

## Building Operator 5th Class Level 2

Comp. #	Competency Type	Competency Statement	Competency Details
43663	Safety	Provide evidence of WHMIS Certification	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Describe classification of controlled products and give practical examples of the classification system</li> <li>2. Describe labeling of controlled products and interpret the labels</li> <li>3. Describe the contents of material safety data sheets, and identify to whom and when these sheets need to be sent</li> <li>4. Discuss safe operating practices</li> <li>5. Describe the use, storage and disposal of chemicals</li> <li>6. Identify location of MSDS books</li> <li>7. Apply WHMIS guidelines to safe handling of chemicals</li> <li>8. Describe the characteristics of common chemicals and their associated hazards</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Apply WHMIS labels</li> <li>2. Ensure all MSDS are current</li> <li>3. Review incoming MSDS</li> <li>4. Follow safe operating practice for safe handling and storage of chemicals</li> </ol>
43670	Safety	Discuss the need for company policies and procedures	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Describe where to locate the company policies and procedures</li> <li>2. Describe how to comply to safe work procedures</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Demonstrate the use of safe work procedures</li> </ol>
43682	Interpersonal	Demonstrate working on a team	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Discuss how to work as a member of a technical team</li> <li>2. Discuss how to provide constructive feedback</li> <li>3. Describe how setting goals and ground rules with effective feedback will promote effective teamwork</li> <li>4. Describe productive team behaviors and how to cope with non-productive behaviors with a team</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Communicate and work positively with others</li> </ol>
43690	Administrative	Discuss when, how and why preventative maintenance should occur	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Describe the preventative maintenance program/system</li> <li>2. Describe the consequences of not following the preventative maintenance program and identify problems which have been caused as a result of non-compliance</li> <li>3. Describe the purpose of the preventative (predictive) maintenance program</li> <li>4. Explain some of the principles used in developing the preventative maintenance schedule</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Request maintenance of equipment as prescribed or necessary</li> </ol>
43692	Administrative	Assist with inventory and work orders	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Describe inventory systems</li> <li>2. Describe work orders</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Maintain inventory control</li> <li>2. Complete a work order</li> </ol>
43724	Safety	Discuss and demonstrate appropriate lock out/tag out procedures	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Discuss safe operating practice</li> <li>2. Discuss hot work procedures</li> <li>3. Discuss blind tag list</li> <li>4. Discuss practice of not working on vessel while someone else is in the vessel</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Follow safe operating practice</li> <li>2. Install and remove blinds</li> <li>3. Install and remove locks and tags – electrical equipment</li> <li>4. Install and remove lock and tags – pressure equipment</li> <li>5. Complete lock out check list</li> <li>6. Complete blind tag list</li> </ol>
43725	Safety	Describe and demonstrate safe entry into confined space	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Define confined space</li> <li>2. Identify potential hazards and reasons for these hazards</li> <li>3. Discuss Occupational Health and Safety Regulations</li> <li>4. Explain Code of Practice for confined space entry</li> <li>5. Identify material and mechanical hazards in confined spaces</li> <li>6. Describe entry preparation into confined space, includes personal, administrative and legal</li> <li>7. Describe emergency preparation and rescue from confined spaces</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Do a safety inspection of vessel before entry</li> <li>2. Fill out vessel entry check sheet</li> <li>3. Demonstrate a confined space entry</li> </ol>

43726	Safety	Describe the hazards associated with each piece of equipment and the safety procedures to follow	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. List each piece of equipment in your facility</li> <li>2. Perform a hazard analysis for your facility and each piece of equipment in your facility</li> <li>3. Describe precautions to take when dealing with each piece of equipment</li> </ol>
43727	Safety	Demonstrate appropriate use of personal protective equipment	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Describe correct use of personal protective equipment and identify situations where protective equipment is necessary</li> <li>2. Discuss safe operating practice</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Identify personal protective equipment signage</li> <li>2. Select/procure suitable personal protective equipment</li> <li>3. Use appropriate personal protective equipment includes eyewear, first aid kits, gas detectors, and any other relevant equipment</li> </ol>
