

Building	Space Location	Nature of Hazards	Safety Precautions	Equipment Required	Comments
AAA	Utility vault woodshop building NW corner	1. Oxygen deficiency 2. Electrical shock 3. Steam 4. Heat	1. Permit posted 2. Atmospheric test 3. Traffic control 4. Pedestrian control 5. Lockout sump pump and steam valves if applicable	1. Monitor 2. Hard hat 3. Compatible communication equipment-radio	1. <b>Permit required</b> 2. <b>Attendant required</b>
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. <b>Permit required</b> 2. <b>Attendant required</b> 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 <i>Clean Up Procedures for Bird Droppings</i> 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. <b>Permit required</b> 2. <b>Attendant required</b> 3. Tools, rubber boots, rubber gloves or other contaminated items that will be reused must be cleaned with a 10% bleach solution
Alumni Center	NW sidewalk corner of East 13 <sup>th</sup> 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. <b>Permit required</b> 2. <b>Attendant required</b> 3. Due to pedestrian traffic on sidewalk – ensure adequate barricades are up and attendant keeps pedestrians from area around vault.
Arena	East side fire pump station and backflow preventer vaults along Villard Street	1. Oxygen deficiency 2. Electric shock	1. Permit posted 2. Ventilate 3. Atmospheric test 4. If water present – pump out prior to entering 5. Lockout sump pump prior to entry if applicable	1. Monitor 2. Compatible communication equipment-radio 3. Barricades/cones	1. <b>Permit required</b> 2. <b>Attendant required due to close proximity to sidewalk and pedestrian traffic.</b>
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. <b>Permit required</b> 2. <b>Attendant required</b>
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. <b>Permit required</b> 2. <b>Attendant required</b>

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Arena	Room 28 sewage ejector pit (SEP 2)	<ol style="list-style-type: none"> <li>Oxygen deficiency</li> <li>Sewer gas</li> <li>Electrical shock</li> </ol>	<ol style="list-style-type: none"> <li>Permit posted</li> <li>Ventilate/purge</li> <li>Atmospheric test</li> <li>Lockout/tagout where applicable</li> </ol>	<ol style="list-style-type: none"> <li>Monitor</li> <li>Hard hat</li> <li>Compatible communication equipment-radio</li> <li>Barricades/cones</li> <li>Retrieval equipment</li> <li>Harness</li> <li>Lifeline for fall protection</li> <li>Rubber boots</li> <li>Disposable Tyvek coveralls</li> <li>Neoprene gloves</li> </ol>	<ol style="list-style-type: none"> <li><b>Permit required</b></li> <li><b>Attendant required</b></li> <li>For work on sump pump – remove w/wire cable.</li> <li>If work in space, pump out sewage, decontaminate – wash and flush out space and pump out prior to entry.</li> </ol>
Arena	Room 73 sewage ejector pit (SEP 3)	<ol style="list-style-type: none"> <li>Oxygen deficiency</li> <li>Sewer gas</li> <li>Electrical shock</li> </ol>	<ol style="list-style-type: none"> <li>Permit posted</li> <li>Ventilate/purge</li> <li>Atmospheric test</li> <li>Lockout/tagout where applicable</li> </ol>	<ol style="list-style-type: none"> <li>Monitor</li> <li>Hard hat</li> <li>Compatible communication equipment-radio</li> <li>Barricades/cones</li> <li>Retrieval equipment</li> <li>Harness</li> <li>Lifeline for fall protection</li> <li>Rubber boots</li> <li>Disposable Tyvek coveralls</li> <li>Neoprene gloves</li> </ol>	<ol style="list-style-type: none"> <li><b>Permit required</b></li> <li><b>Attendant required</b></li> <li>For work on sump pump – remove w/wire cable.</li> <li>If work in space, pump out sewage, decontaminate – wash and flush out space and pump out prior to entry.</li> </ol>
Arena	Room 85 sewage ejector pit (SEP 4)	<ol style="list-style-type: none"> <li>Oxygen deficiency</li> <li>Sewer gas</li> <li>Electrical shock</li> </ol>	<ol style="list-style-type: none"> <li>Permit posted</li> <li>Ventilate/purge</li> <li>Atmospheric test</li> <li>Lockout/tagout where applicable</li> </ol>	<ol style="list-style-type: none"> <li>Monitor</li> <li>Hard hat</li> <li>Compatible communication equipment-radio</li> <li>Barricades/cones</li> <li>Retrieval equipment</li> <li>Harness</li> <li>Lifeline for fall protection</li> <li>Rubber boots</li> <li>Disposable Tyvek coveralls</li> <li>Neoprene gloves</li> </ol>	<ol style="list-style-type: none"> <li><b>Permit required</b></li> <li><b>Attendant required</b></li> <li>For work on sump pump – remove w/wire cable.</li> <li>If work in space, pump out sewage, decontaminate – wash and flush out space and pump out prior to entry.</li> </ol>
Arena	Sanitary sewer pump station- pump 1 and 2 - Arena parking level P3 cage	<ol style="list-style-type: none"> <li>Oxygen deficiency</li> <li>Sewer gas</li> <li>Electrical shock</li> </ol>	<ol style="list-style-type: none"> <li>Permit posted</li> <li>Ventilate/purge</li> <li>Atmospheric test</li> <li>Traffic control</li> <li>Pedestrian control</li> <li>Lockout/tagout where applicable</li> </ol>	<ol style="list-style-type: none"> <li>Monitor</li> <li>Hard hat</li> <li>Compatible communication equipment-radio</li> <li>Barricades/cones</li> <li>Retrieval equipment</li> <li>Harness</li> <li>Lifeline for fall protection</li> <li>Rubber boots</li> <li>Disposable Tyvek coveralls</li> <li>Neoprene gloves</li> <li>Goggles</li> </ol>	<ol style="list-style-type: none"> <li><b>Permit required</b></li> <li><b>Attendant Required</b></li> <li>For work on sump pump – remove w/wire cable.</li> <li>If work in space, pump out sewage, decontaminate – wash and flush out space and pump out prior to entry.</li> </ol>
Arena	Storm water sump pump pit (SP-2) – Southeast ramp to loading dock	<ol style="list-style-type: none"> <li>Oxygen deficiency</li> </ol>	<ol style="list-style-type: none"> <li>Permit posted</li> <li>Ventilate/purge</li> <li>Atmospheric test</li> <li>Traffic control</li> <li>Pump out prior to entry</li> </ol>	<ol style="list-style-type: none"> <li>Monitor</li> <li>Hard hat</li> <li>Compatible communication equipment-radio</li> <li>Barricades/cones</li> <li>Retrieval equipment</li> <li>Harness</li> <li>Lifeline for fall protection</li> </ol>	<ol style="list-style-type: none"> <li><b>Permit required</b></li> <li><b>Attendant required</b></li> <li>For work on sump pump – remove w/wire cable.</li> <li>If work in space, pump out sewage, decontaminate – wash and flush out space and pump out prior to entry.</li> </ol>

