HOT WORK SAFETY PROGRAM:

1.0 Purpose. To establish safe procedure for open flame or hot work process at Oklahoma City Community College (OCCC) to avoid loss of property and injury to personnel.

2.0 Scope. The Hot Work Safety Program (Program) applies when and where open flame or hot work tasks are conducted by OCCC personnel or outside contractors whether intermittently or continually. These operations include but are not limited to oxygen-acetylene cutting/welding, gas flame soldering or brazing, electric welding, grinding, tar kettles and any other open flame operations.¹

3.0 Management. OCCC recognizes its responsibilities for safe usage of hot work operations on its property and based on potential fire/explosion hazards has:

3.1 Established the following locations as permanent hot work (welding and cutting) areas that are isolated noncombustible construction and free from all combustibles or flammables.

<table>
<thead>
<tr>
<th>Location</th>
<th>Authorized Work</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facilities Management Storage</td>
<td>All open flame or hot work processes</td>
</tr>
<tr>
<td>Building (SW corner)</td>
<td></td>
</tr>
<tr>
<td>Shipping &amp; Receiving Dock</td>
<td>All processes except electric welding</td>
</tr>
<tr>
<td>Maintenance Shop Work Area</td>
<td>All processes except electric welding</td>
</tr>
<tr>
<td>Engineering Lab Patio</td>
<td>All open flame or hot work processes</td>
</tr>
</tbody>
</table>

3.2 Established Hot Work procedures and Program for hot work operations outside of designated Hot Work areas.

3.3 Designated and trained Facilities Management supervisory personnel as the responsible persons for authorizing and issuing a written permit for all hot work tasks in areas not specifically designated for such purposes. See Appendix “A.”

3.4 Designated and trained personnel in Facilities Management Department as authorized fire watchers. See Appendix “B.”

4.0 Person(s) authorizing and issuing permits and department supervisor or alternate (See Appendix “C”) shall:

4.1 Inspect and assess the work site prior to issuing the permit;

4.2 Require that necessary actions and precautions are taken before, during and after the job (e.g. fire watch provided, combustible materials removed, etc.);

4.3 Plan the work so fire hazards are eliminated;

4.4 Ensure all needed fire safety items are at the work area and a signed permit has been obtained before starting the job;

4.5 Supervise the job to ensure it is done in a safe manner as prescribed by the permit;

¹ Program does not apply to open flame heating burners in laboratories or fixed heating appliances.
4.6 Ensure that the job is observed for at least 30 minutes after the hot work is completed to determine there is no smoldering or burning material;
4.7 Certify that no conditions exist in the immediate vicinity that might present a possible fire hazard; and
4.8 Have the responsibility for insuring that departmental conditions do not change while the permit is in effect.

5.0 Person or persons doing hot work tasks.
5.1 Person or persons doing hot work tasks understands all special requirements, hazards and precautions and accepts the responsibility for safe execution of the work and that the issuance of hot work permit in no way relieves individual of these responsibilities.
5.2 All objects to be worked on which will involve any open flame or hot work tasks will be moved to the established hot work area if possible.
5.3 If the object cannot readily be removed, than all fire hazards in the vicinity should be removed to a safe place.
5.4 If the object cannot be moved and if **ALL** fire hazards cannot be removed, then guards should be used to confine the heat, sparks slag and to protect the immovable fire hazards (See Safety Precautions/Work Procedures).

6.0 Restrictions: Hot work tasks are prohibited from being conducted under the following conditions:
6.1 Where object cannot be removed or adequately protected as outlined.
6.2 In unauthorized areas.
6.3 In sprinklered building where sprinklers are inoperative.
6.4 When protective equipment is inoperative.
6.5 In presence of explosive atmospheres or highly flammable materials.
6.6 Near storage of readily ignitable materials.