43729	Safety	Discuss the purpose and safe use of hand and power tools	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Describe the correct hand or power tool to use for the job</li> <li>2. Describe how to safe operate power tools</li> <li>3. Describe the correct and safe use of hand tools</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Demonstrate the correct and safe use of hand and power tools</li> </ol>
43730	Safety	Describe and demonstrate firefighting procedures, use of firefighting equipment and fire prevention	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Describe classes of fire</li> <li>2. Describe safe firefighting procedures and different techniques used to fight fires in different situations</li> <li>3. Describe rules for fire prevention</li> <li>4. Inspect and describe the principles and use of firefighting equipment (including PPE)</li> <li>5. Describe the maintenance and operation of a portable fire extinguisher</li> <li>6. Discuss emergency response plan with respect to firefighting</li> <li>7. Describe operation and location of fire detectors</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Follow fire prevention rules</li> <li>2. Respond to fire emergencies</li> <li>3. Identify location of fire extinguishers</li> <li>4. Inspect portable fire extinguishers</li> <li>5. Operate portable fire extinguishers</li> <li>6. Take precautions to reduce static electricity</li> <li>7. Prepare fire detection equipment for maintenance</li> </ol>
43731	Safety	Provide evidence of a current First Aid Certification	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Identify the need for first aid</li> <li>2. Describe your limitations as a first aider</li> <li>3. Complete all paperwork</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Administer first aid</li> <li>2. Check inventory of supplies and equipment</li> <li>3. Check and maintain eye wash stations</li> <li>4. Check first aid kits</li> <li>5. Maintain current First Aid Certification</li> </ol>
43732	Safety	Provide evidence of TDG Certification	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Describe the requirements for safe transportation of dangerous goods</li> <li>2. Interpret labeling and safety marks, and describe appropriate actions with each mark</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Apply and identify safety marks and labels</li> <li>2. Identify appropriate TDG placards</li> <li>3. Identify TDG documentation</li> </ol>
43733	Safety	Assist in the evacuation of people from the building	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Identify all escape routes and alternatives</li> <li>2. Describe when evacuation is necessary</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Complete evacuation of building or participate in evacuation exercises</li> </ol>
43734	Safety	Discuss and comply with environmental standards	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Discuss environmental policies, Acts &amp; Regulations that require compliance</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Comply with company policy and procedure</li> <li>2. Maintain Clean Air Act compliance</li> <li>3. Maintain Clean Water Act compliance</li> </ol>
43735	Safety	Discuss and manage waste disposal	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Discuss waste disposal</li> <li>2. Discuss waste management procedures plan</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Complete waste manifest document</li> </ol>

43736	Safety	Discuss and manage product, chemical and waste storage	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Discuss potential contamination</li> <li>2. Discuss regulations and company policy</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Identify storage of hazardous waste</li> <li>2. Identify storage of product</li> <li>3. Identify storage of chemicals</li> <li>4. Follow environmental operating practice</li> </ol>
43737	Safety	Discuss the responsibility of the employee in regard to Occupational Health and Safety Regulations (OH&S)	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Describe the requirements for Occupational Health and Safety Regulations</li> <li>2. Describe the workers' rights</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Apply OH&amp;S Regulations as applied to the worker</li> <li>2. Demonstrate the use of the OH&amp;S Regulations</li> </ol>
43739	Interpersonal	Demonstrate effective writing skills	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Discuss forms used, how to fill them out and routing</li> <li>2. Prepare and interpret written communication</li> <li>3. Use proper grammar</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Complete reports at an appropriate level</li> <li>2. Write internal memos</li> <li>3. Complete readings and log book</li> <li>4. Complete time sheets</li> <li>5. Write work orders</li> <li>6. Send and receive faxes</li> <li>7. Compare and construct phrases, clauses and sentences</li> </ol>