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<b>Arena</b>	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. <b>Permit required</b> 2. <b>Attendant required</b> 3. For work on sump pump – remove with wire cable.
<b>Arena Manholes &lt; 5 Feet Deep</b>	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. <b>Permit required</b> 2. <b>Attendant required</b>
<b>Arena Manholes &gt; 5 Feet Deep</b>	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. <b>Permit required</b> 2. <b>Attendant required</b>
<b>Autzen Stadium</b>	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. <b>Permit required</b> 2. <b>Attendant required</b>
<b>Autzen Stadium</b>	Electrical vault South berm East of grand staircase	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 4. Appropriate FR PPE and insulated tools 5. Barricade/cones	1. <b>Permit required</b> 2. <b>Attendant required</b>
<b>Autzen Stadium</b>	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 maintain 25" clearance.	1. Monitor 2. Hard hat 3. Compatible communication equipment-radio	1. <b>Permit required</b> 2. <b>Attendant Required</b>
<b>Autzen Stadium</b>	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. <b>Permit required</b> 2. <b>Attendant Required</b>
<b>Autzen Stadium</b>	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. <b>Permit required</b> 2. <b>Attendant Required</b>

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<b>Autzen Stadium</b>	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. <b>Permit required</b> 2. <b>Attendant Required</b>
<b>Autzen Stadium</b>	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. <b>Permit required</b> 2. <b>Attendant required</b>
<b>Autzen Stadium</b>	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. <b>Permit required</b> 2. <b>Attendant required</b>
<b>Autzen Stadium</b>	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. <b>Permit required</b> 2. <b>Attendant required</b>
<b>Autzen Stadium</b>	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. <b>Permit required</b> 2. <b>Attendant required</b>
<b>Backflow Preventer Vaults</b>	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. <b>Permit required</b> 2. <b>Attendant required</b>
<b>Backflow Preventer Vaults &lt; 4 Feet Deep</b>	All	If no hazard exists	None - No permit needed	None	If hazards exist then follow backflow preventer vaults - permit required
<b>Bean Cistern</b>	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. <b>Permit required</b> 2. <b>Attendant required</b>
<b>Casanova Center Mechanic Room</b>	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. <b>Permit required</b> 2. <b>Attendant required</b> 3. Lockout/tagout water source
<b>Casanova Center Mechanical Room</b>	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. <b>Permit required</b> 2. <b>Attendant required</b> 3. Lockout/tagout (blank bleed) gas source

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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. <b>Permit required</b> 2. <b>Attendant required</b>
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. <b>Permit required</b> 2. <b>Attendant required</b>
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. <b>Permit required</b> 2. <b>Attendant required</b> 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. <b>Permit required</b> 2. <b>Attendant required</b> 3. Lockout/tagout gas lines, oil lines and steam atomization lines
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. <b>Permit required</b> 2. <b>Attendant required</b> 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. <b>Permit required</b> 2. <b>Attendant required</b> 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. <b>Permit required</b> 2. <b>Attendant required</b> 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. <b>Permit required</b> 2. <b>Attendant required</b> 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. <b>Permit required</b> 2. <b>Attendant required</b> 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. <b>Permit required</b> 2. <b>Attendant Required</b> 3. Lockout/tagout on main steam, feedwater, and steam blanket systems

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Central Power Station	#2 Boiler Steam Drum	<ol style="list-style-type: none"> <li>Oxygen deficiency</li> <li>Steam/water engulfment</li> <li>Toxic gases/vapors</li> </ol>	<ol style="list-style-type: none"> <li>Permit posted</li> <li>Atmospheric test</li> <li>Ventilation/purge</li> </ol>	<ol style="list-style-type: none"> <li>Compatible communication equipment-radio</li> <li>Monitor</li> <li>Ventilation equipment</li> </ol>	<ol style="list-style-type: none"> <li><b>Permit required</b></li> <li><b>Attendant required</b></li> <li>Lockout/tagout on main steam, feedwater, steam blanket system</li> </ol>
Central Power Station	#2 horizontal D.A. tank (third level)	<ol style="list-style-type: none"> <li>Oxygen deficiency</li> <li>Steam/water engulfment</li> <li>Toxic gases/vapors</li> </ol>	<ol style="list-style-type: none"> <li>Permit posted</li> <li>Atmospheric test</li> <li>Ventilation/purge</li> </ol>	<ol style="list-style-type: none"> <li>Compatible communication equipment-radio</li> <li>Monitor</li> <li>Ventilation equipment</li> </ol>	<ol style="list-style-type: none"> <li><b>Permit required</b></li> <li><b>Attendant required</b></li> <li>Lockout/tagout on steam condensate/make-up, feedwater and chemical feed systems</li> </ol>
Central Power Station	Boiler blowdown sump pumping tank	<ol style="list-style-type: none"> <li>Oxygen deficiency</li> <li>Water engulfment</li> </ol>	<ol style="list-style-type: none"> <li>Permit posted</li> <li>Atmospheric test</li> </ol>	<ol style="list-style-type: none"> <li>Compatible communication equipment-radio</li> <li>Fall protection equipment</li> <li>Monitor</li> <li>Barricades for walkway protection</li> <li>Hard hat</li> </ol>	<ol style="list-style-type: none"> <li><b>Permit required</b></li> <li><b>Attendant required</b></li> <li>Lockout/tagout of electrical equipment (480V sump pump)</li> </ol>
Central Power Station	Emergency standby generators access panels	<ol style="list-style-type: none"> <li>Oxygen deficiency</li> <li>Diesel fumes</li> <li>Electrical shock</li> </ol>	<ol style="list-style-type: none"> <li>Permit posted</li> <li>Atmospheric test</li> <li>Lockout/tagout where applicable.</li> <li>Maintain 25" minimum approach distance. Two qualified high-voltage electricians required if unable to maintain 25" clearance</li> <li>Open access door and allow air to flow at least 10 minutes prior to entry</li> </ol>	<ol style="list-style-type: none"> <li>Monitor</li> <li>Hard hat</li> <li>Compatible communication equipment-radio</li> </ol>	<ol style="list-style-type: none"> <li><b>Permit required</b></li> <li><b>Attendant required</b></li> </ol>
Central Power Station	Heat Recovery and Steam Generation (HRSG)	<ol style="list-style-type: none"> <li>Oxygen deficiency</li> <li>Heat</li> </ol>	<ol style="list-style-type: none"> <li>Permit posted</li> <li>Atmospheric test</li> <li>Ventilation/purge</li> <li>Lockout/tagout</li> <li>Open stack cover and ALL manhole doors</li> </ol>	<ol style="list-style-type: none"> <li>Compatible communication equipment-radio</li> <li>Monitor</li> <li>Fans and ventilation equipment</li> <li>Flashlight and/or appropriate lighting</li> </ol>	<ol style="list-style-type: none"> <li><b>Permit required</b></li> <li><b>Attendant required</b></li> <li>Lockout/tagout on main steam, steam blanket systems and connection between gas turbine.</li> <li>Ensure fire box is at room temperature.</li> </ol>
Central Power Station	RO make-up tank - ground level	<ol style="list-style-type: none"> <li>Oxygen deficiency</li> <li>Engulfment</li> <li>Toxic gases/vapors</li> </ol>	<ol style="list-style-type: none"> <li>Permit posted</li> <li>Atmospheric test</li> <li>Ventilation/purge if needed</li> </ol>	<ol style="list-style-type: none"> <li>Communication equipment</li> <li>Hard hat</li> <li>Harness</li> <li>Lifeline</li> <li>Ventilation equipment</li> <li>Retrieval equipment</li> </ol>	<ol style="list-style-type: none"> <li><b>Permit required</b></li> <li><b>Attendant required</b></li> <li>Harness with lifeline</li> <li>Hard hat</li> <li>Lockout/tagout water supply</li> </ol>
Central Power Station	Steam intertie	<ol style="list-style-type: none"> <li>Oxygen deficiency</li> <li>Steam</li> <li>Heat</li> </ol>	<ol style="list-style-type: none"> <li>Permit posted</li> <li>Atmospheric test</li> </ol>	<ol style="list-style-type: none"> <li>Compatible communication equipment-radio</li> <li>Hard hat</li> <li>Monitor</li> </ol>	<ol style="list-style-type: none"> <li><b>Permit required</b></li> <li><b>Attendant required</b></li> </ol>

