Pembina Trails School Division
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HOT WORK PERMIT

This Hot Work Permit is required for any operation involving open flame or producing heat and/or sparks. This includes, but is not limited to: brazing, cutting, grinding, soldering, thawing pipe, and similar applications involving heat, e.g. roofing, asphalt, etc. An inspection of the area where the work is going to be performed must be done by the site supervisor, before a hot work permit can be issued. All hazards must be identified and the emergency procedures in place, prior to requesting the work permit.

PLEASE COMPLETE IN FULL – FAILURE TO DO SO MAY RESULUT IN YOUR HOT WORK BEING STOPPED.

Permit Valid (24 hrs. only) on Date: _____From Time: _____To:_____

Type of work to be performed:

☐ Welding:_____ ☐ Grinding:_____ ☐ Heating:_____

☐ Cutting: _____ ☐ Brazing:_____ ☐ Other:_____

Hot work being done by: ☐ Employee ☐ Contractor:_____

Name: _____ Company: _____ Phone: _____

Name: _____ Company: _____ Phone: _____

Location of Hot Work: School:_____ Floor:_____ Classroom:_____

Type of portable fire extinguisher or suppression equipment that is available:_____

Person conducting inspection of the area before the work begins and at completion:

Name: _____ Company: _____ Phone: _____

SITE SUPERVISOR APPROVAL: I verify that the above location has been inspected; the precautions listed below and on the following pages have been taken to prevent fire; and authorize permission to start work.

Site Supervisor Signature:_____Permit Expires: Date:_____Time:_____am/pm
Note: Authorizing person **CANNOT** be the worker conducting the hot work and must be the Site Supervisor.

INSTRUCTIONS

1. **Verify that the Precautions shown at right have been completed or do not proceed with the work.**
2. **Complete and retain this permit.**
3. The Hot Work area has sprinkler protection?
   □ Yes □ No □ Deactivated
4. The Hot Work area has smoke detection?
   □ Yes □ No □ Deactivated
5. The Hot Work area is on the roof?
   □ Yes □ No □ If yes, Fall Protection provided / worn?
6. Hoses & portable fire extinguishers are in service / operable?
   □ Yes □ No
7. All Hot Work equipment is in good repair?
   □ Yes □ No □ If no, removed from service.
8. Is work being done in a confined space? □ Yes □ No
   If yes, has a confined space permit been completed?
   □ Yes □ No

REQUIRED RISK/HAZARD ASSESSMENT

Requirements within 15 meters of work.
- ☐ Floors swept clean of combustibles.
- ☐ Flammable liquids, dust, lint and any oil deposits removed.
- ☐ Explosive atmospheres eliminated.
- ☐ Combustible floors wet down, covered with fire-resistive sheets.
- ☐ All other combustibles removed, or covered (fire- resistive sheets)
- ☐ All wall and floor openings covered.

Work on walls, ceiling or enclosed equipment.
- ☐ Construction is non-combustible and without combustible covering or insulation.
- ☐ Combustibles moved away from opposite sides of walls.
- ☐ Provisions are in place to guard against the danger of conduction heat to another area
- ☐ Enclosed equipment is cleaned of all combustibles.
- ☐ Containers are purged of flammable liquids/vapors.
- ☐ Al wall, floor, duct and ceiling penetrations, where sparks may travel have been located and sealed / covered.

FIRE WATCH DURING HOT WORK:

Date & time Hot Work/Fire Watch started:
Date: _____ Time: _____am / pm
Date & time Hot Work/Fire Watch ended:
Date: _____ Time: _____ am/pm

Signature of Fire Watch:_____

FIRE WATCH – AFTER HOT WORK IS COMPLETED:

☐ Fire Code requires the fire watch to be maintained during and for a period of **60 minutes** after work is completed; a fire extinguisher is present and the fire watcher is trained in the use of equipment; all adjacent areas to the work are monitored.

