



STANDARD PROCEDURE INSTRUCTION

Title		SPI
Hot Work Permit		# 34-3
Department	Supersedes SPI Dated	Effective Date
Safety, Health and Environment	Jan 19, 2016	June 5, 2018

Hot Work Permit

1. PURPOSE

1.1 To prescribe a procedure to enhance fire prevention during and following any welding, cutting, carbon arcing, brazing, arc and laser cutting, soldering, thermal spraying, thermal adhesive bonding, grinding tasks or other hot work.

2. SCOPE

2.1 The Hot Work Permit applies to all areas.



2.2 Hot work permits are not required for the following work and locations underground (local permitting requirements may apply):

- Cutting of scrap steel with a handheld grinder in loading pockets;
- Cutting of scrap steel with a handheld grinder at Thompson Mine 3600 Level chutes;
- Cutting of scrap steel with a handheld grinder at crusher stations;
- Cutting of bolts/rebar, screen or drill steel with a handheld grinder in a development or cut-and-fill heading;
- Welding, cutting or grinding performed in a designated "Welding Bay" inside an underground shop.

2.3 Prior to commencing with any Hot Work, alternatives should be considered in order to reduce or eliminate the risk of fire.

3. PROCEDURES

3.1 Each Manager will be responsible to identify area(s) within their jurisdiction where a hot work permit is not required.

3.2 Prior to the commencement of hot work, the Vale Supervisor issuing the Hot Work Permit in charge of the Work Group assigned to the task of cutting, welding, carbon arcing, grinding, etc. (including contractors), will visit the site and perform a risk assessment by the Work Group performing the hot work to ensure the appropriate precautions are in place. The Work Group performing the hot work will also be responsible to ensure the permit is completed and signed indicating that all precautions specified have been complied with.

3.3 A new permit must be issued for each new shift or when the persons working on the hot work change during the shift.

3.4 A new permit is required for each hot work task assignment.

3.5 Upon completion of the hot work or the shift end (whichever occurs first), the Vale Supervisor in charge of the Work Group that performed the hot work will ensure the permit is signed off by a member of the Work Group performing the work, indicating the job status, time, and that the area has been checked and deemed safe this status includes a continuous 1 hour fire watch after the completion of the Hot Work and deliver the hot work permit to the appropriate Supervision to initiate the Fire Watch.

3.6 Supervision will ensure that a continuous fire watch is done for the duration of all Hot Work and for 1 hour after the completion of Hot Work. Fire Watch is then



done each hour for the next 3 hours or longer until it is deemed by Supervision that no further Fire Watch is required.

3.7 Once Supervision determines the area is safe and no further guarding or Fire Watch is required; signing off in the appropriate section will clear the permit.

4. **ADMINISTRATION**

4.1 Completed Hot Work Permits are to be kept on file within the department for a minimum of 1 year for insurance and auditing purposes.

4.2 Local procedures may be developed using this SPI as a minimum standard.

Attachment: Hot Work Permit



Hot Work Permit

Operations

Maintenance

Contractor

This permit applies ONLY to the Designated Area indicated below and is ONLY valid for the shift it is issued. A new permit must be issued for each new shift or when the persons working on the hot work change during the shift.

Building _____ Work Area _____

Location _____

Nature of Work _____

Employee Names _____

The Work Group Supervision must ensure the area is inspected before work starts to ensure:

- Cutting, Welding, Carbon Arcing, Grinding, etc. equipment is in good condition
- Where applicable, sprinklers are in service. (Check gauge pressure on main control valve to ensure the water supply line is in the open position)
- Suitable Fire Extinguisher(s) and/or charged Water / Fire Hose on hand
- Area is clear of combustibles / flammables within 15 meters, protected with non-combustible cover, guard, or shield or the area is wetted down if practical to do so
- Area(s) behind walls, openings (floor and walls), etc. are clear of combustibles or protected with a non-combustible cover
- Hot Work can be done safely in a confined or enclosed space (confined entry permit also required)
- Containers, equipment, or piping containing flammable or combustible liquids or combustible gases must be purged and tested prior to hot work being done on them
- Hot work shall not be done on totally enclosed containers unless proper precautions are taken
- Insides of walls, roofs and/or ceilings are monitored including opposite sides (ie. Hot Work on exterior wall, check interior)
- Hot Work involving roofing material must utilize an infrared heat gun for early detection of hot spots
- Hot work shall not be performed on metal objects in contact with combustible materials unless precautions are taken to prevent their ignition



- When hot work is being performed near piping containing flammable gas, the piping shall be purged and tested or protected by a thermal barrier

- No hot work to be done within 8 metres of explosives

- Continuous fire watch will occur during the hot work and for 1 hr after the work is complete by the person performing the hot work, or a designated employee.

- When hot work is to be done in the General Office, Utilities is to be notified at 2395 and the fire alarm bells in the General office placed on by-pass. Not the panel in Utilities.

- Area specific hazards. (These include but are not limited to rubber belts, rubber lined equipment, cable trays, oil systems, and other combustibles):

- If cylinders of acetylene, oxygen or other compressed gas operated from a location not readily accessible to the worker operating the cutting torch or other burning equipment then a second competent worker to attend to the operation of the cylinder control devices and to guard against any outbreak of fire

The work area has been checked, necessary precautions taken and request authorization for the work to begin:

Permit Holder: _____

Date: _____ Time: _____

am
 pm

Permit has been authorized for requested work:

Supervision: _____

_____ am
Date: _____

_____ pm
Time: _____

Note: Upon completion of hot work this permit must be delivered to Supervision responsible for the area to initiate the Fire Watch.



Completion of Hot work Continuous 1 hour Fire Watch

All Hot Work has been completed by the employee. The area has been monitored for 1 hour in the following manner:

_____ am

_____ pm

Permit Holder **Date** **Time**

Work is now complete and area checked as being safe

Permit Holder: _____ am

_____ pm

Date: _____ Time: _____

Note: Upon completion of hot work this permit must be delivered to Supervision responsible for the area to initiate the Fire Watch.

Fire Watch
(Initial Area Fire Watch must be done within 1 hour)

I have been informed of the work as above. The area will be checked every hour in the following manner:

_____ am

_____ pm

Supervision **Date** **Time**

_____ am

_____ pm

Supervision **Date** **Time**

_____ am

_____ pm

Supervision **Date** **Time**



am

pm

Supervision

Date

Time

am

pm

Supervision

Date

Time

THIS AREA CHECKED AND CERTIFIED SAFE – NO FURTHER FIRE WATCH IS REQUIRED

am

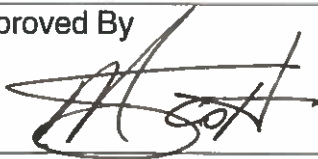
pm

Supervision

Date

Time

Approved By



Title

Vice-President, Vale
Manitoba Operations

Date

June 5, 2018.



