

Workplace Health and Safety Bulletin

Safe Work Permits

Introduction

Certain safeguards that normally protect the worker may have to be removed when repair or maintenance work is performed. When this occurs, the hazards involved need to be identified and a safe work system developed to eliminate or control these hazards

A safe work permit is document that identifies the work to be done, the hazard(s) involved, and the precautions to be taken. It ensures that all hazards and precautions have been considered before work begins. Safe work permits should always be used when work is performed by an outside agency or employer.



What is a safe work permit?

A safe work permit is a written record that authorizes specific work, at a specific work location, for a specific time period. Permits are used for controlling and co-ordinating work to establish and maintain safe working conditions. They ensure that all foreseeable hazards have been considered and that the appropriate precautions are defined and carried out in the correct sequence.

The permit is an agreement between the issuer and the receiver that documents the conditions, preparations, precautions, and limitations that need to be clearly understood before work begins.

The permit records the steps to be taken to prepare the equipment, building, or area for the work, and the safety precautions, safety equipment, or specific procedures that must be followed to enable the worker(s) to safely complete the work.

The safe work permit helps to identify and control hazards, but does not, by itself, make the job safe.

Who benefits from a work permit program?

- Any industry that has a significant risk because of particular hazards.
- Any prime contractor who lets out or sub-contracts work to others to do maintenance or other hazardous work.
- Organizations that have individual employees working in isolated areas and performing non-routine work.

Why use a work permit?

All work exposes the worker to some degree of hazard. This degree of hazard determines the type of safeguards required to protect the worker. Most routine work has defined safe work practices or procedures. In the absence of such procedures, safe work permits should be used.

Workers engaged in maintenance work may be at risk if the machinery they are working on is started unexpectedly. Such machinery and equipment needs to be isolated by blanking, blinding, or a power lockout system. These procedures can be clearly identified by a work permit system.

Certain types or conditions of work, such as confined space entry, flammable or explosive situations, exposure to harmful substances or high voltage electrical equipment, and the transfer of hazardous work from one work shift to the next are examples of where safe work practices or the use of work permits is essential.

Alberta's *Occupational Health and Safety (OHS) Act* and *OHS Regulation* require employers to provide workers with a safe place of work and to identify known safety hazards. This can be partly achieved through the use of a safe work permit system. Verbal instructions can be misinterpreted or forgotten, whereas a great deal of control is achieved through the use of safe work practices or safe work permits.

Types of safe work permits

The type of safe work permit required is determined by the nature of the work to be performed and the hazards that must be controlled or eliminated. The range of activities and locations makes it impossible for a single type of permit to be suitable for all situations. The following types are most commonly used and examples are provided at the end of this Safety Bulletin.

Hot Work Permit

Hot work permits are used when heat or sparks are generated by work such as welding, burning, cutting, riveting, grinding, drilling, and where work involves the use of pneumatic hammers and chippers, non-explosion proof electrical equipment (lights, tools, and heaters), and internal combustion engines.

Three types of hazardous situations need to be considered when performing hot work:

- (a) the presence of flammable materials in the equipment;
- (b) the presence of combustible materials that burn or give off flammable vapours when heated; and
- (c) the presence of flammable gas in the atmosphere, or gas entering from an adjacent area, such as sewers that have not been properly protected. (Portable detectors for combustible gases can be placed in the area to warn workers of the entry of these gases.)

Cold Work Permit

Cold work permits are used in hazardous maintenance work that does not involve “hot work”. Cold work permits are issued when there is no reasonable source of ignition, and when all contact with harmful substances has been eliminated or appropriate precautions taken.

Confined Space Entry Permit

Confined space entry permits are used when entering any confined space such as a tank, vessel, tower, pit or sewer. The permit should be used in conjunction with a “Code of Practice” which describes all important safety aspects of the operation.

Special Permits

Some employers use special permits to cover specific hazards such as:

- extremely hazardous conditions;
- radioactive materials;
- PCBs and other dangerous chemicals;
- excavations; and
- power supplies.

Each type of permit provides a checklist for the person preparing the equipment, informs workers carrying out the work of the hazards present, lists or describes the precautions to be taken, and describes the personal protective equipment to be worn by workers.

General procedure

Safe work permits are usually made out in either duplicate or triplicate. When a duplicate system is used, one copy of the permit is retained by the issuer at the work site and the other is held by the worker/department doing the work. The permit should always be available at the work site. The permit is handed back to the issuer at the end of the shift or when the work is completed.

In a triplicate permit system, the third copy is used by the safety department to audit the work to see if the requirements of the permit are being met.