☐ Fire Code requires a final check of work area to be made **4 hours** after work is completed and **must be performed by the contractor.** Fire code: 5.2.3.1

Final Check Time: _____(initialed)_____

When the Fire Watch has ended return the completed form to the Pembina Trails Safety Officer, Fax: 204-488-8385

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GENERAL RULES FOR PERMITS:

- Hot work permits must not be issued in areas affected by sprinkler/fire alarm system impairments. In the event of a sprinkler/fire alarm system impairment during work, the area supervisor or contractor must be notified to cease hot work operations until the impairment can be corrected.
- In the event that the fire alarm system needs to be taken off line to prevent false alarms, the contractor must contact the head custodian and inform them of the work. The custodian will then be required to take the system off line and place the school under a fire watch until the system can be put back online.
- Permits are valid as long the same person or crew is continuously working on the job, for a period not exceeding 24 hours.
- Permits must not be issued for work areas that cannot be made fire safe.
- The permit is automatically void and hot work is stopped immediately if work area conditions change such that the area is no longer fire safe. Only when the permit is resigned, or another permit written, after the work area reassessed and new fire hazards addressed, work can continue.

HOT WORK PERMIT – STEPS:

1. Prior to start of any hot work operation, the permit issuer must personally examine the work area to confirm that the following minimum safety precautions have been taken:

    - Hot work equipment inspected and in good working condition.
    - The equipment or material to be worked on is thoroughly cleaned of all deposits of oil, carbon, dust, or other combustible/flammable residues.
    - Whenever possible, the hot work operation should be moved to a **designated fire safe area** to minimize the risk of fire in the facility.
    - Sprinklers, where provided, are in commission and will not be taken out of service while this work is being done.
    - All **combustibles materials** have been located at least **15 meters** from the operation and any combustible materials that cannot be moved, must be protected with metal guards or flameproof covers (i.e. fire-resistant tarpaulins).
    - Any materials or building surfaces that cannot be removed or protected should be thoroughly wetted to prevent ignition. Since there is a possibility of sparks leaking onto combustible materials in adjacent areas to the hot works in progress, all openings in walls, floors, or ceilings must be covered or closed.
    - The work will be confined to the area or equipment specified on the permit.
    - Surrounding floors have been swept clean and, if combustible, wet down.
    - Ample portable extinguishing equipment has been provided and is easily accessible. These extinguishers are not from the immediate area, but are additional ones.
    - Exhaust and return air fans (HVAC) within 15 meters have been turned off.
    - All floor, wall, and ceiling openings within 15 meters of the operation have been tightly covered to prevent sparks or slag from entering an unobserved area.
    - Hot work areas must be isolated with tape, barricades, or traffic horses to warn personnel from walking into and under this area when work is in progress and divert them from hazards, such as falling sparks and flash burns.
    - Compressed oxygen is not to be used under any circumstances for the purpose of ventilation, comfort, cooling, blowing dust from clothes, or for cleaning the work area.

2. All appropriate emergency procedures must be reviewed with the person doing the hot work.
3. The hot work permit must completed and be posted it in a visible location in the hot work area.

4. **During and after hot work**, the following work rules must be implemented:
   - Fire watch will be provided during and for ***60 minutes*** after work, including any coffee or lunch breaks. This is a fire code requirement and must be complied with.
   - Fire watch person is supplied with a suitable fire extinguisher and properly trained in use of fire extinguisher and activation of the nearest local fire alarm
   - The hot work area and all adjacent area (including floors above and below) must be monitored periodically for ***4 hours*** after the work has been completed. (Fire Code: Section 5.2.3.1). When hot work is performed on or near a wall, check the other side of wall because there is a chance that heat was transferred or radiated through the wall. The 4hr fire watch is a fire code requirement and is non-negotiable and must be completed by the contractor.
   - If barricades are removed, mark hot materials to warn other workers, employees, and visitors of the potential burn hazard.
5. **Additional Measures:**
   - To reduce or eliminate the possibility of nuisance or "false alarms", temporarily cover sprinklers in the immediate vicinity with noncombustible material or damp cloths.
   - Smoke detectors in the affected area may be temporarily "zoned off" or "bagged" to avoid activation and so as to maintain maximum protection for the duration of the hot works.
   - Remember to remove the temporary protection when the hot works operation is completed!
6. Upon completion of the work, the permit issuer (supervisor) will conduct a **final inspection of area and sign off on the permit** only if the area is fire-safe.
7. The posted permit must be kept for documentation purposes. A copy of permits must be sent or faxed to Pembina Trails School Division's Safety Officer at 204-488-8583

WORK ON PIPING, EQUIPMENT, OR CONTAINERS:

Hot works shall not be performed on containers, equipment, piping containing combustible, or flammable liquids or gases unless they have been cleaned and tested with a gas detector to ascertain that they are free of explosive vapours. Work on the container must be approved by a supervisor once they have observed that the above requirements have been met.

