



# Hot Work Program



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APPENDIX A: Hot Work Permit

### REVISION HISTORY LOG

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## **1.0 PURPOSE**

It is the policy of City of San Carlos that the risk of death, injury, loss of property or inability to continue our business due to fire shall be minimized by implementation of an effective Hot Work Program.

## **2.0 SCOPE**

This Program applies to all City of San Carlos activities involving hot work, whether at our facilities or elsewhere.

City of San Carlos personnel supervising contractors who are performing hot work on City of San Carlos sites, jobs, equipment, etc., must ensure that the work is done in accordance with this Program.

## **3.0 REFERENCES**

- a. California Code of Regulations, Title 8, Section 4848, "Fire Prevention & Suppression Procedure"
- b. American National Standards Institute ANSI Z49.1:1999, "Safety in Welding, Cutting and Allied Processes," which is incorporated into law by reference in 8CCR4848.
- c. National Fire Code 51B, "Hot Work," which is incorporated into law by reference in 8CCR4848.
- d. California Fire Code 2007, Chapter 26, "Welding and Other Hot Work."

## **4.0 DEFINITIONS**

- a. Hot Work: Any work involving gas or electric welding, cutting, brazing, grinding, use of a needle gun, use of powder-driven fasteners, or other similar operations that produce spark or flame. It does not include electric soldering irons, or cooking operations.
- b. Hot Work Operator: Trained person conducting Hot Work operations.
- c. Hot Work Permit: Internal document that that is filled out and signed by the Permit Authorizing Individual that authorizes Hot Work in areas other than a Designated Area.
- d. Designated Area: Permanent location designed or approved for hot work operations to be performed regularly.
- e. Fire Watch: A trained individual that monitors for fires during Hot Work operations in other than Designated Areas and is trained to recognize and extinguish a fire while in its incipient stage.
- f. Minor Fire: A small fire that has no potential to spread, grow or get out of control.
- g. Permit Authorizing Individual (PAI): The individual designated by management to authorize hot work. The PAI cannot be the hot work operator except during callouts where a second person is not readily available. The Public Works Mechanic can sign his/her own permit. For the City of San Carlos the PAI's are all Public Works employees once they have been trained on the Hot Work program.

- h. Shall: Means it is *mandatory*.
- i. Welding blankets, curtains and pads: Materials that are listed or approved for such uses.

## **5.0 EQUIPMENT**

Hot Work Permit: See Appendix A

## **6.0 PROCEDURES**

### **6.1 GENERAL PROTECTION**

6.1.1. Refer to the appropriate documentation (COSP, Manufacturer's instructions, etc.) for safe and proper use of the equipment.

6.1.2. Workers or other personnel near the Hot Work area shall be protected from sparks, spatter, or light/radiation hazards by the use of screens or shields, or shall be required to wear appropriate Personal Protective Equipment. Ensure that screens do not interfere significantly with ventilation

6.1.3. When the hot work area is accessible to anyone other than the person performing the hot work, signs must be posted saying:

CAUTION  
HOT WORK IN PROGRESS  
STAY CLEAR

6.1.4. No hot work shall be done while, if, or when the fire sprinkler system is impaired or inoperable in building that is equipped with fire suppression sprinkler system.

6.1.5. A fire extinguisher rated at least 2-A:20-B:C must be within 30 feet of the location where the hot work is being performed. Ensure that fire extinguisher is rated for materials in the area being worked on.

### **6.2 VENTILATION**

6.2.1. All Hot Work shall be properly ventilated.

6.2.2. The material to be operated on must be taken into consideration when determining proper ventilation.

6.2.3. Care must be taken to ensure that forced ventilation or ventilation exhaust does not move hazardous fumes or vapors to other areas where they still constitute a hazard.

6.2.4. Respiratory protective equipment shall not be used as the City of San Carlos does not have a Respiratory Protection program in place. All Hot Work must be properly ventilated.

### **6.3 HOT WORK**

All hot work shall be done in a Designated Area, or it shall be done by Permit. No Hot Work shall be done anywhere that is not approved of by Management in one of these two fashions.

## **6.4 DESIGNATED AREA**

- 6.4.1. The Designated Area shall be free from all flammable liquids and gases, and essentially free from ordinary combustible materials, for a minimum of 35 feet from the work.
- 6.4.2. The Designated Area shall not be within 35 feet of any openings into other areas in which combustible or flammable materials are present.
- 6.4.3. The Designated Area shall be properly equipped with fire extinguishing equipment.
- 6.4.4. At the City of San Carlos, if there is no Designated Area, all hot work requires a Hot Work Permit.

## **6.5 HOT WORK PERMIT**

- 6.5.1. The Hot Work Permit form is shown in Appendix A
- 6.5.2. The PAI completes the Permit. The permit documents that the PAI has evaluated the Hot Work, and certifies that it meets all the necessary conditions.
- 6.5.3. Conditions:
  - a) All equipment is in satisfactory operating condition and in good repair.
  - b) All combustible materials have been removed for at least 35 feet. Materials that cannot be removed have been protected with fire-retardant blankets, metal shielding, etc. Blankets, shields, etc., shall protect against all entry of sparks.
  - c) All openings in walls, floors or ducts are sealed within 35 ft.
  - d) Walls, partitions, ceilings or roofs are protected, including the sides away from the Hot Work.
  - e) Hot Work shall not be done on pipes or other metals in direct contact with combustible walls, partitions, ceilings or roofs.
  - f) If Hot Work is to be done near a sprinkler head, either shield the head or protect the head with a wet rag, which is to be removed as soon as the Hot Work is completed.
- 6.5.4. The Permit should generally be good for one day only.
- 6.5.5. At least once per day, the PAI shall inspect the area to ensure that it is fire-safe.
- 6.5.6. Fire Watch:
  - 6.5.6.1. A Fire Watch shall be required by the PAI when Hot Work is performed in a location where other than a minor fire might develop, or where the following conditions exist:
    - a) Combustible materials are closer than 35 feet.
    - b) Combustible materials are more than 35 feet away, but are easily ignited by sparks.