43740	Interpersonal	Provide evidence of good reading skills and comprehension using the English language	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Provide evidence of being able to read and understand technical documents</li> </ol>
43741	Interpersonal	Demonstrate effective interpersonal problem resolution	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Identify problems</li> <li>2. Investigate situation</li> <li>3. Identify support required</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Discuss problems with supervisor and peers</li> <li>2. Demonstrate the skills for handling difficult situations with customers</li> <li>3. Demonstrate skills for handling difficult situations with customers/clients</li> </ol>
43743	Computer	Discuss and demonstrate using computer operating systems (such as Windows)	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Discuss use of operating systems</li> <li>2. Describe what an operating system does</li> <li>3. Identify the elements on a Windows</li> <li>4. Recognize the common Windows elements, such as the title bar, menu bar, etc.</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Minimize, maximize and restore windows</li> <li>2. Display multiple windows on the desktop simultaneously</li> <li>3. Find help on topics</li> <li>4. Search through the contents of disk drives</li> <li>5. Use the control panel to examine the hardware resources for your computer</li> <li>6. Expand and collapse the display of hardware devices and their properties</li> </ol>
43744	Computer	Demonstrate basic word processing skills	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Describe the uses of a word processor</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Enter text into a word processor and spell check, format it</li> <li>2. Save and retrieve documents</li> <li>3. Use the undo, do, repeat, insert and delete keys</li> <li>4. Apply font formats (bold, italic, underline)</li> <li>5. Use the Spelling feature and the Thesaurus feature</li> <li>6. Use the Grammar feature</li> <li>7. Insert page breaks</li> <li>8. Highlight and move text in the document</li> <li>9. Cut, copy and paste special using the office clipboard</li> <li>10. Select and change font and font size</li> <li>11. Find and replace text</li> </ol>
43745	Computer	Demonstrate basic spreadsheet skills	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Describe the uses of a spreadsheet</li> <li>2. Define common spreadsheet terms</li> <li>3. Describe the importance of spreadsheet analysis</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Enter data into a spreadsheet</li> <li>2. Perform calculations using formulas and function commands</li> <li>3. Create graphs</li> <li>4. Create, save and retrieve spreadsheets</li> <li>5. Edit a spreadsheet (insert, delete and select)</li> <li>6. Rename worksheet</li> <li>7. Copy and move worksheet</li> <li>8. Apply the main functions of spreadsheets and their operations</li> <li>9. Create, edit/format, save/retrieve, print spreadsheet</li> </ol>

43746	Administrative	Describe and apply cost control measures in your work facility	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Discuss plant optimization</li> <li>2. Discuss methods of cost control</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Advise on facilities and equipment optimization</li> <li>2. Monitor chemical consumption</li> <li>3. Monitor equipment performance</li> <li>4. Give input on proposals</li> </ol>
43747	Administrative	Discuss energy management measures in your facility	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Discuss the monitoring of power costs</li> <li>2. Discuss peak power demand</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Monitor energy demand at peak times</li> </ol>
43748	Administrative	Describe and demonstrate personal and work area time management (planning and scheduling) techniques	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Discuss methods you use for scheduling and planning</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Prepare work order assignments</li> <li>2. Participate in special event planning</li> <li>3. Participate in vacation planning</li> <li>4. Provide practical support to service groups</li> <li>5. Schedule meetings and training sessions</li> <li>6. Schedule employee duty roster</li> </ol>
43749	Administrative	Describe and demonstrate effective tenant relations	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Discuss the importance of good tenant relations</li> <li>2. Describe corporate tenant relations</li> <li>3. Describe what to say, who to say it to, and how to say it</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Participate in ongoing tenant relations</li> <li>2. Handle local complaints</li> <li>3. Keep tenants informed</li> <li>4. Maintain relations with third parties</li> </ol>
43751	Administrative	Describe the importance of annual and biannual inspections, what needs to be inspected and by whom	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Describe who should inspect what equipment and when it should be inspected</li> <li>2. Describe the legal requirements of inspection</li> <li>3. Describe what needs to be looked for in an inspection</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Monitor an external inspection</li> <li>2. Complete an inspection</li> </ol>