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<b>Central Power Station Chiller Building</b>	Various external e-vaults South and East side of building – under transformers	<ol style="list-style-type: none"> <li>1. Possible stagnant air</li> <li>2. High voltage connections</li> <li>3. Electrical shock</li> </ol>	<ol style="list-style-type: none"> <li>1. Permit posted</li> <li>2. Atmospheric test</li> <li>3. Lockout/tagout where applicable</li> <li>4. <b>Maintain 25” minimum approach distance.</b> Two qualified high-voltage electricians required if unable to maintain 25” clearance</li> <li>5. Open access doors and allow air to flow at least 10 minutes prior to entry</li> <li>6. Perform visual check for presence of water on the floor. Do not enter if water is visible.</li> <li>7. Take added precaution as necessary to remove water prior to entry.</li> </ol>	<ol style="list-style-type: none"> <li>1. Monitor</li> <li>2. Hard hat</li> <li>3. Compatible communication equipment-radio</li> <li>4. Appropriate FR PPE and insulated tools</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Permit required</b></li> <li>2. <b>Attendant required</b></li> </ol>
<b>Central Power Station Electrical Vault (Switch House)</b>	Entrances at Northeast edge of building and Northwest edge of building - switch house underground electrical vault	<ol style="list-style-type: none"> <li>1. Possible stagnant air</li> <li>2. Electrical shock</li> </ol>	<ol style="list-style-type: none"> <li>1. Permit posted</li> <li>2. Atmospheric test</li> <li>3. Lockout/tagout where applicable</li> <li>4. Open both access doors and allow air to flow at least 10 minutes prior to entry</li> <li>5. Barricade entrances</li> </ol>	<ol style="list-style-type: none"> <li>1. Monitor</li> <li>2. Compatible communication equipment-radio</li> <li>3. Barricades</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Permit posted</b></li> <li>2. <b>Atmospheric test</b></li> </ol>
<b>Central Power Station Oil/Water Separator (3 water chambers)</b>	Southwest side of Chiller Building	<ol style="list-style-type: none"> <li>1. Oxygen deficiency</li> <li>2. Engulfment</li> </ol>	<ol style="list-style-type: none"> <li>1. Permit posted</li> <li>2. Atmospheric test</li> <li>3. Traffic control</li> <li>4. Pedestrian control</li> </ol>	<ol style="list-style-type: none"> <li>1. Monitor</li> <li>2. Compatible communication equipment-radio</li> <li>3. Hard hat</li> <li>4. Retrieval equipment</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Permit required</b></li> <li>2. <b>Attendant required</b></li> <li>3. Lockout/tagout pumps</li> </ol>
<b>Electrical Vault</b>	All	<ol style="list-style-type: none"> <li>1. Oxygen deficiency</li> <li>2. Electrical shock</li> </ol>	<ol style="list-style-type: none"> <li>1. Permit posted</li> <li>2. Atmospheric test</li> <li>3. Traffic control</li> <li>4. Pedestrian control</li> <li>5. Lockout/tagout where applicable.</li> <li>6. <b>Maintain 25” minimum approach distance.</b> Two qualified high-voltage electricians required if unable to maintain 25” clearance.</li> </ol>	<ol style="list-style-type: none"> <li>1. Monitor</li> <li>2. Hard hat</li> <li>3. Compatible communication equipment-radio</li> <li>4. Appropriate FR PPE and insulated tools</li> <li>5. Barricades/cones</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Permit required</b></li> <li>2. <b>Attendant required</b></li> </ol>
<b>Franklin/Onyx Backflow Vault</b>	Corner of Franklin and Onyx in front of boat house	<ol style="list-style-type: none"> <li>1. Oxygen deficiency</li> <li>2. Toxic gases/vapors (from traffic)</li> <li>3. Electrical shock (sump pump)</li> </ol>	<ol style="list-style-type: none"> <li>1. Permit posted</li> <li>2. Ventilate</li> <li>3. Atmospheric test</li> <li>4. Pedestrian control</li> <li>5. If water present – pump out prior to entering</li> </ol>	<ol style="list-style-type: none"> <li>1. Monitor</li> <li>2. Compatible communication equipment-radio</li> <li>3. Barricades/cones</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Permit required</b></li> <li>2. <b>Attendant required</b></li> </ol>
<b>Friendly Hall</b>	Sump pump vault west central	<ol style="list-style-type: none"> <li>1. Oxygen deficiency</li> <li>2. Electrical shock</li> <li>3. Engulfment</li> </ol>	<ol style="list-style-type: none"> <li>1. Permit posted</li> <li>2. Atmospheric test</li> </ol>	<ol style="list-style-type: none"> <li>1. Compatible communication equipment – radio or cell phone</li> <li>2. Lockout/tagout if applicable</li> <li>3. Monitor</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Permit required</b></li> <li>2. <b>Attendant required</b></li> </ol>
<b>Gerlinger Hall</b>	Chemical mixing pit in exterior building West end	<ol style="list-style-type: none"> <li>1. Oxygen deficiency</li> <li>2. Toxic gases/vapors</li> </ol>	<ol style="list-style-type: none"> <li>1. Permit posted</li> <li>2. Atmospheric test</li> </ol>	<ol style="list-style-type: none"> <li>1. Monitor</li> <li>2. Compatible communication equipment-radio</li> <li>3. Tripod</li> <li>4. Harness</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Permit required</b></li> <li>2. <b>Attendant required</b></li> </ol>