CONFINED SPACES:

If the hot work is being done in a confined space (i.e. closed container, tank, drum or similar equipment, or crawl space, etc.) which contain or may have contained flammable liquids or other combustible materials, then the following additional safety precautions must be applied for both employees and contractors, before work is started:

- A confined space entry permit must be completed and posted at the site.
- Confined space entry work requires two people: one to enter and one to monitor the entrance.
- Personal protective equipment and rescue equipment must be on site.
- Check atmosphere for combustible gases or vapors using reliable gas detection equipment. If there is a chance of a gas vapor release into the area during the hot work, continuous gas detection monitoring of the area. Continuous ventilation of hot work fumes must also be conducted.
- Thoroughly empty, clean, and vent. Purge any flammable gases or vapors with inert gas (i.e. nitrogen) until atmosphere is safely below the explosive range. Flush with water if necessary to remove any combustible residue.
- Blank off or disconnect all points of entry into the container to prevent gases from entering the confined work area.

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PERSONAL PROTECTIVE EQUIPMENT:

- Appropriate personal protective equipment (i.e. welding goggles, face shield, safety glasses, gloves, etc.) must be worn by any person involved in a hot work activity.
- Hot work operations performed in congested areas requires use of welding flash shields, curtains, or partitions to protect adjacent workers or nearby employees from flash burns, otherwise, suitable eye protection must be provided.
- Fire watchers (patrol) who are stationed within twenty (20) feet of the work area (especially electric or heli-arc welding) must be provided with eye protection (i.e. dark glasses) for protection against flash burns.

VENTILATION:

- Local mechanical exhaust systems (i.e. welding fume extractors, booths, smoke eaters, additional ventilation, etc.) must be provided and arranged to prevent the accumulation of toxic welding fumes, gases, or dust containing hazardous metals or compounds in confined spaces or where the welding area contains partitions or other structural barriers that significantly obstruct cross ventilation.
- Movable local exhaust hoods should be placed as close to the point of welding as practicable to minimize worker exposure.
- Exhaust hoods or booths must provide a forced air flow rate sufficient to maintain a minimum capture velocity of 100 feet per minute in the welding zone.

WELDING EQUIPMENT:

The Pembina Trails S.D. employee or contractor doing the work is responsible for applying the following additional welding equipment safety precautions:

- Secure gas cutting and welding cylinders so they will not be upset or damaged. Replace protective top caps on all cylinders not in use.
- Use portable cable stands to elevate welding hose or cable off floor areas where it can be easily damaged.
- All welding equipment must have flash back arrestors.
- Thoroughly inspect all valves, regulators, hoses, and torches, before use, to ensure all welding equipment is in good condition. Defective equipment should be immediately taken out of service for repair or replacement. **DO NOT** work with defective welding equipment!
- Carefully connect the ground clamp when using *electrical arc welding* equipment. Since an improperly made ground can be a source of ignition, the ground clamp should be connected as close to the work as possible so that it may be easily observed.

EMERGENCIES:

The prime contractor or Pembina Trails S.D. area supervisor in charge of the hot work operation is responsible for the following emergency response requirements:

- All hot work operations must be stopped immediately upon notification of a fire, gas leak, or other emergency in the facility. All equipment must be shut off and employees/contractors must evacuate the work area until the emergency is over.
- All personnel, including contractors, assigned to the hot work operation must be told the location of the nearest fire alarm, fire exit, and portable fire extinguishing equipment, and must be familiar with the facility's emergency evacuation and notification procedures.
- All contractors must have emergency procedures posted and include: muster sites, means of communication, emergency phone numbers, contact numbers, Pembina Trails S.D. emergency contacts, means of accounting for all workers on site, etc.