygen deficiency | <ol style="list-style-type: none"> Permit posted Atmospheric test Traffic control | <ol style="list-style-type: none"> Monitor Compatible communication equipment-radio Hard hat Barricade/cones Ventilation equipment | <ol style="list-style-type: none"> Permit required Attendant required If only pumping sludge from the top – no permit is required. |
| Motor Pool Manholes | 330 Franklin Blvd, South side of facility near fence, oil/water separator (2 manholes approx. 12.5' deep), East of natural gas pumps | <ol style="list-style-type: none"> Oxygen deficiency Engulfment | <ol style="list-style-type: none"> Permit posted Atmospheric test Traffic control | <ol style="list-style-type: none"> Monitor Retrieval equipment Harness Lifeline for fall protection Compatible communication equipment-radio Hard hat Barricades/cones | <ol style="list-style-type: none"> Permit required Attendant required |
| Museum of Natural and Cultural History | Water control valve vault North side along sidewalk - new addition | <ol style="list-style-type: none"> Oxygen deficiency Flood Electrical (sump pump) | <ol style="list-style-type: none"> Permit posted Atmospheric test Traffic/pedestrian control If water present lockout sump pump prior to entry | <ol style="list-style-type: none"> Monitor Compatible communication equipment Hard hat if working below sump Barricades/cones | <ol style="list-style-type: none"> Permit required Attendant required |
| Network & Telecom Vaults/Manholes | All | <ol style="list-style-type: none"> Oxygen deficiency Stagnant air Electrical (if sump pumps) | <ol style="list-style-type: none"> Permit posted Atmospheric test Ventilation/purge – if organic solvents used, open flame torches or if manhole/vault is located near vehicle traffic or vault/manhole is unvented. If sump pump isn't working and water present – lockout sump pump prior to entry. | <ol style="list-style-type: none"> Monitor Compatible communication equipment-radio Hard hat Barricades/cones Ventilation equipment | <ol style="list-style-type: none"> Permit required Attendant required |
| Non-Electrical All Other Vaults | All vaults that are over 3 feet in depth | <ol style="list-style-type: none"> Oxygen deficiency Engulfment Toxic gasses/vapors Flammable gasses/vapors Steam Heat | <ol style="list-style-type: none"> Permit posted Atmospheric test Traffic control Pedestrian control Lockout/tagout where applicable | <ol style="list-style-type: none"> Monitor Compatible communication equipment-radio Hard hat Barricades/cones | <ol style="list-style-type: none"> Permit required Attendant required |

| Building | Space Location | Nature of Hazards | Safety Precautions | Equipment Required | Comments |
|--|---|--|---|--|--|
| Onyx Bridge | Excavated area (air plenum) through hatch across from Science Library through door to Men's restroom in Room# B72A (janitor's room) | 1. Oxygen deficiency | 1. Permit posted 2. Atmospheric test | 1. Monitor 2. Compatible communication equipment-radio | 1. Permit required 2. Attendant required |
| Oregon Institute of Marine Biology | Seawater tanks | 1. Oxygen deficiency | 1. Permit posted 2. Atmospheric test | 1. Monitor 2. Hard hat | 1. Permit required 2. Attendant required |
| Pine Mountain | Pump house | 1. Oxygen deficiency 2. Electrical | 1. Permit posted 2. Atmospheric test 3. Lockout pump if applicable | 1. Monitor 2. Compatible communication equipment-radio or cell | 1. Permit required 2. Attendant required |
| Pine Mountain | Water cistern | 1. Oxygen deficiency | 1. Permit posted 2. Atmospheric test | 1. Monitor 2. Hard hat | 1. Permit required 2. Attendant required |
| Pine Mountain | Water hauling tank | 1. Oxygen deficiency | 1. Permit posted 2. Atmospheric test | 1. Monitor 2. Hard hat | 1. Permit required 2. Attendant required |
| Prince Lucien Campbell Hall (PLC) | Storm sewer pump station manhole - Northwest corner of building in grass | 1. Oxygen deficiency 2. Electrical shock 3. Engulfment 4. Fall from ladder | 1. Permit posted 2. Atmospheric test 3. Pump out prior to entry 4. Lockout/tagout sump pump 5. Pedestrian control 6. Barricades | 1. Monitor 2. Retrieval Equipment 3. Harness 4. Lifeline 5. Communication equipment-radio 6. Hard hat | 1. Permit required 2. Attendant required |