Building	Space Location	Nature of Hazards	Safety Precautions	Equipment Required	Comments
<b>Global Scholars Fire Backflow/Sprinkler System Vault</b>	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. <b>Permit required</b> 2. <b>Attendant required</b>
<b>Hayward Field</b>	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. <b>Permit required</b> 2. <b>Attendant required</b>
<b>Health Center</b>	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. <b>Permit required</b> 2. <b>Attendant required</b> 3. Hard hat if entering beyond sump pump
<b>HEDCO</b>	SW side of building- Fire backflow preventer vaults	1. Oxygen deficiency 2. Electric shock	1. Permit posted 2. Ventilate 3. Atmospheric test 4. If water present- pump out prior to entering 5. Lock out sump pump prior to entry if applicable	1. Monitor 2. Compatible communication equipment-radio	1. <b>Permit required</b> 2. <b>Attendant required</b>
<b>HEDCO Parking Garage</b>	Exhaust fans at North side #8 and Southeast corner #10	1. Oxygen deficiency (car fumes) 2. Limited access/egress 3. Electrical 4. Moving parts	1. Permit posted 2. Atmospheric test 3. Lockout fan prior to entry	1. Monitor 2. Compatible communication equipment-radio	1. <b>Permit required</b> 2. <b>Attendant required</b>
<b>Huestis Food Prep Room #4-Sump Pump Vault SP-2</b>	Huestis basement, Zebrafish Facility (vault is approx. 18'x5'x7' deep)		1. Permit posted 2. Atmospheric test 3. Ventilate/purge vault prior to entry 4. Fan and/or other ventilation equipment should be used to provide extra ventilation 5. Lockout pumps 6. Attach air monitor close to entrant's breathing zone	1. Respirator required/ consult EHS prior to entry 2. Disposable rain gear 3. Rubber wader boots 4. Rubber or Neoprene gloves 5. Safety shield 6. Head light and or/battery operated portable light 7. Compatible communication equipment-radio 8. Monitor 9. Ventilation equipment	1. <b>Permit required</b> 2. <b>Attendant required</b>
<b>Huestis Hall</b>	Backflow preventer valve vault in 13th Avenue sidewalk	1. Oxygen deficiency	1. Permit posted 2. Atmospheric test	1. Monitor 2. Compatible communication equipment-radio	1. <b>Permit required</b> 2. <b>Attendant required</b>



Building	Space Location	Nature of Hazards	Safety Precautions	Equipment Required	Comments
<b>Jacqua Academic Center</b>	Reclamation pump vault for water feature East side of building	<ol style="list-style-type: none"> <li>1. Oxygen deficiency</li> <li>2. Electrical shock</li> <li>3. Engulfment</li> <li>4. Fall from ladder</li> </ol>	<ol style="list-style-type: none"> <li>1. Permit posted</li> <li>2. Atmospheric test</li> <li>3. Pump out water prior to entry</li> <li>4. Lockout/tagout water supply and sump pump</li> <li>5. Check pH of water prior to entering if water isn't completely removed.</li> <li>6. Ventilate</li> <li>7. Pedestrian control</li> <li>8. Use buddy system down - 1 space, 1 to do work, 1 person to assist</li> </ol>	<ol style="list-style-type: none"> <li>1. Monitor</li> <li>2. Retrieval equipment</li> <li>3. Harness</li> <li>4. Lifeline</li> <li>5. Communication equipment</li> <li>6. Hard hat</li> <li>7. Rope</li> <li>8. Ladder</li> <li>9. Barricades/cones</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Permit required</b></li> <li>2. <b>Attendant required</b></li> </ol>
<b>Klamath Hall</b>	Chemical exhaust - building roof	<ol style="list-style-type: none"> <li>1. Oxygen deficiency</li> <li>2. Toxic gases/vapors</li> <li>3. Material harmful to the skin</li> </ol>	<ol style="list-style-type: none"> <li>1. Permit posted</li> <li>2. Atmospheric test</li> <li>3. Open all doors to ventilate</li> </ol>	<ol style="list-style-type: none"> <li>1. Monitor</li> <li>2. Compatible communication equipment-radio</li> <li>3. Eye protection</li> <li>4. Protective clothing</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Permit required</b></li> <li>2. <b>Attendant required</b></li> </ol>
<b>Knight Law School</b>	Backflow vault sidewalk, NW corner of building	<ol style="list-style-type: none"> <li>1. Oxygen deficiencies</li> <li>2. Electrical (sump pump)</li> </ol>	<ol style="list-style-type: none"> <li>1. Information sheet</li> <li>2. Atmospheric test</li> <li>3. Lock out sump pump prior to entry if applicable</li> <li>4. Pedestrian control</li> </ol>	<ol style="list-style-type: none"> <li>1. Monitor</li> <li>2. Compatible communication equipment-radio</li> <li>3. Barricade/cones</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Permit required</b></li> <li>2. <b>Attendant required</b></li> <li>3. <b>High traffic area</b></li> </ol>
<b>Knight Law School</b>	Three vaults in West side front lawn (backflow, irrigation controls and EWEB connection)	<ol style="list-style-type: none"> <li>1. Oxygen deficiencies</li> <li>2. Electrical (sump pump)</li> </ol>	<ol style="list-style-type: none"> <li>1. Permit posted</li> <li>2. Atmospheric test</li> <li>3. Lockout sump pump prior to entry if applicable</li> <li>4. Pedestrian control</li> </ol>	<ol style="list-style-type: none"> <li>1. Monitor</li> <li>2. Compatible communication equipment-radio</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Permit required</b></li> <li>2. <b>Attendant required</b></li> </ol>
<b>Lawrence Hall</b>	Room 196 crawl space under building	<ol style="list-style-type: none"> <li>1. Oxygen deficiency</li> <li>2. Heat</li> <li>3. Piping and tight spaces</li> <li>4. Areas that slope upward create potential for entrant to get stuck</li> </ol>	<ol style="list-style-type: none"> <li>1. Permit posted</li> <li>2. Atmospheric test</li> </ol>	<ol style="list-style-type: none"> <li>1. Monitor</li> <li>2. Compatible communication equipment-radio</li> <li>3. Hard hat</li> <li>4. Flash light</li> <li>5. Ventilation equipment if necessary</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Permit required</b></li> <li>2. <b>Attendant required</b></li> </ol>
<b>Lillis Business Complex</b>	Backflow device in vault at SW corner of Peterson Hall	<ol style="list-style-type: none"> <li>1. Oxygen deficiency</li> </ol>	<ol style="list-style-type: none"> <li>1. Permit posted</li> <li>2. Atmospheric test</li> <li>3. Pedestrian control</li> </ol>	<ol style="list-style-type: none"> <li>1. Monitor</li> <li>2. Compatible communication equipment-radio</li> <li>3. Barricades/cones</li> <li>4. Flashlight</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Permit required</b></li> <li>2. <b>Attendant required</b></li> <li>3. High traffic area</li> </ol>
<b>LISB</b>	Roof-chemical exhaust x2	<ol style="list-style-type: none"> <li>1. Oxygen deficiency</li> <li>2. Toxic gases/vapors</li> <li>3. Material harmful to skin</li> </ol>	<ol style="list-style-type: none"> <li>1. Permit posted</li> <li>2. Atmospheric test</li> <li>3. Other-open all doors</li> </ol>	<ol style="list-style-type: none"> <li>1. Monitor</li> <li>2. Compatible communication equipment-radio</li> <li>3. Eye protection</li> <li>4. Protective clothing</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Permit required</b></li> <li>2. <b>Attendant required</b></li> </ol>
<b>Living Learning Center</b>	Water control valve vault North side	<ol style="list-style-type: none"> <li>1. Oxygen deficiency</li> <li>2. Flood</li> <li>3. Electrical (sump pump)</li> </ol>	<ol style="list-style-type: none"> <li>1. Permit required</li> <li>2. Atmospheric test</li> <li>3. Traffic/pedestrian control</li> <li>4. If water present lockout sump pump prior to entry</li> </ol>	<ol style="list-style-type: none"> <li>1. Monitor</li> <li>2. Compatible communication equipment</li> <li>3. Hard hat if working below sump</li> <li>4. Barricades/cones</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Permit required</b></li> <li>2. <b>Attendant required</b></li> </ol>

