

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

Building	Space Location	Nature of Hazards	Safety Precautions	Equipment Required	Comments
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 breaching	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

Building	Space Location	Nature of Hazards	Safety Precautions	Equipment Required	Comments
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	1. Oxygen deficiency 2. Engulfment 3. Toxic gases/vapors	1. Permit posted 2. Atmospheric test 3. Ventilation/purge if needed	1. Communication equipment 2. Hard hat 3. Harness 4. Lifeline 5. Ventilation equipment 6. Retrieval equipment	1. Permit required 2. Attendant required 3. Harness with lifeline 4. Hard hat 5. Lockout/tagout water supply
Central Power Station	Steam intertie	1. Oxygen deficiency 2. Steam 3. Heat	1. Permit posted 2. Atmospheric test	1. Compatible communication equipment-radio 2. Hard hat 3. Monitor	1. Permit required 2. Attendant required
Central Power Station Chiller Building	Various external e- vaults South and East side of building – under transformers	1. Possible stagnant air 2. High voltage connections 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 doors and allow air to flow at least 10 minutes prior to entry 6. Perform visual check for presence of water on the floor. Do not enter if water is visible. 7. Take added precaution as necessary to remove water prior to entry.	1. Monitor 2. Hard hat 3. Compatible communication equipment-radio 4. Appropriate FR PPE and insulated tools	1. Permit required 2. 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	1. Possible stagnant air 2. Electrical shock	1. Permit posted 2. Atmospheric test 3. Lockout/tagout where applicable 4. Open both access doors and allow air to flow at least 10 minutes prior to entry 5. Barricade entrances	1. Monitor 2. Compatible communication equipment-radio 3. Barricades	1. Permit posted 2. Atmospheric test
Central Power Station Oil/Water Separator (3 water chambers)	Southwest side of Chiller Building	1. Oxygen deficiency 2. Engulfment	1. Permit posted 2. Atmospheric test 3. Traffic control 4. Pedestrian control	1. Monitor 2. Compatible communication equipment-radio 3. Hard hat 4. Retrieval equipment	1. Permit required 2. Attendant required 3. Lockout/tagout pumps
Electrical Vault	All	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 maintain 25" clearance.	1. Monitor 2. Hard hat 3. Compatible communication equipment-radio 4. Appropriate FR PPE and insulated tools 5. Barricades/cones	1. Permit required 2. Attendant required
Fine Arts Studio	Vault with backflow devices on West side of building	1. Oxygen deficiency	1. Permit posted 2. Atmospheric test	1. Monitor 2. Hard hat	1. Permit required 2. Attendant required
Ford Alumni Center	NE sidewalk corner of East 13th and Columbia Street, backflow preventer vault	1. Oxygen deficiency 2. Electrical shock	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 and attendant keeps pedestrians from area around vault.
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

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Frohnmayr Music	Domestic and fire water check valves manhole – Northwest 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 Harness with lifeline
Frohnmayr Music	Fire water check valves vault – Southeast corner of building at 18th Street parking lot	<ol style="list-style-type: none"> Oxygen deficiency Electrical shock 	<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 Communication equipment-radio Hard hat Barricades/cones 	<ol style="list-style-type: none"> Permit required Attendant required
Frohnmayr Music	Storm sewer pump station manhole – North side of building against center wall	<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 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 Harness with lifeline
Gerlinger Hall	Chemical mixing pit in exterior building West end	<ol style="list-style-type: none"> Oxygen deficiency Toxic gases/vapors 	<ol style="list-style-type: none"> Permit posted Atmospheric test 	<ol style="list-style-type: none"> Monitor Compatible communication equipment-radio Tripod Harness 	<ol style="list-style-type: none"> Permit required Attendant required
Global Scholars Fire Backflow and Sprinkler System Vault	15th Street, NW corner of Global Scholars Housing next to walkway near sidewalk	<ol style="list-style-type: none"> Oxygen deficiency Electrical 	<ol style="list-style-type: none"> Permit posted Atmospheric test If water present-pump out- un-plug sump pump prior to entry 	<ol style="list-style-type: none"> Monitor Compatible communication equipment-radio Barricades/cones 	<ol style="list-style-type: none"> Permit required Attendant required
Hayward Field	Mehcanical room, 491 pit	<ol style="list-style-type: none"> Sewer gas Electrical shock Fall from ship ladder Pressurized steam Water Pines 	<ol style="list-style-type: none"> Permit posted Atmospheric test If water present - pump out prior to entering 	<ol style="list-style-type: none"> Monitor Compatible communication equipment - radio Hard hat 	<ol style="list-style-type: none"> Permit required Attendant required
Hayward Field	Backflow preventer vault, Lot 32 SE entrance	<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 Pedestrian control Traffic control 	<ol style="list-style-type: none"> Monitor Compatible communication equipment-radio Barricades/cones 	<ol style="list-style-type: none"> Permit required Attendant required
HEDCO Education	SW side of building- Fire backflow preventer vaults	<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 Lock out sump pump prior to entry if applicable 	<ol style="list-style-type: none"> Monitor Compatible communication equipment-radio 	<ol style="list-style-type: none"> Permit required Attendant required
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

