HOT WORK PROGRAM
May 2015

A. SCOPE AND APPLICATION

The UNLV Hot Work Program is established in accordance with the standards listed in Section I and specifies the minimum requirements and procedures necessary to prevent fires, injuries and property damage and comply with all applicable health and safety rules.

B. COMPLIANCE WITH PROGRAM

This procedure applies to all UNLV employees, students, and contractor (multi-employers) who perform hot work at UNLV.

C. DEFINITIONS

(1) **Hot Work** – Work involving burning, welding, cutting, brazing, grinding or any similar operation that is capable of initiating fires and/or explosions.

(2) **Fire Watch** – Trained personnel who are in attendance during the entire hot work and are immediately available to extinguish a fire or take other effective action, if needed.

(3) **Permanently Established Welding Area** – A specific location designed and approved for hot work operations that is maintained fire-safe, such as maintenance shop or detached outside locations.

D. DUTIES AND RESPONSIBILITIES

(1) **Risk Management and Safety (RMS)**

   a. Establish the Hot Work Program for UNLV.

   b. Offer training on the Hot Work program requirements.

   c. Provide system for departments to complete and return hot work permits and hot work permit checklist.

   d. Serve as a resource to departments who are planning hot work and processing hot work permits and hot work permit checklists.

   e. Perform periodic inspections of hot work sites.
f. Maintain a file of completed hot work permits hot work permit checklists for two years.

(2) Departments

a. Define hot work areas and abide by all requirements of this procedure.

b. Authorize hot work for the department and provide approved equipment.

c. Contact RMS to evaluate areas that are to be designated as permanently established welding areas (see Appendix A)

d. Designate individuals to serve as Hot Work Operation Supervisors, Fire Watch Attendants and Hot Work Operators.

e. Verify that Hot Work Operation Supervisors, Hot Work Attendants and Hot Work Operators have completed the UNLV Hot Work Program and fire extinguisher training course and participated in a hands-on fire extinguisher class.

f. Contact their respective maintenance staff to arrange for the covering of sprinkler heads and smoke detectors prior to the start of work for those in close proximity to where the hot work will take place and removal of covers when work has been completed.

(3) Authorized Alarm Personnel

a. Review submitted hot work permits pertaining to their area of responsibility.

b. Contact the appropriate maintenance technician concerning the placement and removal of covers for sprinkler heads and smoke detectors.

(4) Hot Work Operation Supervisor

a. Complete the UNLV Hot Work Program and fire extinguisher training course and participate in a hands-on fire extinguisher class.

b. Determine the location and types of combustible/flammable materials that are present or likely to be present.

c. After hot work is authorized, submit hot work permit (see Appendix B) to RMS prior to the start of hot work and post at the site. Refer
to flow diagram (see Appendix C) for information on the hot work permit process.

d. Complete the “Before Hot Work Begins” section of the hot work permit checklist (see Appendix D)

e. Post the hot work permit and hot work permit checklist at the site.

f. Inspect areas daily where hot work will take place, using the hot work permit checklist, until work has been completed. Complete the “During Hot Work” section of the hot work permit checklist.

g. Verify that appropriate equipment and supplies are on-hand.

i. Fully charged and operable fire extinguishers appropriate for the possible types of fire.

ii. Welding equipment, shields, and personal protective equipment (PPE) for all hazards.

iii. Communication equipment.

h. Check equipment for proper operation prior to the start of the hot work.

i. Withdraw defective equipment from service, have it tagged out to prevent use until equipment has been repaired or replaced by qualified personnel.

j. Provide briefings to the Fire Watch Attendant and Hot Work Operator assigned to the job/project that covers the following:

i. Permit conditions.

ii. Potential hazards.

iii. Protective measures.

iv. Other issues related to the work.

k. Instruct Fire Watch Attendant to stop hot work immediately if unsafe conditions develop.

l. Ensure a Fire Watch Attendant is available while work is being performed and at least 30 minutes following completion (or longer if necessary) to detect and extinguish possible smoldering fires.
m. Request additional fire watch attendants for areas with vertical or horizontal fire exposures and combustible materials that are not observable by a single individual.

n. At the conclusion of work, receives the hot work permit and hot work permit checklist from the Fire Watch Attendant and verifies that the site is safe.

o. Signs and dates the hot work permit and submits the hot work permit and hot work permit checklist to RMS for filing.

p. If hot work is stopped for breaks or overnight, identify and eliminate any hazardous conditions that may have developed before hot work is resumed.