Building	Space Location	Nature of Hazards	Safety Precautions	Equipment Required	Comments
<b>Living Learning Center</b>	Water control valve vault South side along 15 <sup>th</sup> Avenue	<ol style="list-style-type: none"> <li>1. Oxygen deficiency</li> <li>2. Flood</li> <li>3. Electrical (sump pump)</li> </ol>	<ol style="list-style-type: none"> <li>1. Permit required</li> <li>2. Atmospheric test</li> <li>3. Traffic/pedestrian control</li> <li>4. If water present lockout sump pump prior to entry</li> </ol>	<ol style="list-style-type: none"> <li>1. Monitor</li> <li>2. Compatible communication equipment</li> <li>3. Hard hat if working below sump</li> <li>4. Barricades/cones</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Permit required</b></li> <li>2. <b>Attendant required</b></li> </ol>
<b>Manholes &lt;5 Feet Deep</b>	All, except tunnel accesses	<ol style="list-style-type: none"> <li>1. Oxygen deficiency</li> <li>2. Electrical if sump pump</li> </ol>	<ol style="list-style-type: none"> <li>1. Permit posted</li> <li>2. Atmospheric test</li> <li>3. Traffic control</li> <li>4. Pedestrian control</li> <li>5. Lockout sump pump prior to entry if applicable</li> </ol>	<ol style="list-style-type: none"> <li>1. Monitor</li> <li>2. Hard hat</li> <li>3. Barricades/cones</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Permit required</b></li> <li>2. <b>Attendant required</b></li> </ol>
<b>Manholes &gt;5 Feet Deep</b>	All, except tunnel accesses	<ol style="list-style-type: none"> <li>1. Oxygen deficiency</li> <li>2. Electrical if sump pump</li> </ol>	<ol style="list-style-type: none"> <li>1. Permit posted</li> <li>2. Atmospheric test</li> <li>3. Traffic control</li> <li>4. Pedestrian control</li> <li>5. Lockout sump pump prior to entry if applicable</li> </ol>	<ol style="list-style-type: none"> <li>1. Monitor</li> <li>2. Hard hat</li> <li>3. Barricades/cones</li> <li>4. Retrieval equipment</li> <li>5. Harness</li> <li>6. Lifeline</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Permit required</b></li> <li>2. <b>Attendant required</b></li> </ol>
<b>Many Nations Longhouse</b>	Vaults (electrical and utilities) on West side of Vivian Olum Child Care next to Knight Law parking lot	<ol style="list-style-type: none"> <li>1. Oxygen deficiency</li> <li>2. Electrical shock</li> </ol>	<ol style="list-style-type: none"> <li>1. Permit posted</li> <li>2. Atmospheric test</li> <li>3. Traffic control</li> <li>4. Pedestrian control</li> <li>5. Barricades</li> <li>6. Lockout/tagout where applicable</li> <li>7. <b>Maintain 25" minimum approach distance.</b> Two qualified high-voltage electricians required if unable to maintain 25" clearance.</li> </ol>	<ol style="list-style-type: none"> <li>1. Monitor</li> <li>2. Hard hat</li> <li>3. Compatible communication equipment-radio</li> <li>4. Appropriate FR PPE and insulated tools</li> <li>5. Barricades/cones</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Permit required</b></li> <li>2. <b>Attendant required</b></li> </ol>
<b>Millrace</b>	Backflow preventer vault along Millrace Drive, North of Lot 4, behind Building 125A (Vault 3'x5' wide, approx. 8' deep)	<ol style="list-style-type: none"> <li>1. Oxygen deficiency</li> </ol>	<ol style="list-style-type: none"> <li>1. Permit posted</li> <li>2. Ventilate</li> <li>3. Atmospheric test</li> <li>4. If water present- pump out prior to entering</li> </ol>	<ol style="list-style-type: none"> <li>1. Monitor</li> <li>2. Compatible communication equipment-radio</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Permit required</b></li> <li>2. <b>Attendant required</b></li> </ol>
<b>Millrace - New Sewage Lift Station</b>	Sanitary sewage lift station and two 5000 gallon surge tanks in sidewalk next to Onyx Street and Millrace - 5 manholes	<ol style="list-style-type: none"> <li>1. Oxygen deficiency</li> <li>2. Electrical shock</li> <li>3. Engulfment</li> </ol>	<ol style="list-style-type: none"> <li>1. Permit posted</li> <li>2. Atmospheric test</li> <li>3. Traffic control</li> <li>4. Pedestrian control</li> <li>5. Lockout/tagout where applicable</li> </ol>	<ol style="list-style-type: none"> <li>1. Monitor</li> <li>2. Hard hat</li> <li>3. Compatible communication equipment-radio</li> <li>4. Barricades/cones</li> <li>5. Retrieval equipment</li> <li>6. Harness</li> <li>7. Lifeline for fall protection</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Permit required</b></li> <li>2. <b>Attendant required</b></li> </ol>
<b>Millrace Studio II</b>	Steam connection vault in road to North	<ol style="list-style-type: none"> <li>1. Oxygen deficiency</li> <li>2. Steam</li> <li>3. Water</li> </ol>	<ol style="list-style-type: none"> <li>1. Permit posted</li> <li>2. Atmospheric test</li> </ol>	<ol style="list-style-type: none"> <li>1. Monitor</li> <li>2. Compatible communication equipment-radio</li> <li>3. Hard hat</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Permit required</b></li> <li>2. <b>Attendant required</b></li> </ol>
<b>Millrace Studio III</b>	Water valve box Northwest end	<ol style="list-style-type: none"> <li>1. Oxygen deficiency</li> <li>2. Steam</li> <li>3. Water</li> </ol>	<ol style="list-style-type: none"> <li>1. Permit posted</li> <li>2. Atmospheric test</li> </ol>	<ol style="list-style-type: none"> <li>1. Monitor</li> <li>2. Compatible communication equipment-radio</li> <li>3. Hard hat</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Permit required</b></li> <li>2. <b>Attendant required</b></li> </ol>