| Psychology Department (Old ORI Building) | Backflow preventer vault, 1715 Franklin Blvd, SE end of building by sidewalk | 1. Oxygen deficiency 2. Exhaust from street traffic | 1. Permit posted 2. Atmospheric test 3. If water present - pump out prior to entering | 1. Monitor 2. Compatible communication equipment-radio 3. Ladder | 1. Permit required 2. Attendant required |
| Riley Residence Hall | Pipe chases throughout building | 1. Oxygen deficiency/ carbon monoxide 2. Electrical shock 3. Sewer leak/N 4. Heat 5. Entrapment 6. Trip hazards | 1. Permit posted 2. Atmospheric test 3. Pedestrian control 4. Lockout steam valves and/or electrical if applicable 5. Open all doors-ventilate prior to entry | 1. Monitor 2. Long sleeve shirt 3. Long pants 4. Safety glasses 5. Head light and/or flash light 6. Safety cones or tape 7. Compatible communication equipment-radio | 1. Permit required 2. Attendant required |
| Sanitary Sewage Lift Stations | ALL | 1. Oxygen deficiency 2. Sewer gas 3. Electrical shock 4. Engulfment | 1. Permit posted 2. Ventilate 3. Atmospheric test 4. Traffic control 5. Pedestrian control 6. Lockout/tagout where applicable | 1. Monitor 2. Hard hat 3. Compatible communication equipment-radio 4. Barricades/cones 5. Retrieval equipment 6. Harness | 1. Permit required 2. Attendant required 3. If work in space, pump out sewage, decontaminate—wash and flush down space and pump out prior to entry |
| Spencer View | Water main supply vault East of Commons building next to Patterson Street | 1. Oxygen deficiency 2. Electrical equipment (sump pump) | 1. Permit posted 2. Atmospheric test 3. Lockout/tagout 4. Pedestrian control 5. Barricades | 1. Monitor 2. Compatible communication equipment-radio/cell 3. Hard hat 4. Barricades/cones | 1. Permit required 2. Attendant required |
| Streisinger Hall | Chemical exhaust, building roof | 1. Oxygen deficiency 2. Toxic gases/vapors 3. Material harmful to skin | 1. Permit posted 2. Atmospheric test 3. Open all doors | 1. Monitor 2. Compatible communication equipment-radio 3. Eye protection 4. Protective clothing | 1. Permit required 2. Attendant required |
| Student Recreation Center | Cistern-stormwater catchment system | 1. Oxygen deficiency 2. Toxic gases/vapors 3. Stagnant air | 1. Permit posted 2. Atmospheric test 3. Barricades 4. Pedestrian control 5. Lockout water supply and sump pump prior to entry | 1. Monitor 2. Retrieval equipment 3. Harness 4. Lifeline 5. Communication equipment-radio 6. Hard hat | 1. Permit required 2. Attendant required |

| Building | Space Location | Nature of Hazards | Safety Precautions | Equipment Required | Comments |
|---|---|---|--|--|---|
| Student Recreation Center | Domestic water double check valve manhole – Northeast corner of building | <ol style="list-style-type: none"> Oxygen deficiency Electrical shock Engulfment Fall from ladder | <ol style="list-style-type: none"> Permit posted Atmospheric test Pump out water prior to entry Lockout/tagout sump pump Pedestrian control Barricades | <ol style="list-style-type: none"> Monitor Retrieval equipment Harness Lifeline Communication equipment-radio Hard hat | <ol style="list-style-type: none"> Permit required Attendant required |
| Student Recreation Center | Fountain pump vault at front entrance | <ol style="list-style-type: none"> Oxygen deficiency Electrical shock Engulfment | <ol style="list-style-type: none"> Permit posted Atmospheric test Lockout if applicable | <ol style="list-style-type: none"> Monitor Compatible communication equipment | <ol style="list-style-type: none"> Permit required Attendant required |
| Student Recreation Center | Recirculation pump manhole for fountain at front entrance – North side of building | <ol style="list-style-type: none"> Oxygen deficiency Electrical shock Engulfment Fall from ladder | <ol style="list-style-type: none"> Permit posted Atmospheric test Lockout/tagout water supply and sump pump Pedestrian control Barricades | <ol style="list-style-type: none"> Monitor Retrieval equipment Harness Lifeline Communication equipment-radio Hard hat | <ol style="list-style-type: none"> Permit required Attendant required |