43752	Administrative	Supervise other employees	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Describe management and leadership, the differences between the two and the factors which affect each</li> <li>2. Describe the role of a supervisor</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Schedule and assign work</li> <li>2. Resolve conflicts and problems</li> <li>3. Review work effectiveness with supervisor</li> <li>4. Supervise co-workers and contractors</li> </ol>
43753	Administrative	Conduct quality assurance programs	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Discuss the appropriate CSA standards for your industry and their applicability to your organization</li> <li>2. Define quality</li> <li>3. Determine quality measures</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Measure quality</li> <li>2. Communicate program and results to others</li> <li>3. Modify Quality Assurance and Quality Control programs on a continuous basis to maintain effectiveness</li> </ol>
43754	Administrative	Track purchasing activities (place orders, receive orders, maximize system)	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Describe the purchasing/receiving process</li> <li>2. Describe the location of all loading docks in your facility and the specific equipment/supplies that each loading dock will accept</li> <li>3. Describe and complete all paperwork associated with ordering and receiving tasks</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Track all purchased equipment/supplies</li> <li>2. Contact suppliers in the event of undelivered orders</li> <li>3. Contact appropriate individuals regarding status of orders</li> <li>4. Monitor invoice payments, inform appropriate individuals of variances</li> </ol>
43756	Administrative	Supervise and sign off students on practicum work	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Describe the sign off procedures</li> <li>2. List the standards that are expected by faculty members</li> <li>3. Describe the procedure in passing an individual</li> <li>4. Describe and complete all paperwork</li> </ol>

43757	Administrative	Tutor lower level staff working on equipment	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Describe when you would and would not allow a lower level to work on a piece of equipment</li> <li>2. Describe adult learning principles</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Tutor lower level staff</li> </ol>
43758	Plant and Process Equipment	Discuss and check heating boilers	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Describe the principles of combustion, combustion equations, and the relationships between theoretical and excess air</li> <li>2. Describe flue gas analysis and its relationship to boiler efficiency</li> <li>3. Discuss safety precautions</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Do routine check of unit</li> </ol>
43759	Plant and Process Equipment	Start up heating boilers	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Describe equipment used and identify all components</li> <li>2. Discuss safety precautions</li> <li>3. Describe the start-up procedure and all sequences</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Do a routine check of the unit</li> <li>2. Prepare equipment and valves for start-up</li> <li>3. Start up unit</li> <li>4. Adjust flows, pressures and levels</li> </ol>
43760	Plant and Process Equipment	Shut down heating boilers	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Describe shutdown procedure and provide reasons for the tasks and sequence of operations</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Shut down unit</li> <li>2. Isolate system</li> <li>3. Prepare for maintenance</li> </ol>
43761	Plant and Process Equipment	Troubleshoot heating boiler system	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Identify probable operating problems and troubleshooting</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Troubleshoot operating problems</li> </ol>
43762	Plant and Process Equipment	Describe the operation of refrigeration system and conduct minor maintenance	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Discuss principle of operation</li> <li>2. Discuss equipment used</li> <li>3. Discuss safety precautions</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Do a routine check of unit</li> <li>2. Check refrigerant</li> <li>3. Adjust flow, pressures and temperatures</li> </ol>
43763	Plant and Process Equipment	Start up refrigeration system	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Discuss start up procedure</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Prepare equipment and valves for start up</li> <li>2. Start up unit</li> </ol>
43764	Plant and Process Equipment	Shut down refrigeration system	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Discuss shut down procedure</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Shut down unit</li> <li>2. Isolate system</li> <li>3. Prepare for maintenance</li> </ol>
43765	Plant and Process Equipment	Troubleshoot refrigeration system	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Discuss operating problems and troubleshooting</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Troubleshoot operating problems</li> </ol>