Building	Space Location	Nature of Hazards	Safety Precautions	Equipment Required	Comments
<b>Mobile Shop</b>	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. <b>Permit required</b> 2. <b>Attendant required</b>
<b>Moss Street Child Care</b>	Water control valve vault along 17 <sup>th</sup> 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. <b>Permit required</b> 2. <b>Attendant required</b>
<b>Moss Street Tunnel Sump Pump Manhole</b>	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. <b>Permit required</b> 2. <b>Attendant required</b>
<b>Motor Pool</b>	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. <b>Permit required</b> 2. <b>Attendant required</b>
<b>Motor Pool Manholes</b>	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. <b>Permit required</b> 2. <b>Attendant required</b>
<b>Motor Pool Manholes</b>	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. <b>Permit required</b> 2. <b>Attendant required</b> 3. If only pumping sludge from the top – no permit is required.
<b>Motor Pool Manholes</b>	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. <b>Permit required</b> 2. <b>Attendant required</b>
<b>Museum of Art</b>	Backflow device in vault	1. Oxygen deficiency 2. Flooding	1. Permit posted 2. Atmospheric test	1. Monitor 2. Compatible communication equipment	1. <b>Permit required</b> 2. <b>Attendant required</b>

Building	Space Location	Nature of Hazards	Safety Precautions	Equipment Required	Comments
<b>Museum of Natural History</b>	Water control valve vault North side along sidewalk - new addition	<ol style="list-style-type: none"> <li>1. Oxygen deficiency</li> <li>2. Flood</li> <li>3. Electrical (sump pump)</li> </ol>	<ol style="list-style-type: none"> <li>1. Permit posted</li> <li>2. Atmospheric test</li> <li>3. Traffic/pedestrian control</li> <li>4. If water present lockout sump pump prior to entry</li> </ol>	<ol style="list-style-type: none"> <li>1. Monitor</li> <li>2. Compatible communication equipment</li> <li>3. Hard hat if working below sump</li> <li>4. Barricades/cones</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Permit required</b></li> <li>2. <b>Attendant required</b></li> </ol>
<b>Music Building</b>	Domestic and fire water check valves manhole – Northwest corner of building	<ol style="list-style-type: none"> <li>1. Oxygen deficiency</li> <li>2. Electrical shock</li> <li>3. Engulfment</li> <li>4. Fall from ladder</li> </ol>	<ol style="list-style-type: none"> <li>1. Permit posted</li> <li>2. Atmospheric test</li> <li>3. Pump out prior to entry</li> <li>4. Lockout/tagout sump pump</li> <li>5. Pedestrian control</li> <li>6. Barricades</li> </ol>	<ol style="list-style-type: none"> <li>1. Monitor</li> <li>2. Retrieval equipment</li> <li>3. Harness</li> <li>4. Lifeline</li> <li>5. Communication equipment-radio</li> <li>6. Hard hat</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Permit required</b></li> <li>2. <b>Attendant required</b></li> <li>3. Harness with lifeline</li> </ol>
<b>Music Building</b>	Fire water check valves vault – Southeast corner of building at 18th Street parking lot	<ol style="list-style-type: none"> <li>1. Oxygen deficiency</li> <li>2. Electrical shock</li> </ol>	<ol style="list-style-type: none"> <li>1. Permit posted</li> <li>2. Atmospheric test</li> <li>3. Pump out prior to entry</li> <li>4. Lockout/tagout sump pump</li> <li>5. Pedestrian control</li> <li>6. Barricades</li> </ol>	<ol style="list-style-type: none"> <li>1. Monitor</li> <li>2. Communication equipment-radio</li> <li>3. Hard hat</li> <li>4. Barricades/cones</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Permit required</b></li> <li>2. <b>Attendant required</b></li> </ol>
<b>Music Building</b>	Storm sewer pump station manhole – North side of building against center wall	<ol style="list-style-type: none"> <li>1. Oxygen deficiency</li> <li>2. Electrical shock</li> <li>3. Engulfment</li> <li>4. Fall from ladder</li> </ol>	<ol style="list-style-type: none"> <li>1. Permit posted</li> <li>2. Atmospheric test</li> <li>3. Pump out prior to entry</li> <li>4. Lockout/tagout sump pump</li> <li>5. Barricades</li> </ol>	<ol style="list-style-type: none"> <li>1. Monitor</li> <li>2. Retrieval equipment</li> <li>3. Harness</li> <li>4. Lifeline</li> <li>5. Communication equipment-radio</li> <li>6. Hard hat</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Permit required</b></li> <li>2. <b>Attendant required</b></li> <li>3. Harness with lifeline</li> </ol>
<b>Network &amp; Telecom Vaults/Manholes</b>	All	<ol style="list-style-type: none"> <li>1. Oxygen deficiency</li> <li>2. Stagnant air</li> <li>3. Electrical (if sump pumps)</li> </ol>	<ol style="list-style-type: none"> <li>1. Permit posted</li> <li>2. Atmospheric test</li> <li>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.</li> </ol>	<ol style="list-style-type: none"> <li>1. Monitor</li> <li>2. Compatible communication equipment-radio</li> <li>3. Hard hat</li> <li>4. Barricades/cones</li> <li>5. Ventilation equipment</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Permit required</b></li> <li>2. <b>Attendant required</b></li> </ol>
<b>Non-Electrical All Other Vaults</b>	All vaults that are over 3 feet in depth	<ol style="list-style-type: none"> <li>1. Oxygen deficiency</li> <li>2. Engulfment</li> <li>3. Toxic gasses/vapors</li> <li>4. Flammable gasses/vapors</li> <li>5. Steam</li> <li>6. Heat</li> </ol>	<ol style="list-style-type: none"> <li>1. Permit posted</li> <li>2. Atmospheric test</li> <li>3. Traffic control</li> <li>4. Pedestrian control</li> <li>5. Lockout/tagout where applicable</li> </ol>	<ol style="list-style-type: none"> <li>1. Monitor</li> <li>2. Compatible communication equipment-radio</li> <li>3. Hard hat</li> <li>4. Barricades/cones</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Permit required</b></li> <li>2. <b>Attendant required</b></li> </ol>
<b>Northsite B</b>	Vault with backflow devices on West side of building	<ol style="list-style-type: none"> <li>1. Oxygen deficiency</li> </ol>	<ol style="list-style-type: none"> <li>1. Permit posted</li> <li>2. Atmospheric test</li> </ol>	<ol style="list-style-type: none"> <li>1. Monitor</li> <li>2. Hard hat</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Permit required</b></li> <li>2. <b>Attendant required</b></li> </ol>
<b>Onyx Bridge</b>	Excavated area (air plenum) through hatch across from Science Library through door to Men's restroom in Room# B72A (janitor's room)	<ol style="list-style-type: none"> <li>1. Oxygen deficiency</li> </ol>	<ol style="list-style-type: none"> <li>1. Permit posted</li> <li>2. Atmospheric test</li> </ol>	<ol style="list-style-type: none"> <li>1. Monitor</li> <li>2. Compatible communication equipment-radio</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Permit required</b></li> <li>2. <b>Attendant required</b></li> </ol>