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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
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

Building	Space Location	Nature of Hazards	Safety Precautions	Equipment Required	Comments
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.
Matthew Knight Arena	Oil/water separator – Arena parking level P3 – manhole near parking space 290	<ol style="list-style-type: none"> Oxygen deficiency 	<ol style="list-style-type: none"> Permit posted Ventilate/purge 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 Lifeline for fall protection 	<ol style="list-style-type: none"> Permit required Attendant required
Matthew Knight Arena	Oil/water separator – manhole in Arena loading dock area	<ol style="list-style-type: none"> Oxygen deficiency 	<ol style="list-style-type: none"> Permit posted Ventilate/purge 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 	<ol style="list-style-type: none"> Permit required Attendant required

Building	Space Location	Nature of Hazards	Safety Precautions	Equipment Required	Comments
Matthew Knight Arena	Room 28 sewage ejector pit (SEP 2)	<ol style="list-style-type: none"> Oxygen deficiency Sewer gas Electrical shock 	<ol style="list-style-type: none"> Permit posted Ventilate/purge Atmospheric test Lockout/tagout where applicable 	<ol style="list-style-type: none"> Monitor Hard hat Compatible communication equipment-radio Barricades/cones Retrieval equipment Harness Lifeline for fall protection Rubber boots Disposable Tyvek coveralls Neoprene gloves 	<ol style="list-style-type: none"> Permit required Attendant required For work on sump pump - remove w/wire cable. 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)	<ol style="list-style-type: none"> Oxygen deficiency Sewer gas Electrical shock 	<ol style="list-style-type: none"> Permit posted Ventilate/purge Atmospheric test Lockout/tag out where applicable 	<ol style="list-style-type: none"> Monitor Hard hat Compatible communication equipment-radio Barricades/cones Retrieval equipment Harness Lifeline for fall protection Rubber boots Disposable Tyvek coveralls Neoprene gloves 	<ol style="list-style-type: none"> Permit required Attendant required For work on sump pump - remove w/wire cable. 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)	<ol style="list-style-type: none"> Oxygen deficiency Sewer gas Electrical shock 	<ol style="list-style-type: none"> Permit posted Ventilate/purge Atmospheric test Lockout/tag out where applicable 	<ol style="list-style-type: none"> Monitor Hard hat Compatible communication equipment-radio Barricades/cones Retrieval equipment Harness Lifeline for fall protection Rubber boots Disposable Tyvek coveralls Neoprene gloves 	<ol style="list-style-type: none"> Permit required Attendant required For work on sump pump - remove w/wire cable. 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	<ol style="list-style-type: none"> Oxygen deficiency Sewer gas Electrical shock 	<ol style="list-style-type: none"> Permit posted Ventilate/purge Atmospheric test Traffic control Pedestrian control Lockout/tagout where applicable 	<ol style="list-style-type: none"> Monitor Hard hat Compatible communication equipment-radio Barricades/cones Retrieval equipment Harness Lifeline for fall protection Rubber boots Disposable Tyvek coveralls Neoprene gloves Goggles 	<ol style="list-style-type: none"> Permit required Attendant Required For work on sump pump - remove w/wire cable. 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 pump pit (SP-2) - Southeast ramp to loading dock	<ol style="list-style-type: none"> Oxygen deficiency 	<ol style="list-style-type: none"> Permit posted Ventilate/purge 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 Lifeline for fall protection 	<ol style="list-style-type: none"> Permit required Attendant required For work on sump pump - remove w/wire cable. 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	<ol style="list-style-type: none"> Oxygen deficiency 	<ol style="list-style-type: none"> Permit posted Ventilate/purge 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 	<ol style="list-style-type: none"> Permit required Attendant required For work on sump pump - remove w/wire cable.