43766	Plant and Process Equipment	Describe the operation of heating valves	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Describe the operation</li> <li>2. Describe all flows</li> <li>3. Describe start up, shut down and troubleshooting</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Operate equipment</li> </ol>
43767	Plant and Process Equipment	Describe the operation of air boxes	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Describe the operation</li> <li>2. Describe all flows</li> <li>3. Describe start up, shut down and troubleshooting</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Operate equipment</li> </ol>
43768	Plant and Process Equipment	Describe the operation of radiation unit heaters	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Describe the operation</li> <li>2. Describe all flows</li> <li>3. Describe start up, shut down and troubleshooting</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Operate equipment</li> </ol>

43769	Plant and Process Equipment	Describe the operation of a make up air system	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Describe the operation</li> <li>2. Describe all flows</li> <li>3. Describe start up, shut down and troubleshooting</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Operate equipment</li> </ol>
43770	Plant and Process Equipment	Describe the operation of humidifiers	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Describe the operation</li> <li>2. Describe all flows</li> <li>3. Describe start up, shut down and troubleshooting</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Operate equipment</li> </ol>
43771	Plant and Process Equipment	Describe the operation and perform maintenance on mechanical systems	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Describe the purpose of mechanical system filters</li> <li>2. Describe checking filters</li> <li>3. Describe the reasons for filter defects or wear down</li> <li>4. Describe the safety hazards</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Prepare machines for maintenance</li> <li>2. Remove and install filters</li> </ol>
43772	Plant and Process Equipment	Describe the operation and perform maintenance on mechanical system coils (cleaning)	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Describe the purpose of mechanical system coils</li> <li>2. Describe checking coils</li> <li>3. Describe the reasons for coil defects or wear down</li> <li>4. Describe the safety hazards</li> <li>5. Describe how to clean coil</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Prepare machines for maintenance</li> <li>2. Remove and clean coils</li> </ol>
43773	Plant and Process Equipment	Operate and perform basic maintenance on heated glycol/heating exchanger	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Describe the principles of operation</li> <li>2. Describe safety precautions</li> <li>3. Describe the purpose of equipment</li> <li>4. Describe all flows into and out of equipment</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Start up equipment</li> <li>2. Shut down equipment</li> <li>3. Troubleshoot equipment</li> <li>4. Perform maintenance</li> </ol>
43774	Plant and Process Equipment	Operate and perform basic maintenance on building air-condition unit	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Describe the principles of operation</li> <li>2. Describe safety precautions</li> <li>3. Describe the purpose of equipment</li> <li>4. Describe all flows into and out of equipment</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Start up equipment</li> <li>2. Shut down equipment</li> <li>3. Troubleshoot equipment</li> <li>4. Perform maintenance</li> </ol>
43775	Plant and Process Equipment	Operate and perform basic maintenance on force flow general unit heater	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Describe the principles of operation</li> <li>2. Describe safety precautions</li> <li>3. Describe the purpose of equipment</li> <li>4. Describe all flows into and out of equipment</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Start up equipment</li> <li>2. Shut down equipment</li> <li>3. Troubleshoot equipment</li> <li>4. Perform maintenance</li> </ol>
43776	Plant and Process Equipment	Operate and perform basic maintenance on kitchen makeup and exhaust system (direct fire)	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Describe the principles of operation</li> <li>2. Describe safety precautions</li> <li>3. Describe the purpose of equipment</li> <li>4. Describe all flows into and out of equipment</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Start up equipment</li> <li>2. Shut down equipment</li> <li>3. Troubleshoot equipment</li> <li>4. Perform maintenance</li> </ol>

43777	Plant and Process Equipment	Operate and perform basic maintenance on general exhaust system	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Describe the principles of operation</li> <li>2. Describe safety precautions</li> <li>3. Describe the purpose of equipment</li> <li>4. Describe all flows into and out of equipment</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Start up equipment</li> <li>2. Shut down equipment</li> <li>3. Troubleshoot equipment</li> <li>4. Perform maintenance</li> </ol>