(5) Fire Watch Attendant

a. Complete the UNLV Hot Work Program and fire extinguisher training course and participate in a hands-on fire extinguisher class.

b. Have no other duties other than performing fire watch.

c. Have fire extinguishing equipment readily available to extinguish spot fires.

d. Be familiar with the facilities where hot work will be accomplished and the methods for sounding the alarm in the event of a fire.

e. Ensure safe conditions are maintained during and after hot work.

f. Maintain fire watch for at least 30 minutes following the completion of hot work (or longer if necessary) to detect and extinguish possible smoldering flames. Extend fire watch for a longer period when directed by the Hot Work Operation Supervisor.

g. Stop hot work if unforeseen or unsafe conditions are present.

h. Wear appropriate personal protective equipment depending on the hazards present.

i. After fire watch has ended, conduct a final inspection of the hot work area for any signs of smoke or fire.

j. Signs and dates the hot work permit and completes action items shown on the “Following Hot Work” section of the hot work permit checklist.
k. Provide the completed hot work permit and hot work permit checklist to the Hot Work Operation Supervisor.

(6) **Hot Work Operator**

a. Complete the UNLV Hot Work Program and fire extinguisher training course and participate in a hands-on fire extinguisher class.

b. Perform a hot work check prior to commencing work to ensure that:
   
i. All equipment is in safe condition.
   
ii. All hazards are recognized and protected.
   
iii. All combustibles are removed from the vicinity of the hot work or adequately covered.

c. Use appropriate personal protective equipment (PPE) at all times while performing hot work.

d. Notify people in the area that hot work is in progress.

e. Cease hot work if unsafe conditions develop. Request a re-assessment by the Hot Work Operation Supervisor.

f. Follow the requirements specified in Section I.

E. **CONTRACTOR (MULTI – EMPLOYER) WORKSITE**

(1) UNLV Project Manager/Coordinator will provide contractors the information specified on the Host Employer/Contractor Information Exchange (Appendix E) and return a signed copy of the form to RMS.

(2) Contractors will post a copy of the hot work permit and hot work permit checklist at the site and provide their UNLV Project Manager/Coordinator copies when work has been completed. Refer to flow diagram (see Appendix C) for information on the hot work permit process.

(3) Contractors shall comply with the requirements specified in Section I of this procedure.

F. **PROHIBITED HOT WORK AREAS**

a. In sprinklered buildings while such protection is impaired. (OSHA 1910.252(a)(2)(vi)[B])
b. In the presence of explosive atmospheres (mixtures of flammable gases, vapors, liquids, or dusts with air), or explosive atmospheres that may develop inside un-cleaned or improperly prepared tanks or equipment which have previously contained such materials, or that may develop in areas with an accumulation of combustible dusts. (OSHA 1910.252(a)(2)(vi)(C))

c. Hot work shall not be attempted on a partition, wall, ceiling, or roof that has a combustible covering or insulation, or on walls or partitions of combustible sandwich type construction. (NFPA 51B, Section 5.4.2 (8))

d. Hot work that is performed on pipes or other material that is in contact with combustible walls, partitions, ceilings, roofs or other combustibles shall not be undertaken if the work is close enough to cause ignition by conduction. (NFPA 51B, Section 5.4.2 (9))

G. PERMANENTLY ESTABLISHED WELDING AREA

(1) Permanently established welding areas on campus should conform to the definition shown in Section C and meet the following criteria:

i. Noncombustible or fire-resistant construction.

ii. Free of combustible and flammable contents.

iii. Suitable segregated from adjacent areas.

(2) RMS will evaluate proposed locations to be designated as permanently established welding areas.

(3) Permanently established welding areas that meet these criteria are exempt from hot work permit requirements specified in this procedure.

H. TRAINING

(1) Training shall be provided on-line or in the classroom to employees and students who are required to complete tasks that require hot work.

(2) Training will include instruction on the UNLV Hot Work Program, types and use of fire extinguishers and hands-on practice using an extinguisher.

(3) Employees and students whose names are shown on the hot work permit (any position) should have completed the UNLV Hot Work Program and fire extinguisher training course and participated in a hands-on fire extinguisher class prior to assuming responsibilities of the position indicated.
(4) Refresher training will be required whenever the written program has been updated.

