

<b>1 Purpose</b>	To outline the requirements for safely working in a workshop.
<b>2 Application</b>	Applies to all NTPC employees and contractors required to work in workshops.
<b>3 Definitions</b>	<p><b>Competent Worker</b> A worker with the training, knowledge, and experience to perform specific work.</p> <p><b>Hand Tool</b> A tool held in the hand and operated manually without electricity or other power.</p> <p><b>Power Tool</b> A tool that is driven by a motor (e.g., electric, battery, pneumatic).</p> <p><b>Workshop</b> A room or building in which goods are manufactured or repaired (e.g., wood shop, electrical shop, welding shop).</p>
<b>4 References</b>	<ul style="list-style-type: none"> <li>• NWT Safety Act 1988</li> <li>• NWT Occupational Health &amp; Safety Regulations 2015</li> <li>• Health &amp; Safety Management System Element 14.03: Work Protection Code</li> <li>• SWP 1.03: Housekeeping</li> <li>• SWP 1.16: Power Tools</li> <li>• SWP 1.17: Hand Tools</li> </ul>
<b>5 Equipment</b>	<ul style="list-style-type: none"> <li>• Power tools</li> <li>• Hand tools</li> </ul>
<b>6 PPE</b>	<ul style="list-style-type: none"> <li>• CSA-approved Class E hard hat</li> <li>• Work gloves</li> <li>• CSA-approved safety glasses and face shield</li> <li>• High-visibility clothing</li> <li>• CSA-approved foot protection</li> <li>• CSA-approved hearing protection</li> </ul>
<b>7 Training</b>	<ul style="list-style-type: none"> <li>• Nil</li> </ul>
<b>8 Work Practice</b>	<p><b>Introduction</b></p> <p>Workshops contain reciprocating and rotating tools such as grinders, saws, and drill presses. These tools require proper inspection, operation, and maintenance to ensure worker safety.</p>

### General

- Ensure the workplace is clean, tidy, and free of trip hazards, spills, and other hazards as per *SWP 1.03: Housekeeping*.
- Read and follow the safe work practices outlined in *SWP 1.16: Power Tools* and *SWP 1.17: Hand Tools*.
- Wear or use personal protective equipment (PPE) or clothing that is appropriate for the work being done. This may include items such as safety glasses or goggles, a face shield with safety glasses or goggles, hearing protection, dust mask, gloves, coveralls, safety boots or shoes, rubber boots, etc.
- Do not wear loose fitting clothes or jewelry when working with rotating or reciprocating tools. Ensure long hair is tied back.
- Only Competent Workers shall use workshop tools and equipment.
- Before beginning work, review the location of the closest fire extinguisher, first aid kit, and eyewash station.
- Any spills shall be cleaned up promptly.
- Whenever practical, all welding and cutting shall be done in a specially equipped shop.
- Welding shops shall not be used as a storage space for oxygen and other gas cylinders.

### PPE

- Face shields shall be worn along with safety glasses or goggles when operating a table saw, bench grinder, drill press, portable grinder, portable drill, or any other power tool that produces flying objects, flying particles, dust, or strong bursts of air.
- Work gloves shall be worn when operating a table saw, bench grinder, or drill press.
- Hearing protection or work gloves shall be worn when operating portable power tools whenever there may be risk of hearing damage or damage to the hands.

### Inspection

- Inspect equipment before using.
- Any defective tools or equipment shall be immediately removed from service, tagged with a Special Instructions Tag with the appropriate message (e.g., out of service for

repair), and reported to the manager.

- Bench or portable grinders shall not be used unless fitted with the proper machine guards.
- Any power tool that has had guarding removed or damaged removed from service, tagged, and reported to the manager.

**Maintenance**

- Disconnect the power supply before making adjustments or changing accessories on a power tool (e.g., changing a blade or wheel).
  - Electric tool: remove plug from wall socket.
  - Battery powered tool: remove battery.
  - Pneumatic tool: remove airline.
- Attempt to start the machine. If confirmed inoperable, proceed with maintenance.
- If machine is hard-wired to the wall, *Element 14.03: Work Protection Code* shall be followed.

**Tools**

- When using portable electric/power tools such as drills and saws, care shall be taken to:
  - Secure the work pieces to prevent them from being thrown; and
  - Ensure that the tools do not seize in the work piece.
- Table saws or circular saws shall not be used without guards.
- When sawing short or narrow pieces of material on a table saw the worker shall stand to one side and use a push stick.
- Before using a bench or pedestal grinder, the grinding wheel, guard, and work rest shall be examined and maintained as required.
  - Keep arms and fingers away from stone. If necessary, hold the work piece with pliers.
  - Be sure to wear gloves as metal can become hot very quickly.
  - Avoid awkward operations and hand positions where a sudden slip could cause a hand to move into the stone.
  - Firmly push the work piece down on the rest and slowly apply it to the stone.
  - Be prepared to have sparks.

	<ul style="list-style-type: none"> <li>○ While grinding keep the work piece 90° to the grinding stone and do not lift it off the rest. Otherwise the stone may catch and throw the work piece.</li> <li>○ After turning off the grinder wait until it stops rotating before leaving the grinder.</li> <li>● Bench grinder work rests shall be:             <ul style="list-style-type: none"> <li>○ Installed in a way that is compatible with the work process;</li> <li>○ Securely attached to the grinder;</li> <li>○ Set not more than 3 mm from the face of the wheel; and</li> <li>○ Set no lower than the center of the wheel.</li> </ul> </li> <li>● Bench or pedestal grinders and drill presses shall be properly secured (i.e., bolted down) before use.</li> <li>● Care shall be exercised in the operation of portable grinders and the following precautions shall be taken:             <ul style="list-style-type: none"> <li>○ Face shields and safety glasses or goggles shall be worn.</li> <li>○ Grinding wheels, abrasive disks, and wire brushes shall not be operated beyond manufacturer's specifications. The speed (rpm) rating must be clearly indicated and tools of appropriate size, speed, and composition shall be selected.</li> <li>○ Grinding wheels shall be carefully inspected before each use. Defective grinding wheels (e.g., cracked, chipped, containing metal residue) shall not be used and shall be disposed of.</li> <li>○ Grinding wheels shall be specific to the type of metal to be ground (e.g., do not grind non-ferrous metals such as aluminum or brass with wheels meant for steel).</li> <li>○ The sides of any grinding wheel shall not be used for grinding.</li> </ul> </li> </ul>
<b>9 Documentation</b>	<ul style="list-style-type: none"> <li>● Nil</li> </ul>

**Development**

<b>Name</b>	<b>Position</b>	<b>Date</b>
Prepared by: J. Clark	Environmental Analyst	Aug. 12, 2014
Reviewed by: A. Crowther	Health & Safety Coordinator	Feb. 22, 2016
Approved by: E. Smith	Director, Health, Safety & Environment	May 27, 2016

**Revision History**

<b>#</b>	<b>Revised Sections</b>	<b>Description of Revisions</b>	<b>Revised by (name, position)</b>	<b>Approved by (name, position)</b>	<b>Issue Date</b>
01	8	Added additional precautions for use of bench grinder.	E. Smith Director HSE	E. Smith Director HSE	11-08-21
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