43778	Plant and Process Equipment	Operate and perform basic maintenance on roof mounted air handling system	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Describe the principles of operation</li> <li>2. Describe safety precautions</li> <li>3. Describe the purpose of equipment</li> <li>4. Describe all flows into and out of equipment</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Start up equipment</li> <li>2. Shut down equipment</li> <li>3. Troubleshoot equipment</li> <li>4. Perform maintenance</li> </ol>
43779	Plant and Process Equipment	Operate and perform basic maintenance on kitchen coolers and walk in freezers	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Describe the principles of operation</li> <li>2. Describe safety precautions</li> <li>3. Describe the purpose of equipment</li> <li>4. Describe all flows into and out of equipment</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Start up equipment</li> <li>2. Shut down equipment</li> <li>3. Troubleshoot equipment</li> <li>4. Perform maintenance</li> </ol>
43780	Plant and Process Equipment	Operate and perform basic maintenance on back up power generator boilers with side circulation pumps	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Describe the principles of operation</li> <li>2. Describe safety precautions</li> <li>3. Describe the purpose of equipment</li> <li>4. Describe all flows into and out of equipment</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Start up equipment</li> <li>2. Shut down equipment</li> <li>3. Troubleshoot equipment</li> <li>4. Perform maintenance</li> </ol>
43781	Rotating Equipment	Describe the operation of exhaust fans	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Describe the operation</li> <li>2. Describe all flows</li> <li>3. Describe start up, shut down and troubleshooting</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Operate equipment</li> </ol>
43782	Rotating Equipment	Operate and perform basic maintenance on radiation pumps	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Describe the principles of operation</li> <li>2. Describe safety precautions</li> <li>3. Describe the purpose of equipment</li> <li>4. Describe all flows into and out of equipment</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Start up equipment</li> <li>2. Shut down equipment</li> <li>3. Troubleshoot equipment</li> <li>4. Perform maintenance</li> </ol>
43783	Rotating Equipment	Describe the operation and perform maintenance on mechanical system bearings	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Describe the purpose of mechanical system bearings</li> <li>2. Describe checking bearings</li> <li>3. Describe the reasons for bearing defects or wear down</li> <li>4. Describe the safety hazards</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Prepare machines for maintenance</li> <li>2. Remove and install bearings</li> </ol>
43784	Rotating Equipment	Describe the operation and perform maintenance on mechanical system lubrication	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Describe the purpose of mechanical system lubrication</li> <li>2. Describe checking lubrication</li> <li>3. Describe the reasons for lubrication defects or wear down</li> <li>4. Describe the different types and uses of lubrication</li> <li>5. Identify leakages and their causes</li> <li>6. Describe the safety hazards</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Prepare machine for maintenance</li> <li>2. Change and lubricate machines</li> </ol>

43785	Rotating Equipment	Describe the operation and perform maintenance on mechanical system belts	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Describe the purpose of mechanical system belts</li> <li>2. Describe checking bolts</li> <li>3. Describe the reasons for belt defects or wear down</li> <li>4. Describe the safety hazards</li> <li>5. Describe how to size and type a belt</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Prepare machines for maintenance</li> <li>2. Remove and install belts</li> </ol>
43786	Rotating Equipment	Describe the operation and perform maintenance on mechanical system seals and seal packing	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Describe the purpose of mechanical system seals and packing</li> <li>2. Describe checking seals and packing</li> <li>3. Describe the reasons for seals and packing or wear down</li> <li>4. Describe the different types and uses of seals and packing</li> <li>5. Describe the safety hazards</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Prepare machines for maintenance</li> <li>2. Change seals and packing in machines</li> </ol>
43787	Rotating Equipment	Describe the operation of heating pumps	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Describe the operation</li> <li>2. Describe all flows</li> <li>3. Describe start up, shut down and troubleshooting</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Operate equipment</li> </ol>