Building	Space Location	Nature of Hazards	Safety Precautions	Equipment Required	Comments
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 phone	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 or cell phone 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
<b>Student Recreation Center</b>	Domestic water double check valve manhole – Northeast corner of building	<ol style="list-style-type: none"> <li>1. Oxygen deficiency</li> <li>2. Electrical shock</li> <li>3. Engulfment</li> <li>4. Fall from ladder</li> </ol>	<ol style="list-style-type: none"> <li>1. Permit posted</li> <li>2. Atmospheric test</li> <li>3. Pump out water prior to entry</li> <li>4. Lockout/tagout sump pump</li> <li>5. Pedestrian control</li> <li>6. Barricades</li> </ol>	<ol style="list-style-type: none"> <li>1. Monitor</li> <li>2. Retrieval equipment</li> <li>3. Harness</li> <li>4. Lifeline</li> <li>5. Communication equipment-radio</li> <li>6. Hard hat</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Permit required</b></li> <li>2. <b>Attendant required</b></li> </ol>
<b>Student Recreation Center</b>	Fountain pump vault at front entrance	<ol style="list-style-type: none"> <li>1. Oxygen deficiency</li> <li>2. Electrical shock</li> <li>3. Engulfment</li> </ol>	<ol style="list-style-type: none"> <li>1. Permit posted</li> <li>2. Atmospheric test</li> <li>3. Lockout if applicable</li> </ol>	<ol style="list-style-type: none"> <li>1. Monitor</li> <li>2. Compatible communication equipment</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Permit required</b></li> <li>2. <b>Attendant required</b></li> </ol>
<b>Student Recreation Center</b>	Recirculation pump manhole for fountain at front entrance – North side of building	<ol style="list-style-type: none"> <li>1. Oxygen deficiency</li> <li>2. Electrical shock</li> <li>3. Engulfment</li> <li>4. Fall from ladder</li> </ol>	<ol style="list-style-type: none"> <li>1. Permit posted</li> <li>2. Atmospheric test</li> <li>3. Lockout/tagout water supply and sump pump</li> <li>4. Pedestrian control</li> <li>5. Barricades</li> </ol>	<ol style="list-style-type: none"> <li>1. Monitor</li> <li>2. Retrieval equipment</li> <li>3. Harness</li> <li>4. Lifeline</li> <li>5. Communication equipment-radio</li> <li>6. Hard hat</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Permit required</b></li> <li>2. <b>Attendant required</b></li> </ol>
<b>Student Recreation Center/Leighton Pool</b>	Recirculation pump pit (hair strainer) – basement	<ol style="list-style-type: none"> <li>1. Oxygen deficiency</li> <li>2. Toxic gases/vapors</li> <li>3. Material harmful to skin</li> </ol>	<ol style="list-style-type: none"> <li>1. Permit posted</li> <li>2. Atmospheric test</li> <li>3. Lockout/tagout pump</li> </ol>	<ol style="list-style-type: none"> <li>1. Monitor</li> <li>2. Compatible communication equipment-radio</li> <li>3. Hard hat</li> <li>4. <b>Appropriate PPE for skin and eye protection (rubber gloves and goggles)</b></li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Permit required</b></li> <li>2. <b>Attendant required</b></li> </ol>
<b>Student Recreation Center/Leighton Pool</b>	Surge overflow vault – basement	<ol style="list-style-type: none"> <li>1. Oxygen deficiency</li> </ol>	<ol style="list-style-type: none"> <li>1. Permit posted</li> <li>2. Atmospheric test</li> </ol>	<ol style="list-style-type: none"> <li>1. Monitor</li> <li>2. Compatible communication equipment-radio</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Permit required</b></li> <li>2. <b>Attendant required</b></li> </ol>
<b>Student Recreation Center/Leighton Pool</b>	Surge tank/water balance – basement	<ol style="list-style-type: none"> <li>1. Oxygen deficiency</li> <li>2. Toxic gases/vapors</li> <li>3. Material harmful to the skin</li> </ol>	<ol style="list-style-type: none"> <li>1. Permit posted</li> <li>2. Atmospheric test</li> </ol>	<ol style="list-style-type: none"> <li>1. Monitor</li> <li>2. Compatible communication equipment-radio</li> <li>3. Hard hat</li> <li>4. <b>Appropriate PPE for skin and eye protection (rubber gloves and goggles)</b></li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Permit required</b></li> <li>2. <b>Attendant required</b></li> </ol>
<b>Susan Campbell Hall</b>	Old E-Vault (now low voltage lines only) South side lawn	<ol style="list-style-type: none"> <li>1. Oxygen deficiency</li> </ol>	<ol style="list-style-type: none"> <li>1. Permit posted</li> <li>2. Atmospheric test</li> </ol>	<ol style="list-style-type: none"> <li>1. Monitor</li> <li>2. Compatible communication-radio or cell phone</li> <li>3. Ladder</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Permit required</b></li> <li>2. <b>Attendant required</b></li> </ol>
<b>Susan Campbell Hall</b>	Storm sewer pump station manhole – Northeast corner of building	<ol style="list-style-type: none"> <li>1. Oxygen deficiency</li> <li>2. Electrical shock</li> <li>3. Engulfment</li> <li>4. Fall from ladder</li> </ol>	<ol style="list-style-type: none"> <li>1. Permit posted</li> <li>2. Atmospheric test</li> <li>3. Pump out prior to entry</li> <li>4. Lockout/tagout sump pump</li> <li>5. Pedestrian control</li> <li>6. Barricades</li> </ol>	<ol style="list-style-type: none"> <li>1. Monitor</li> <li>2. Retrieval equipment</li> <li>3. Harness</li> <li>4. Lifeline</li> <li>5. Communication equipment-radio</li> <li>6. Hard hat</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Permit required</b></li> <li>2. <b>Attendant required</b></li> </ol>
<b>Susan Campbell Hall</b>	Sump pump vault at NE corner of building	<ol style="list-style-type: none"> <li>1. Oxygen deficiency</li> <li>2. Electrical shock</li> <li>3. Engulfment</li> </ol>	<ol style="list-style-type: none"> <li>1. Permit posted</li> <li>2. Atmospheric test</li> </ol>	<ol style="list-style-type: none"> <li>1. Compatible communication equipment-radio or cell phone</li> <li>2. Lockout/tagout if applicable</li> <li>3. Monitor</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Permit required</b></li> <li>2. <b>Attendant required</b></li> </ol>