7.0 Whenever hot work is to be performed in non-permanent locations, a “Hot Work Permit” shall be issued by an individual responsible for authorizing Hot Work Permits.
7.1 Both the department supervisor and/or outside contractor requesting the permit and the individual who authorized and issued the permit are responsible for safety of the particular task ensuring that the required precaution checklist is completed.
7.2 The permit is to be issued for a period of no longer than one (1) shift. If work continues beyond expiration specified on permit, a new permit shall be issued.
7.3 The Hot Work task shall take place only after the area has been inspected, the required precautions have been taken, and a signed permit is obtained from the person authorized to issue the permit.
7.4 The hard copy of the “Hot Work Permit” shall be conspicuously posted at the work location.

8.0 Fire Watch.
8.1 Whenever welding, cutting, grinding or other hot work tasks are performed, a fire watch is required. **EXCEPTION:** A fire watch is not required for minor Hot Work tasks, such as brazing or soldering when the following conditions exist:
8.1.1 Non-combustible building constructions;
8.1.2 All combustibles (contents or equipment) are separated by non-combustible building construction including wall, floor, or ceiling openings; and
8.1.3 There are no combustible materials adjacent to or on opposite side of partition, walls, ceiling or roof likely to be ignited by conduction or radiation.

8.2 Barriers and/or signs shall be posed – a black/yellow “Caution Hot Work Area Do Not Enter” and a sign stating “Caution Safety Glasses Must Be Worn At All Time” shall be posed in plain view at the job site.

8.3 The fire watcher should carefully observe the travel of sparks slag, to make sure they don’t come into contact with combustible materials.

8.4 Before work is started the fire watcher shall determine the location of the nearest available communication system (telephone or radio) for immediately summoning the fire department or ambulance service in event of an emergency and be familiar with the following procedures:

8.4.1 During normal working hours emergency notification shall be to main switchboard operator or by pressing the Emergency button on the Cisco IP Phone system.

8.4.2 During other than normal working hours emergency notification shall be by pressing the Emergency button on the Cisco IP Phone system or by dialing Campus Police Department at extension 7747.

8.5 Before work is started the fire watcher shall determine location and proper operation of nearest fire fighting equipment. Fire watchers shall be trained in use of fire extinguishers. A charged 1 2/3 gallon water type extinguisher and a 10 pound multi-purpose A:B:C dry powder extinguisher shall be provided in the permitted area (NOTE: These are additional fire extinguishers. The building fire extinguisher shall not be removed from its permanent building location unless needed for fire emergency).

8.6 The designated fire watcher is restricted from giving assistance or having other work assignments.

8.7 Designated fire watcher is required and authorized to keep all unauthorized personnel out of the permit area.

8.8 Additional personnel shall be assigned as fire watchers if the size of the job or degree of hazard warrants. If welding or cutting is to be done at high elevations, fire watches with fire extinguishers are to be stationed at various levels to check sparks and hot slag as they cascade downward.

8.9 Fire watch personnel are to be stationed not only while actual operations are being performed, but also through any lunch or rest break and for a period of time after completion of the work to ensure that no fire or smoldering exists. This period may vary from a minimum of 30 minutes to several hours depending on conditions.

8.10 If a fire watcher must leave the job for any reason, the individual must notify the person doing the hot work, and no work shall be performed in the absence of the fire watcher or until an authorized relief fire watcher is available. Hot work person must become the fire watcher until another employee who is properly trained arrives at the work site.

8.11 The fire watcher is delegated the authority to stop all hot work if fire watcher deems the safety measures are inadequate or an unsafe fire/explosion condition has developed and shall immediately contact the individual who authorized and
issued the Hot Work Permit and the department supervisor advising them of concerns who will reassess conditions and make final determination of precautionary needs.

8.12 On completion of the hot work task, the fire watcher will remain in the area for a minimum of 30 minutes or longer if necessary, to inspect the area to which sparks and heat may have spread and determine the area fire safe.

8.13 After determining the area fire safe, the fire watcher shall:
8.13.1 Sign off the “Fire Watch Signoff” portion of the Hot Work Permit;
8.13.2 Notify the department supervisor that fire watcher is leaving the fire area; and
8.13.3 Leave permit posted.