| Student Recreation Center/Leighton Pool | Recirculation pump pit (hair strainer) – basement | <ol style="list-style-type: none"> Oxygen deficiency Toxic gases/vapors Material harmful to skin | <ol style="list-style-type: none"> Permit posted Atmospheric test Lockout/tagout pump | <ol style="list-style-type: none"> Monitor Compatible communication equipment-radio Hard hat Appropriate PPE for skin and eye protection (rubber gloves and goggles) | <ol style="list-style-type: none"> Permit required Attendant required |
| Student Recreation Center/Leighton Pool | Surge overflow vault – basement | <ol style="list-style-type: none"> Oxygen deficiency | <ol style="list-style-type: none"> Permit posted Atmospheric test | <ol style="list-style-type: none"> Monitor Compatible communication equipment-radio | <ol style="list-style-type: none"> Permit required Attendant required |
| Student Recreation Center/Leighton Pool | Surge tank/water balance – basement | <ol style="list-style-type: none"> Oxygen deficiency Toxic gases/vapors Material harmful to the skin | <ol style="list-style-type: none"> Permit posted Atmospheric test | <ol style="list-style-type: none"> Monitor Compatible communication equipment-radio Hard hat Appropriate PPE for skin and eye protection (rubber gloves and goggles) | <ol style="list-style-type: none"> Permit required Attendant required |
| Susan Campbell Hall | Old E-Vault (now low voltage lines only) South side lawn | <ol style="list-style-type: none"> Oxygen deficiency | <ol style="list-style-type: none"> Permit posted Atmospheric test | <ol style="list-style-type: none"> Monitor Compatible communication-radio or cell phone Ladder | <ol style="list-style-type: none"> Permit required Attendant required |
| Susan Campbell Hall | Storm sewer pump station manhole – Northeast corner of building | <ol style="list-style-type: none"> Oxygen deficiency Electrical shock Engulfment Fall from ladder | <ol style="list-style-type: none"> Permit posted Atmospheric test Pump out prior to entry Lockout/tagout sump pump Pedestrian control Barricades | <ol style="list-style-type: none"> Monitor Retrieval equipment Harness Lifeline Communication equipment-radio Hard hat | <ol style="list-style-type: none"> Permit required Attendant required |
| Susan Campbell Hall | Sump pump vault at NE corner of building | <ol style="list-style-type: none"> Oxygen deficiency Electrical shock Engulfment | <ol style="list-style-type: none"> Permit posted Atmospheric test | <ol style="list-style-type: none"> Compatible communication equipment-radio or cell phone Lockout/tagout if applicable Monitor | <ol style="list-style-type: none"> Permit required Attendant required |
| Tunnels (where work requires permit) | ALL NOTE: if work could create any potential atmospheric hazards, creates potential for entrapment or creates a safety or health hazard (e.g. welding, cutting and brazing, chemicals) and these hazards cannot be mitigated by fans and/or ventilation equipment, then permit is required | <ol style="list-style-type: none"> Fire/heat Asbestos Electrical shock Flooding Steam Natural gas Tight spaces Compressed air Sanitation | <ol style="list-style-type: none"> Permit posted Atmospheric test 2 person tunnel rule plus attendant outside Comply with safety signs on all electrical cables and equipment Hot work permit required when welding Cutting or brazing | <ol style="list-style-type: none"> Monitor Hard hat Compatible communication equipment-radio Flash light Fan or other ventilation equipment Appropriate respirator if required | <ol style="list-style-type: none"> Permit required Attendant required |

| Building | Space Location | Nature of Hazards | Safety Precautions | Equipment Required | Comments |
|--|--|---|--|--|---|
| Tunnels | Note: In most situations when working and travelling in the tunnels – follow the tunnel entry requirements. While the tunnel is specifically | <ol style="list-style-type: none"> Heat Asbestos Electrical Shock Flooding Natural gas Sanitation issues Compressed air Steam lines | <ol style="list-style-type: none"> 2 Person tunnel rule Comply with safety signs on all electrical cables and equipment Hot work permit if welding, cutting or brazing If confined space permit is required, air monitoring and an attendant/rescuer are required. | <ol style="list-style-type: none"> Hard hat Flashlight Compatible communication equipment Long pants Long-sleeve shirt Shoes appropriate for work to be performed (no open-toe shoes) Air monitor (if permit is required) | <ol style="list-style-type: none"> Log in/out with Power Plant control room |