Building	Space Location	Nature of Hazards	Safety Precautions	Equipment Required	Comments
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 along Millrace Drive, North of Lot 4, behind Building 125A (Vault 3'x5' wide, approx. 8' deep)	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 – New Sewage Lift Station	Sanitary sewage lift station and two 5000 gallon surge tanks in sidewalk next to Onyx Street and Millrace – 5 manholes	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 for fall protection	1. Permit required 2. Attendant required
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
Moss Street Tunnel Sump Pump Manhole	Moss Street roadway between lots 33 and 34 on South side of Arena (approx. 17' deep)	1. Oxygen deficiency 2. Fall 3. Electrical shock	1. Permit posted 2. Atmospheric test 3. Traffic control 4. Pedestrian control 5. Remove water if sump pump is submerged 6. Lockout sump pump prior to entry if applicable	1. Monitor 2. Compatible communication equipment-radio 3. Hard hat 4. Barricades/cones 5. Ventilation equipment 6. Harness 7. Lifeline 8. Retrieval equipment	1. Permit required 2. Attendant required
Motor Pool	Oil/water separator, South side of facility near fence (approx. 12.5' deep)	1. Oxygen deficiency	1. Permit posted 2. Atmospheric test 3. Traffic control 4. Pump out prior to entry	1. Monitor 2. Hard hat 3. Compatible communication equipment-radio 4. Barricades/cones 5. Retrieval equipment 6. Harness	1. Permit required 2. Attendant required
Motor Pool/Fleet Services	located inside of the sign for motor pool	1. Oxygen Deficiency 2. Other (carbon monoxide from vehicle traffic)	1. Permit posted 2. Atmospheric test 3. Other (a ladder is needed to access the space, a fall exposure)	1. Monitor 2. Compatible communication equipment 3. Hard Hat 4. Ladder	1. Permit required 2. Attendant Required

Building	Space Location	Nature of Hazards	Safety Precautions	Equipment Required	Comments
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	1. Oxygen deficiency	1. Permit posted 2. Atmospheric test 3. Traffic control	1. Monitor 2. Compatible communication equipment-radio 3. Hard hat 4. Barricades/cones 5. Ventilation equipment 6. Harness 7. Lifeline 8. Retrieval equipment	1. Permit required 2. Attendant required
Motor Pool Manholes	330 Franklin Blvd, car wash settling tanks x4, NE corner of building	1. Oxygen deficiency	1. Permit posted 2. Atmospheric test 3. Traffic control	1. Monitor 2. Compatible communication equipment-radio 3. Hard hat 4. Barricade/cones 5. Ventilation equipment	1. Permit required 2. Attendant required 3. 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	1. Oxygen deficiency 2. Engulfment	1. Permit posted 2. Atmospheric test 3. Traffic control	1. Monitor 2. Retrieval equipment 3. Harness 4. Lifeline for fall protection 5. Compatible communication equipment-radio 6. Hard hat 7. Barricades/cones	1. Permit required 2. Attendant required
Museum of Natural and Cultural History	Water control valve vault North side along sidewalk - new addition	1. Oxygen deficiency 2. Flood 3. Electrical (sump pump)	1. Permit posted 2. Atmospheric test 3. Traffic/pedestrian control 4. If water present lockout sump pump prior to entry	1. Monitor 2. Compatible communication equipment 3. Hard hat if working below sump 4. Barricades/cones	1. Permit required 2. Attendant required
Network & Telecom Vaults/Manholes	All	1. Oxygen deficiency 2. Stagnant air 3. Electrical (if sump pumps)	1. Permit posted 2. Atmospheric test 3. 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.	1. Monitor 2. Compatible communication equipment-radio 3. Hard hat 4. Barricades/cones 5. Ventilation equipment	1. Permit required 2. Attendant required
Non-Electrical All Other Vaults	All vaults that are over 3 feet in depth	1. Oxygen deficiency 2. Engulfment 3. Toxic gasses/vapors 4. Flammable gasses/vapors 5. Steam 6. Heat	1. Permit posted 2. Atmospheric test 3. Traffic control 4. Pedestrian control 5. Lockout/tagout where applicable	1. Monitor 2. Compatible communication equipment-radio 3. Hard hat 4. Barricades/cones	1. Permit required 2. Attendant required
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