43788	Rotating Equipment	Operate and perform basic maintenance on chilled glycol pump	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Describe the principles of operation</li> <li>2. Describe safety precautions</li> <li>3. Describe the purpose of equipment</li> <li>4. Describe all flows into and out of equipment</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Start up equipment</li> <li>2. Shut down equipment</li> <li>3. Troubleshoot equipment</li> <li>4. Perform maintenance</li> </ol>
43789	Rotating Equipment	Operate and perform basic maintenance on fire booster pump	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Describe the principles of operation</li> <li>2. Describe safety precautions</li> <li>3. Describe the purpose of equipment</li> <li>4. Describe all flows into and out of equipment</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Start up equipment</li> <li>2. Shut down equipment</li> <li>3. Troubleshoot equipment</li> <li>4. Perform maintenance</li> </ol>
43790	Rotating Equipment	Operate and perform basic maintenance on 2 stage reciprocating air compressors	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Describe the principles of operation</li> <li>2. Describe safety precautions</li> <li>3. Describe the purpose of equipment</li> <li>4. Describe all flows into and out of equipment</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Start up equipment</li> <li>2. Shut down equipment</li> <li>3. Troubleshoot equipment</li> <li>4. Perform maintenance</li> </ol>
43791	Instrumentation and Control	Describe the operation of building system computers	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Describe the location and hookups of the building computer system</li> <li>2. Describe all alarms recorded on the computer system</li> <li>3. Describe the actions to take as a result of all information provided by the computer system</li> <li>4. Describe the actions to take if the computer goes down or is not functioning properly</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Access and interpret the building computer system</li> </ol>
43792	Instrumentation and Control	Describe and explain the function of the various components of an electronic control circuit	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Sketch and describe a simple electronic control system</li> <li>2. Describe the common types of temperature, humidity and pressure sensors used in HVAC electronic control systems</li> <li>3. Describe the types of controllers used in HVAC electronic control systems, and their respective functions</li> <li>4. Describe the output devices in an HVAC electronic control system</li> </ol>
43793	Instrumentation and Control	Demonstrate the process tying into the mechanical systems with a laptop (remote investigations)	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Describe why you would tie in with a laptop</li> <li>2. Describe where you would tie in with a laptop</li> <li>3. Describe how you would download all information from one to the other computer (Synchronize)</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Demonstrate tying into the building system with a laptop</li> </ol>

43794	Instrumentation and Control	Discuss and adjust pressure measurement and control	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Describe basic measurement principles and how measurement instruments operate</li> <li>2. Identify type of measurement devices</li> <li>3. Describe basic control principles</li> <li>4. Describe all steps and precautions and interpretations of a pressure regulator</li> <li>5. Describe pressure measuring devices</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Take pressure readings</li> <li>2. Adjust pressure settings</li> <li>3. Adjust pressure regulators</li> </ol>
43795	Facility Maintenance and Construction	Demonstrate tearing down a boiler	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Describe the steps and precautions necessary in tearing down a boiler</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Demonstrate tearing down a boiler and performing basic maintenance</li> <li>2. Describe and demonstrate checking a boiler prior to start up</li> </ol>
43796	Facility Maintenance and Construction	Perform basic maintenance on refractory valves, fittings and repairs	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Describe the purpose of each part</li> <li>2. Describe common problems</li> <li>3. Identify parts that need to be maintained and/or replaced</li> <li>4. List the safety precautions and hazards</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Perform maintenance functions</li> </ol>
43797	Facility Maintenance and Construction	Perform basic maintenance on heating pumps	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Describe the purpose of each part</li> <li>2. Describe common problems</li> <li>3. Identify parts that need to be maintained and/or replaced</li> <li>4. List the safety precautions and hazards</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Perform maintenance functions</li> </ol>
43798	Facility Maintenance and Construction	Describe and demonstrate roof top unit preventative maintenance	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Describe the machinery that is located on the roof and what its purpose is</li> <li>2. Describe all hookups and flows from rooftop equipment</li> <li>3. Describe the most common rooftop equipment problems</li> <li>4. List the safety precautions when dealing with rooftop equipments and heights</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Complete rooftop equipment maintenance</li> <li>2. Troubleshoot rooftop equipment</li> </ol>
