

## 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	THEORY 1. Describe the operation 2. Describe all flows 3. Describe start up, shut down and troubleshooting TASKS 1. Operate equipment
43770	Plant and Process Equipment	Describe the operation of humidifiers	THEORY 1. Describe the operation 2. Describe all flows 3. Describe start up, shut down and troubleshooting TASKS 1. Operate equipment
43771	Plant and Process Equipment	Describe the operation and perform maintenance on mechanical systems	THEORY 1. Describe the purpose of mechanical system filters 2. Describe checking filters 3. Describe the reasons for filter defects or wear down 4. Describe the safety hazards TASKS 1. Prepare machines for maintenance 2. Remove and install filters
43772	Plant and Process Equipment	Describe the operation and perform maintenance on mechanical system coils (cleaning)	THEORY 1. Describe the purpose of mechanical system coils 2. Describe checking coils 3. Describe the reasons for coil defects or wear down 4. Describe the safety hazards 5. Describe how to clean coil TASKS 1. Prepare machines for maintenance 2. Remove and clean coils
43773	Plant and Process Equipment	Operate and perform basic maintenance on heated glycol/heating exchanger	THEORY 1. Describe the principles of operation 2. Describe safety precautions 3. Describe the purpose of equipment 4. Describe all flows into and out of equipment TASKS 1. Start up equipment 2. Shut down equipment 3. Troubleshoot equipment 4. Perform maintenance
43774	Plant and Process Equipment	Operate and perform basic maintenance on building air-condition unit	THEORY 1. Describe the principles of operation 2. Describe safety precautions 3. Describe the purpose of equipment 4. Describe all flows into and out of equipment TASKS 1. Start up equipment 2. Shut down equipment 3. Troubleshoot equipment 4. Perform maintenance
43775	Plant and Process Equipment	Operate and perform basic maintenance on force flow general unit heater	THEORY 1. Describe the principles of operation 2. Describe safety precautions 3. Describe the purpose of equipment 4. Describe all flows into and out of equipment TASKS 1. Start up equipment 2. Shut down equipment 3. Troubleshoot equipment 4. Perform maintenance
43776	Plant and Process Equipment	Operate and perform basic maintenance on kitchen makeup and exhaust system (direct fire)	THEORY 1. Describe the principles of operation 2. Describe safety precautions 3. Describe the purpose of equipment 4. Describe all flows into and out of equipment TASKS 1. Start up equipment 2. Shut down equipment 3. Troubleshoot equipment 4. Perform maintenance

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>