Building	Space Location	Nature of Hazards	Safety Precautions	Equipment Required	Comments
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
Student Recreation Center	Domestic water double check valve manhole – Northeast corner of building	1. Oxygen deficiency 2. Electrical shock 3. Engulfment 4. Fall from ladder	1. Permit posted 2. Atmospheric test 3. Pump out water 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
Student Recreation Center	Fountain pump vault at front entrance	1. Oxygen deficiency 2. Electrical shock 3. Engulfment	1. Permit posted 2. Atmospheric test 3. Lockout if applicable	1. Monitor 2. Compatible communication equipment	1. Permit required 2. Attendant required
Student Recreation Center	Recirculation pump manhole for fountain at front entrance – North side of building	1. Oxygen deficiency 2. Electrical shock 3. Engulfment 4. Fall from ladder	1. Permit posted 2. Atmospheric test 3. Lockout/tagout water supply and sump pump 4. Pedestrian control 5. Barricades	1. Monitor 2. Retrieval equipment 3. Harness 4. Lifeline 5. Communication equipment-radio 6. Hard hat	1. Permit required 2. Attendant required
Student Recreation Center/Leighton Pool	Recirculation pump pit (hair strainer) – basement	1. Oxygen deficiency 2. Toxic gases/vapors 3. Material harmful to skin	1. Permit posted 2. Atmospheric test 3. Lockout/tagout pump	1. Monitor 2. Compatible communication equipment-radio 3. Hard hat 4. Appropriate PPE for skin and eye protection (rubber gloves and goggles)	1. Permit required 2. Attendant required
Student Recreation Center/Leighton Pool	Surge overflow vault – basement	1. Oxygen deficiency	1. Permit posted 2. Atmospheric test	1. Monitor 2. Compatible communication equipment-radio	1. Permit required 2. Attendant required