- c) Wall or floor openings within 35 feet expose combustible materials, including concealed spaces in walls or floors.
- d) Combustible materials that are likely to be ignited are adjacent to the opposite side of partitions, walls, ceiling or roofs.
- e) A second Fire Watch may be required if the risk of fire hazard cannot be seen by one person alone, e.g., where there is a risk of fire on the other side of a wall.

6.5.6.2. The Fire Watch shall be prepared to recognize and respond to fires, including alerting occupants, notifying the Fire Department, and extinguishing smoldering or incipient fires.

6.5.6.3. The Fire Watch has the authority to stop the Hot Work if unsafe conditions develop.

6.5.6.4. The Fire Watch shall be maintained for at least ½ hour after completion of Hot Work. The PAI may extend this time if deemed necessary.

6.5.7. When a fire watch is not required, the PAI shall make a final check ½ hour after the completion of hot work to detect, respond to and extinguish smoldering fires.

## 7.0 TRAINING

The Public Works Supervisor shall assure that Hot Work Operators are trained in the safe operation of their equipment, the safe use of the process, and emergency procedures.

## 8.0 RECORDKEEPING


The permit must be kept for at least 1 year after the hot work is completed. Employees conducting Hot Work will give the Hot Work Permit to their Senior Maintenance Worker at the end of each day and the Senior Maintenance Worker will review it and deliver it to the Public Works Supervisor who will maintain it on file for at least one year. All training records will be delivered to the Public Works Supervisor and Administrative Services as outlined in the City's IIPP.

## 9.0 REVIEW AND APPROVAL

The Hot Work Program is hereby approved.

  
 Jeff Maltbie  
 City Manager

**ATTEST:**

  
 Crystal Mui, City Clerk  
 City of San Carlos  
 Dated: 9.19.16

9-16-16  
 Date



## APPENDIX A: Hot Work Permit

## City of San Carlos Hot Work Permit

Date of Work: _____	Time of Work Begin: _____	Expires: _____
Location of Hot Work: _____		
Description of Hot Work: _____		
Hot Work To Be Performed By: _____		
Fire Watch(s): _____		
Emergency Phone Number: _____		

This permit indicates that the following specific protections either are or must be present before Hot Work is begun, or that they are Not Applicable (N/A)

<input type="checkbox"/> Ventilation Provided <input type="checkbox"/> Sprinkler System in Service <input type="checkbox"/> Adequate Lighting <input type="checkbox"/> Fire Extinguishers Present & Working <input type="checkbox"/> Surfaces Wetted Down <input type="checkbox"/> Containers Emptied of Flammable or Combustible Materials <input type="checkbox"/> Other _____	<input type="checkbox"/> Welding Goggles <input type="checkbox"/> Welders Helmet <input type="checkbox"/> Hearing Protection <input type="checkbox"/> Foot/Hand Protection <input type="checkbox"/> Body Protection <input type="checkbox"/> Barricade/Cones <input type="checkbox"/> Notification Posted <input type="checkbox"/> Hot Work Equipment In Good Condition <input type="checkbox"/> Other _____	<input type="checkbox"/> Combustible Material Removed 35 ft. <input type="checkbox"/> Wall & Floor Openings Covered. <input type="checkbox"/> Heat Shields & Blankets Cover Combustibles <input type="checkbox"/> Blanking, Bleeding, Purging of Hazardous Materials From Piping <input type="checkbox"/> All Equipment and Systems Locked Out And Tagged Out As Needed <input type="checkbox"/> Equipment Cleaned of Combustible Materials <input type="checkbox"/> Atmospheric Testing Conducted, Document readings Below <input type="checkbox"/> Other _____
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### Work On Enclosed/Confined Space

**NOTE: (All Hot Work conducted in Confined Space Alternate Entry is Prohibited - STOP Work Immediately and Contact the Supervisor)**

<input type="checkbox"/> Confined Space Program Reviewed And All Procedures Followed <input type="checkbox"/> Adequate Ventilation Provided <input type="checkbox"/> Atmosphere Checked With Appropriate Detection Equipment And Is Safe Oxygen _____ Flammable/Combustible _____ Toxics _____ Other _____	<input type="checkbox"/> Make/Model/Serial _____ Most Recent Calibration Date _____ <input type="checkbox"/> Gas Bump Test - Date: _____ Time: _____ Checked OK _____ <input type="checkbox"/> Continuous Reading To Be Taken <input type="checkbox"/> Confined Space Permit Obtained <input type="checkbox"/> Rescue Procedures Reviewed And In Place	
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Time Hot Work Started: \_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_

Time Hot Work Suspended: \_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_

Time Fire Watch Suspended: \_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_

Fire Watch (signature): \_\_\_\_\_ (date): \_\_\_\_\_

Permit Authorizing Individual (signature): \_\_\_\_\_ (date): \_\_\_\_\_