I. **STANDARDS**

The UNLV Hot Work Program is based upon the program requirements specified in the following standards:

(1) 29 CFR 1910 Subpart Q - Welding, Cutting and Brazing

(2) International Fire Code Chapter 35, Welding and Other Hot Work

(3) NFPA 51B, Standard for Fire Prevention During Welding, Cutting, and Other Hot Work

(4) Nevada Administrative Code (NAC) 618.5315, Permit for Hot Work

J. **APPENDICES**

(1) Appendix A – “Permanently Established Welding Areas” List

(2) Appendix B – “Hot Work Permit” Form

(3) Appendix C – “Hot Work Permit” Flow Diagram

(4) Appendix D – “Hot Work Permit Checklist”

(5) Appendix E – “Host Employer/Contractor Information Exchange”
### Appendix A

**Permanently Established Welding Areas**

<table>
<thead>
<tr>
<th>Department/Location</th>
<th>Building</th>
<th>Room/Location</th>
<th>Type of Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>School of Architecture</td>
<td>ARC</td>
<td>159</td>
<td>Model Shop</td>
</tr>
<tr>
<td>Department of Art</td>
<td>HFA</td>
<td>159</td>
<td>Metal Studio</td>
</tr>
<tr>
<td>Judy Bayley Theatre</td>
<td>JBT</td>
<td>50</td>
<td>Scene Shop</td>
</tr>
<tr>
<td>Mechanical Engineering</td>
<td>SEB</td>
<td>1128</td>
<td>Machine Shop</td>
</tr>
<tr>
<td>Mechanical Engineering</td>
<td>TBE B</td>
<td>168</td>
<td>Lab</td>
</tr>
<tr>
<td>Campus Life Facilities &amp; Operations</td>
<td>SAM</td>
<td>106</td>
<td>Outside Welding Area</td>
</tr>
<tr>
<td>Sam Boyd Stadium</td>
<td>SBW</td>
<td>First Floor</td>
<td>Maintenance Shop</td>
</tr>
<tr>
<td>Thomas &amp; Mack Center</td>
<td>TMW</td>
<td>#1</td>
<td>Maintenance Shop</td>
</tr>
<tr>
<td>Facilities Maintenance</td>
<td>OM3</td>
<td>100</td>
<td>Welding Shop</td>
</tr>
<tr>
<td>Facilities Maintenance</td>
<td>SLC C</td>
<td>100</td>
<td>Maintenance Shop</td>
</tr>
<tr>
<td>Facilities Maintenance</td>
<td>SEP</td>
<td>109</td>
<td>Maintenance Shop</td>
</tr>
<tr>
<td>Facilities Management Administration</td>
<td>FMA</td>
<td>131</td>
<td>Outside Welding Area – Grounds Shop</td>
</tr>
<tr>
<td>Facilities Management Administration</td>
<td>FMA</td>
<td>124</td>
<td>Motor Pool</td>
</tr>
</tbody>
</table>
### ABOUT THE JOB

<table>
<thead>
<tr>
<th>Work to be Done</th>
<th>Hot Work Operator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hot Work Site</td>
<td>Worker Role</td>
</tr>
<tr>
<td>Permit Duration</td>
<td>Work Start Time</td>
</tr>
<tr>
<td>Requestor's Name</td>
<td>Requestor's Phone Number</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fire Watch Attendant Name</th>
<th>Fire Watch Attendant Signature</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hot Work Supervisor Name</td>
<td>Hot Work Supervisor Signature</td>
<td>Date</td>
</tr>
</tbody>
</table>

**IN CASE OF EMERGENCY, DIAL 9-1-1**

**Fill in the top section of the permit. Print a copy and post at the site along with the Hot Work Permit Checklist located at:** [Hot Works Permit Checklist](#)

**When the work has been completed, the fire watch attendant and hot work operation supervisor signs and dates the permit. After which, the hot work operation supervisor or project manager will return the signed copy to the RMS, CSB 119, via UNLV Mailstop 1042 or by fax (702)-895-4690.
Appendix C
Hot Work Permit Flow Diagram

Start

Approved project or job requiring hot work process

UNLV or contractor doing work?