Building	Space Location	Nature of Hazards	Safety Precautions	Equipment Required	Comments
<b>Tunnels (where work requires permit)</b>	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"> <li>1. Fire/heat</li> <li>2. Asbestos</li> <li>3. Electrical shock</li> <li>4. Flooding</li> <li>5. Steam</li> <li>6. Natural gas</li> <li>7. Tight spaces</li> <li>8. Compressed air</li> <li>9. Sanitation</li> </ol>	<ol style="list-style-type: none"> <li>1. Permit posted</li> <li>2. Atmospheric test</li> <li>3. 2 person tunnel rule plus attendant outside</li> <li>4. Comply with safety signs on all electrical cables and equipment</li> <li>5. Hot work permit required when welding</li> <li>6. Cutting or brazing</li> </ol>	<ol style="list-style-type: none"> <li>1. Monitor</li> <li>2. Hard hat</li> <li>3. Compatible communication equipment-radio</li> <li>4. Flash light</li> <li>5. Fan or other ventilation equipment</li> <li>6. Appropriate respirator if required</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Permit required</b></li> <li>2. <b>Attendant required</b></li> </ol>
<b>Tunnels</b>	<b>Note: In most situations when working and travelling in the tunnels – follow the tunnel entry requirements. While the tunnel is specifically</b>				
		<ol style="list-style-type: none"> <li>1. Heat</li> <li>2. Asbestos</li> <li>3. Electrical Shock</li> <li>4. Flooding</li> <li>5. Natural gas</li> <li>6. Sanitation issues</li> <li>7. Compressed air</li> <li>8. Steam lines</li> </ol>	<ol style="list-style-type: none"> <li>1. 2 Person tunnel rule</li> <li>2. Comply with safety signs on all electrical cables and equipment</li> <li>3. Hot work permit if welding, cutting or brazing</li> <li>4. If confined space permit is required, air monitoring and an attendant/rescuer are required.</li> </ol>	<ol style="list-style-type: none"> <li>1. Hard hat</li> <li>2. Flashlight</li> <li>3. Compatible communication equipment</li> <li>4. Long pants</li> <li>5. Long-sleeve shirt</li> <li>6. Shoes appropriate for work to be performed (no open-toe shoes)</li> <li>7. Air monitor (if permit is required)</li> </ol>	<ol style="list-style-type: none"> <li>1. Log in/out with Power Plant control room</li> </ol>
<b>Vaults All Other &lt;4 Feet</b>	ALL	<ol style="list-style-type: none"> <li>1. If no hazard exists</li> </ol>	<ol style="list-style-type: none"> <li>1. NONE- no permit required</li> </ol>		If hazards exist then follow Backflow Preventer Vaults- Permit Required
<b>Villard-Miller Theater</b>	Backflow preventer vault, South side of building by bike racks (approx. 6' deep)	<ol style="list-style-type: none"> <li>1. Oxygen deficiency</li> </ol>	<ol style="list-style-type: none"> <li>1. Permit posted</li> <li>2. Ventilate</li> <li>3. Atmospheric test</li> <li>4. If water present pump out prior to entering</li> </ol>	<ol style="list-style-type: none"> <li>1. Monitor</li> <li>2. Compatible communication equipment-radio</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Permit required</b></li> <li>2. <b>Attendant required</b></li> </ol>
<b>Walton Complex</b>	Pipe runs in Smith and Clark adjacent to laundry area	<ol style="list-style-type: none"> <li>1. Oxygen deficiency</li> </ol>	<ol style="list-style-type: none"> <li>1. Permit posted</li> <li>2. Atmospheric test</li> </ol>	<ol style="list-style-type: none"> <li>1. Monitor</li> <li>2. Hard hat</li> <li>3. Compatible communication equipment-radio</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Permit required</b></li> <li>2. <b>Attendant required</b></li> </ol>
<b>Willamette Hall</b>	Atrium, smoke fan duct works x2 South side of building on either side of door	<ol style="list-style-type: none"> <li>1. Oxygen deficiency</li> <li>2. Toxic gases/vapors</li> </ol>	<ol style="list-style-type: none"> <li>1. Permit posted</li> <li>2. Atmospheric test</li> <li>3. Pedestrian control</li> </ol>	<ol style="list-style-type: none"> <li>1. Monitor</li> <li>2. Compatible communication equipment-radio</li> <li>3. Hard hat</li> <li>4. Barricades/cones</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Permit required</b></li> <li>2. <b>Attendant required</b></li> </ol>
<b>Willamette Hall</b>	Chemical exhaust x2, building East and West side roof	<ol style="list-style-type: none"> <li>1. Oxygen deficiency</li> <li>2. Toxic gases/vapors</li> <li>3. Material harmful to the skin</li> </ol>	<ol style="list-style-type: none"> <li>1. Permit posted</li> <li>2. Atmospheric test</li> <li>3. Open all doors for ventilation</li> </ol>	<ol style="list-style-type: none"> <li>1. Monitor</li> <li>2. Compatible communication equipment-radio</li> <li>3. Eye protection</li> <li>4. Protective clothing</li> <li>5. SCBA</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Permit required</b></li> <li>2. <b>Attendant required</b></li> </ol>

<b>Building</b>	<b>Space Location</b>	<b>Nature of Hazards</b>	<b>Safety Precautions</b>	<b>Equipment Required</b>	<b>Comments</b>
<b>Willamette Hall</b>	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. <b>Permit required</b> 2. <b>Attendant required</b>
<b>Zebrafish International Research Center-ZIRC</b>	Room 120- Mechanical vault	1. Oxygen deficiency 2. Steam 3. Heat	1. Permit posted 2. Atmospheric test	1. Monitor Compatible communication 3. Tripod Emergency Escape Unit 4. Escape harness/lifeline 2.	1. <b>Permit required</b> <b>Attendant required</b> 2.