| University Health Services | Backflow preventer vault East side by sidewalk | <ol style="list-style-type: none"> Oxygen deficiency Electrical (sump pump) | <ol style="list-style-type: none"> Permit posted Atmospheric test If water present lockout sump pump prior to entry | <ol style="list-style-type: none"> Monitor Compatible communication equipment-radio | <ol style="list-style-type: none"> Permit required Attendant required Hard hat if entering beyond sump pump |
| Vaults All Other <4 Feet | ALL | <ol style="list-style-type: none"> If no hazard exists | <ol style="list-style-type: none"> NONE- no permit required | | <ol style="list-style-type: none"> If hazards exist then follow Backflow Preventer Vaults- Permit Required |
| Villard-Miller Theater | Backflow preventer vault, South side of building by bike racks (approx. 6' deep) | <ol style="list-style-type: none"> Oxygen deficiency | <ol style="list-style-type: none"> Permit posted Ventilate Atmospheric test If water present pump out prior to entering | <ol style="list-style-type: none"> Monitor Compatible communication equipment-radio | <ol style="list-style-type: none"> Permit required Attendant required |
| Walton Complex | Pipe runs in Smith and Clark adjacent to laundry area | <ol style="list-style-type: none"> Oxygen deficiency | <ol style="list-style-type: none"> Permit posted Atmospheric test | <ol style="list-style-type: none"> Monitor Hard hat Compatible communication equipment-radio | <ol style="list-style-type: none"> Permit required Attendant required |
| West Side of New Residence Halls, East of LLC | Alley inbetween LLC and New Residence Halls | <ol style="list-style-type: none"> Electrical shock (sump pump) Oxygen deficiency | <ol style="list-style-type: none"> Permit posted, Atmospheric test, if water present - pump out prior to entering Pedestrian control Lockout/tagout (sump pump) | <ol style="list-style-type: none"> Monitor Compatible communication equipment - radio Hard hat Barricades/cones. | <ol style="list-style-type: none"> Permit required Attendant required. High voltage cables in vault. Two confined spaces next to each other. If using both confined spaces at the same time, need 4th person as attendant. |
| Willamette Hall | Atrium, smoke fan duct works x2 South side of building on either side of door | <ol style="list-style-type: none"> Oxygen deficiency Toxic gases/vapors | <ol style="list-style-type: none"> Permit posted Atmospheric test Pedestrian control | <ol style="list-style-type: none"> Monitor Compatible communication equipment-radio Hard hat Barricades/cones | <ol style="list-style-type: none"> Permit required Attendant required |
| Willamette Hall | Chemical exhaust x2, building East and West side roof | <ol style="list-style-type: none"> Oxygen deficiency Toxic gases/vapors Material harmful to the skin | <ol style="list-style-type: none"> Permit posted Atmospheric test Open all doors for ventilation | <ol style="list-style-type: none"> Monitor Compatible communication equipment-radio Eye protection Protective clothing SCBA | <ol style="list-style-type: none"> Permit required Attendant required |
| Willamette Hall | Room 40 cryogenic wind tunnel vault (Donnelly lab) | <ol style="list-style-type: none"> Oxygen deficiency Toxic gases/vapors | <ol style="list-style-type: none"> Permit posted Atmospheric test Open hatch and air out | <ol style="list-style-type: none"> Monitor Flashlight Compatible communication equipment-radio | <ol style="list-style-type: none"> Permit required Attendant required |
| Zebrafish International Research Center-ZIRC | Room 120- Mechanical vault | <ol style="list-style-type: none"> Oxygen deficiency Steam Heat | <ol style="list-style-type: none"> Permit posted Atmospheric test | <ol style="list-style-type: none"> Monitor Tripod Emergency Escape Unit Escape harness/lifeline | <ol style="list-style-type: none"> Permit required Attendant required |