UNLV
Identify, supervisor, fire watch and operator for job
Receive job information and safety briefing from supervisor
Prepare site and submit permit and checklist for hot work to be done
Place extinguishers, post fire watch and display permit and checklist
Inspect area at least once daily, while work is in progress
Perform final inspection. Complete permit and checklist and submit to hot work supervisor
Hot Work Supervisor verifies site safety, signs/dates permit and provides completed permit and checklist to RMS

End

Contractor
Receive information from project manager
Complete Host Employer/Contractor Information Exchange
Prepare site, permit and checklist for hot work to be done
Place extinguishers, post fire watch and display permit
Inspect area at least once daily, while work is in progress
Perform final inspection. Complete permit and checklist and submit to project manager
Project Manager provides completed permit and checklist to RMS

End
# Appendix D

## Hot Work Permit Checklist

<table>
<thead>
<tr>
<th>Action Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hot work equipment is in satisfactory operating condition and in good repair.</td>
</tr>
<tr>
<td>At hot work site floors swept clean for a radius of 35 feet.</td>
</tr>
<tr>
<td>Combustible floors kept wet, covered with damp sand or welding blanket or pad.</td>
</tr>
<tr>
<td>Openings or cracks in walls, floors or ducts within 35 feet of the site shall be covered or sealed.</td>
</tr>
<tr>
<td>Precautions to prevent ignition of combustibles on other side of walls by relocating combustibles.</td>
</tr>
<tr>
<td>Fully charged/operable fire extinguishers (appropriate for type of fire) are immediately available.</td>
</tr>
<tr>
<td>Sprinkler heads and smoke detectors in close proximity to the hot work are covered.</td>
</tr>
<tr>
<td>Combustibles relocated at least 35 feet in all directions from the site. If not possible, combustibles shall be covered by an approved welding curtain, blanket or pad.</td>
</tr>
<tr>
<td>Hot work near walls, partitions, ceilings or roofs of combustible material shall be protected by an approve welding curtain, blanket or pad.</td>
</tr>
<tr>
<td>Site checked by Hot Work Operations Supervisor. Create hot work permit and complete this section of the checklist. Post the hot work permit and checklist at the site.</td>
</tr>
<tr>
<td>Fire Watch Attendant assigned/in-place at site and in adjoining areas not visible from the site.</td>
</tr>
</tbody>
</table>

### Before Hot Work Begins

<table>
<thead>
<tr>
<th>Action Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hot Work Operations Supervisor checks site (at least once a day) while work is in progress to ensure it is fire safe.</td>
</tr>
</tbody>
</table>

### During Hot Work

<table>
<thead>
<tr>
<th>Action Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fire Watch Attendant provided for 30 minutes following the completion of hot work.</td>
</tr>
<tr>
<td>Fire Watch Attendant to look for and extinguish smoldering fires.</td>
</tr>
<tr>
<td>Fire Watch Attendant checks site for safety, completes this section of the checklist and signs/dates the hot work permit then provides it to the Hot Work Operation Supervisor.</td>
</tr>
<tr>
<td>Hot Work Operation Supervisor signs and dates the bottom of the form and submits completed hot work permit and checklist to RMS (CSB 119), via UNLV mail (stop 1042), or by fax (702-895-4690).</td>
</tr>
</tbody>
</table>

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For More Information about the Hot Work Program please contact Risk Management and Safety at 702-748-5781.
Appendix D
Host Employer/Contractor
Information Exchange

UNLV Representative Name: __________________________

Contractor Representative Name: ______________________

Date of Work: __________________________

Location of Work: __________________________________

Host Employer:
☐ Provide information about site-specific flammable materials, hazardous processes or conditions, or other potential fire hazards.

☐ Inform contractor of any precautions or procedures that UNLV has implemented for the protection of employees in/near hot work sites where contractor will be working.

☐ Explain the alarm methods and notification procedures that should be used in the event of a fire.

☐ Coordinate procedures: if contractor and UNLV employees will be working near each other in hot work site.

______________________________________________ Date
UNLV Representative Signature

Contractor:
☐ Receive the information specified above from the host employer include the type of work to be done, the hazards in the area and the protection of personnel and property.

☐ Establish a hot work program that conforms to the 2006 International Fire Code (IFC), Chapter 26.

☐ Post a copy of the hot work permit and hot work permit checklist at the site.

☐ Provide host employer a copy of the completed hot work permit and hot work inspection checklist when work has been accomplished.

______________________________________________ Date
Contractor Representative Signature