43799	Facility Maintenance and Construction	Perform basic maintenance on heating valves	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Describe the purpose of each part</li> <li>2. Describe common problems</li> <li>3. Identify parts that need to be maintained and/or replaced</li> <li>4. List the safety precautions and hazards</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Perform maintenance functions</li> </ol>
43800	Facility Maintenance and Construction	Perform basic maintenance on air boxes	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Describe the purpose of each part</li> <li>2. Describe common problems</li> <li>3. Identify parts that need to be maintained and/or replaced</li> <li>4. List the safety precautions and hazards</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Perform maintenance functions</li> </ol>
43801	Facility Maintenance and Construction	Perform basic maintenance on radiation unit heaters	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Describe the purpose of each part</li> <li>2. Describe common problems</li> <li>3. Identify parts that need to be maintained and/or replaced</li> <li>4. List the safety precautions and hazards</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Perform maintenance functions</li> </ol>
43802	Facility Maintenance and Construction	Perform basic maintenance on exhaust fans	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Describe the purpose of each part</li> <li>2. Describe common problems</li> <li>3. Identify parts that need to be maintained and/or replaced</li> <li>4. List the safety precautions and hazards</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Perform maintenance functions</li> </ol>
43803	Facility Maintenance and Construction	Perform basic maintenance on make up air systems	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Describe the purpose of each part</li> <li>2. Describe common problems</li> <li>3. Identify parts that need to be maintained and/or replaced</li> <li>4. List the safety precautions and hazards</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Perform maintenance functions</li> </ol>

43804	Facility Maintenance and Construction	Clean humidifiers	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Describe the common problems associate with humidifiers</li> <li>2. Describe why humidifiers need maintenance and the reason why they need cleaning</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Clean humidifiers</li> </ol>
43805	Sampling and Testing	Describe and demonstrate operation and interpretation of results from a comlester analyzer	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Describe the operation of a comlester analyzer, how it works, and what it measures</li> <li>2. Interpret the results and describe the actions to take in all possible scenarios</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Use a comlester analyzer</li> <li>2. Troubleshoot a comlester analyzer</li> </ol>
43806	Sampling and Testing	Describe the operation of water treatment and monitoring system	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Describe the operation</li> <li>2. Describe all flows</li> <li>3. Describe the start up, shut down and troubleshooting</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Operate equipment</li> </ol>
43807	Sampling and Testing	Perform water testing	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Describe the purpose for water testing</li> <li>2. Describe the different types of tests</li> <li>3. Interpret the results of tests and describe the required actions</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Perform water testing</li> </ol>
43808	Utilities	Describe basic electrical terms and concepts	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Describe power, electricity, how electricity is generated and lost, uses of electricity</li> </ol>
43809	Utilities	Describe basic electrical load types including volts, amps, kW, kWh, kva, etc.	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Define the differences between load types (inductive, resistive, capacities, loads, etc.)</li> <li>2. Define power (load) factor and the variables that affect it</li> </ol>
43810	Utilities	Perform building operation diagnostics on electrical systems	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Describe the electrical flows in your building</li> <li>2. Describe the location of fuse boxes</li> <li>3. Read an electrical blueprint</li> <li>4. Describe the emergency electrical backup system</li> <li>5. Locate electrical problems and describe who and when to call for help</li> </ol>
43811	Utilities	Read electrical meters and troubleshoot electrical system	<p>THEORY</p> <ol style="list-style-type: none"> <li>1. Describe location of electrical meters</li> <li>2. Describe the operation of electrical meters</li> <li>3. Read and interpret electrical meters</li> </ol> <p>TASKS</p> <ol style="list-style-type: none"> <li>1. Troubleshoot electrical meters</li> </ol>