8.14 The fire watcher for a period of not less than one (1) hour after leaving the permit area will periodically (not less than every 30 minutes) return and monitor the area as deemed needed to ensure the area remains fire safe and sign the “Final Checkup.”

8.15 When the fire watcher is satisfied the area is safe, the individual will sign the “Final Checkup” on Hot Work Permit and return the Permit to Facilities Management Administration to be filed as a permanent record.

9.0 Safety Precautions/Work Procedures. The following precautions shall be taken:

9.1 All specialized fire protection systems (automatic sprinklers, CO₂, foam, etc.) (when provided) shall be maintained in operable conditions while welding or cutting work is being performed. (When Hot Work must be done close to sprinkler heads or detectors, precautions must be taken to prevent accidental actuation.)

9.2 Suitable portable fire extinguishing equipment shall be available and in a state of readiness for instant use. The existing building extinguishers are not to be removed or borrowed from the building for use at the worksite. Separate fire extinguishers are to be provided at the work location.

9.3 Purge tanks, pipes or other containers of all explosive, flammable and toxic vapors or fumes on which cutting, welding or other Hot Work tasks are to be conducted. This shall be affirmed using appropriate safety equipment and/or through filling all such containers with water or some other inert gas, (Nitrogen), prior to Hot Work being conducted.

9.4 Ventilate and clear the work area of combustible-flammable liquids, hazardous (toxic) chemicals, gases, lint, dust or any other material which may be ignited or give off flammable-toxic vapors when heated.

9.5 Move combustible materials at least 35 feet from the work site or cover with flameproof covers to protect against sparks or heat when cutting or welding. (Edges of the covers must be tight to prevent sparks from getting under them.)

9.6 All floors and equipment shall be swept clean.

9.7 Combustible floors must be kept wet or covered with damp sand or other fire protective shielding materials when performing cutting or welding.

9.8 Cover exposed wall or floor openings, cracks, ducts, or other openings within 35 feet of the work site to prevent the passage of sparks to adjacent areas.

9.9 Protect combustible walls, partitions, ceiling, or roofs with fire resistant shields or flameproof covers.
9.10 Maintain cutting, welding, soldering and heating equipment in good condition. (Manufacturer’s instructions for their uses and maintenance are to be carefully followed.)

10.0 Special/High Hazard Locations. Cutting and welding in combustible dust areas, warehouse areas, etc., require certain additional procedures as follows:

10.1 In combustible dust locations, the area must be completely cleaned. There must not be dust or material in the area that can form a dust cloud. Pieces of equipment to be worked on must be clear of dust accumulations inside or outside. Production equipment that can generate a dust cloud must not be permitted to operate during the open flame or Hot Work job.

10.2 If work is to be performed on existing duct work, fans are to be shut down and locked out to prevent sparks from coming into contact with combustible filters or other materials.

11.0 Equipment.

11.1 Maintain all equipment used for Hot Work tasks in good condition following manufacturer’s specifications and applicable OSHA, N.F.P.A., and ANSI Safety Standards.

11.2 Fuel fired kettles are not to be:

11.2.1 Permitted on building roofs or inside of any building; and

11.2.2 Located within 15 feet of any building.

Reviewed and Revised: September 13, 2011
APPENDIX I

Designated person who may authorize Hot Work Task and issue written Hot Work Permits:

1. Director of Facilities Management; and
2. Assistant Director of Facilities Management.
APPENDIX II

Designated and Trained Fire Watchers:

1. Maintenance and Operations personnel;
2. Campus & Building Services personnel;
3. Materials Control personnel;
4. Student employees and temporary personnel that have met training objectives;
5. Campus Police Officers and Safety and Security Officers; and
6. Engineering faculty and/or students.
APPENDIX III

Department supervisors authorized to request Hot Work and have shared responsibility with person issuing Hot Work Permit for joint assessment of area where Hot Work Task will be performed.

1. Building Maintenance & Operations Supervisor;
2. Campus & Building Services Supervisor;
3. Materials Control Supervisor; and
4. Facilities Management Project Manager.