Building	Space Location	Nature of Hazards	Safety Precautions	Equipment Required	Comments
Student Recreation Center/Leighton Pool	Surge tank/water balance – basement	1. Oxygen deficiency 2. Toxic gases/vapors 3. Material harmful to the skin	1. Permit posted 2. Atmospheric test	1. Monitor 2. Compatible communication equipment-radio 3. Hard hat 4. Appropriate PPE for skin and eye protection (rubber gloves and goggles)	1. Permit required 2. Attendant required
Susan Campbell Hall	Old E-Vault (now low voltage lines only) South side lawn	1. Oxygen deficiency	1. Permit posted 2. Atmospheric test	1. Monitor 2. Compatible communication-radio or cell phone 3. Ladder	1. Permit required 2. Attendant required
Susan Campbell Hall	Storm sewer pump station manhole – Northeast corner of building	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
Susan Campbell Hall	Sump pump vault at NE corner of building	1. Oxygen deficiency 2. Electrical shock 3. Engulfment	1. Permit posted 2. Atmospheric test	1. Compatible communication equipment-radio or cell phone 2. Lockout/tagout if applicable 3. Monitor	1. Permit required 2. 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	1. Fire/heat 2. Asbestos 3. Electrical shock 4. Flooding 5. Steam 6. Natural gas 7. Tight spaces 8. Compressed air 9. Sanitation	1. Permit posted 2. Atmospheric test 3. 2 person tunnel rule plus attendant outside 4. Comply with safety signs on all electrical cables and equipment 5. Hot work permit required when welding 6. Cutting or brazing	1. Monitor 2. Hard hat 3. Compatible communication equipment-radio 4. Flash light 5. Fan or other ventilation equipment 6. Appropriate respirator if required	1. Permit required 2. Attendant required
Tunnels	Note: In most situations when working and travelling in the tunnels – follow the tunnel entry requirements. While the tunnel is specifically	1. Heat 2. Asbestos 3. Electrical Shock 4. Flooding 5. Natural gas 6. Sanitation issues 7. Compressed air 8. Steam lines	1. 2 Person tunnel rule 2. Comply with safety signs on all electrical cables and equipment 3. Hot work permit if welding, cutting or brazing 4. If confined space permit is required, air monitoring and an attendant/rescuer are required.	1. Hard hat 2. Flashlight 3. Compatible communication equipment 4. Long pants 5. Long-sleeve shirt 6. Shoes appropriate for work to be performed (no open-toe shoes) 7. Air monitor (if permit is required)	1. Log in/out with Power Plant control room
University Health Services	Backflow preventer vault East side by sidewalk	1. Oxygen deficiency 2. Electrical (sump pump)	1. Permit posted 2. Atmospheric test 3. If water present lockout 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
Vaults All Other <4 Feet	ALL	1. If no hazard exists	1. NONE- no permit required		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)	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
Walton Complex	Pipe runs in Smith and Clark adjacent to laundry area	1. Oxygen deficiency	1. Permit posted 2. Atmospheric test	1. Monitor 2. Hard hat 3. Compatible communication equipment-radio	1. Permit required 2. Attendant required

Building	Space Location	Nature of Hazards	Safety Precautions	Equipment Required	Comments
West Side of New Residence Halls, East of LLC	Alley inbetween LLC and New Residence Halls	1. Electrical shock (sump pump) 2. Oxygen deficiency	1. Permit posted, 2. Atmospheric test, if water present - pump out prior to entering 3. Pedestrian control 4. Lockout/tagout (sump pump)	1. Monitor 2. Compatible communication equipment - radio 3. Hard hat 4. Barricades/cones.	1. Permit required 2. Attendant required. 3. High voltage cables in vault. 4. Two confined spaces next to each other. 5. 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	1. Oxygen deficiency 2. Toxic gases/vapors	1. Permit posted 2. Atmospheric test 3. Pedestrian control	1. Monitor 2. Compatible communication equipment-radio 3. Hard hat 4. Barricades/cones	1. Permit required 2. Attendant required
Willamette Hall	Chemical exhaust x2, building East and West side roof	1. Oxygen deficiency 2. Toxic gases/vapors 3. Material harmful to the skin	1. Permit posted 2. Atmospheric test 3. Open all doors for ventilation	1. Monitor 2. Compatible communication equipment-radio 3. Eye protection 4. Protective clothing 5. SCBA	1. Permit required 2. Attendant required
Willamette Hall	Room 40 cryogenic wind tunnel vault (Donnelly lab)	1. Oxygen deficiency 2. Toxic gases/vapors	1. Permit posted 2. Atmospheric test 3. Open hatch and air out	1. Monitor 2. Flashlight 3. Compatible communication equipment-radio	1. Permit required 2. Attendant required
Zebrafish International Research Center-ZIRC	Room 120- Mechanical vault	1. Oxygen deficiency 2. Steam 3. Heat	1. Permit posted 2. Atmospheric test	1. Monitor 3. Tripod Emergency Escape Unit 4. Escape harness/lifeline	1. Permit required 2. Attendant required