Example of a safe work permit checklist

A safe work permit is a written record that identifies:

- (1) the date, time of issue, and time of expiry of the permit;
- (2) the location of the work —it must be as specific as possible;
- (3) the department or company doing the work;
- (4) a description of the work to be done;
- (5) any toxic, corrosive, flammable, or other dangerous materials in the immediate work area;
- (6) whether the work area has been inspected and found free of the above materials;
- (7) the need for fire protection;
- (8) the need for isolation — electrical and mechanical hazards locked out and tagged, piping blanked off, tagged, disconnected, drained, or vented;
- (9) the need for ventilation — air, steam, inert gas purge;
- (10) the need for testing prior to or during the work for:
 - harmful substances;
 - combustible gases;

- oxygen deficiency;
 - other hazards e.g. radiation;
- (11) any specific health hazard — is Material Safety Data Sheet information required?
 - (12) the need for specific personal protective equipment to protect the worker from the hazard;
 - (13) the need for emergency procedures and competent rescue personnel;
 - (14) a special instructions and comments section — special procedures, special precautions;
 - (15) a general instruction-to-receiver section;
 - (16) the name and job title of the person who issued the permit and when;
 - (17) the name and job title of the person who received the permit and when;
 - (18) that the work has been completed and the permit signed by the person returning it; and
 - (19) the name of the person signing off the permit and whether or not the work has been completed.

Considerations when using a safe work permit

A safe work permit should only be issued by a competent person who is completely familiar with the work or situation covered by the permit and who has control over changes in that work area e.g. lead operator or supervisor.

The permit issuer must be sure that the work situation identified on the permit is as described. Where possible, the permit issuer should review the work or operation with the worker before work begins. If the permit issuer has not reviewed the site, this should be noted on the permit and the work situation should be discussed with the worker.

Written instructions alone are often insufficient in the effective use of a permit system. Practical training exercises for the people who issue and receive permits should be considered.

The person receiving the permit must completely understand the work situation, the potential hazards, and the precautions required before accepting the permit.

Any special precautions not normally associated with the particular work should be identified to the receiver of the permit, who must fully understand the reasons for these precautions e.g. work to be done in an area where there is a possible exposure to H₂S gas.

The permit issuer must be sure that the worker understands the hazards. If not, the permit issuer needs to review the Material Safety Data Sheet or other information with the worker to ensure that they understand the dangers of the product and the precautions to be taken.

No one should sign a safe work permit unless completely satisfied that the work can be done safely.

All safe work permits must be signed by both the permit receiver and the permit issuer before work is started and after it is completed.

Pitfalls of work permits

Workers and supervisors do not always see the need for a safe work permit system. They have not been trained to recognize the added safeguards that such a program provides.

Factors leading to ineffective permit systems are:

- The type or format of the permit does not cover all the potential hazards.
- The issuing procedure is inadequate.
- The person signing the permit has not inspected the operation to see if the isolation, lock-out, or testing has been done.
- Workers are not following or don't understand the requirements of the permit, especially the expiry time.
- The employer is not enforcing or auditing the work permit system.
- Permits are prepared too far in advance, or after the work has begun.
- A responsible person is not inspecting the operation after the permit has been issued.
- The system is too complex.

Conclusion

All workers using permits must completely understand the reasons for, and the requirements of, the permit before work begins.

A safe work permit is an effective tool to help identify and control hazards, prevent injuries, and avoid costly mistakes.

The following pages provide samples of safe work permits.

**SAFE WORK PERMIT FOR HOT WORK
NO WORK IS ALLOWED EXCEPT THAT WHICH IS SHOWN ON THE PERMIT**

DATE OF ISSUE _____ TIME OF ISSUE _____ EXPIRES _____ LOCATION _____
 OF WORK _____
 DEPARTMENT DOING WORK _____
 DESCRIPTION OF WORK TO BE DONE _____

NAME MATERIALS ONLY _____ TOXIC _____ CORROSIVE _____
 FLAMMABLE _____ OTHER _____

	N/A	NO	YES
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- | | | | |
|---|--|--|--|
| (1) Has an inspection been made of the unit/equipment to be worked on? | | | |
| (2) Where inspected, was it found to be free of the above materials? | | | |
| (3) Is an adequate supply of fresh air assured? | | | |
| (4) Do unit and atmospheric conditions permit safe work? | | | |
| (5) Equipment has been cleaned by (Specify) _____ | | | |
| (6) The necessary equipment has been adequately protected by (Specify) _____ | | | |
| (7) Have electrical switches been locked out and tagged?
Signature for Process: _____ Electrical: _____
Mechanical: _____ Other: _____ | | | |
| (8) Have combustible waste materials been removed from the area? | | | |
| (9) Have nearby sewers been properly protected? | | | |
| (10) Is fire protection required? (Specify) _____ | | | |
| (11) (a) May underground obstructions be encountered?
(b) May underground or overhead electrical power lines be encountered?
(c) Signature of electrical supervisor or designate: _____ | | | |
| (12) Have precautions been taken against radioactive sources? | | | |
| (13) Is permit receiver aware of material safety data sheets pertaining to this job? | | | |
| (14) Is there a need to review a special procedure such as handling asbestos, pyrophoric materials, confined space entry, Hydrofluoric Acid Area, etc.? | | | |
| (15) Are gas tests required during the job? | | | |
| (16) Has the confined space or vessel been prepared for safe entry and entry signs installed? | | | |
| (17) Is it permissible to use (a) Electrical equipment?
(b) Diesel, gasoline & propane driven equipment? | | | |
| (18) Is welding permitted? | | | |

TYPES OF GAS TESTS REQUIRED & RESULTS OBTAINED (Check Where Required)

I examined the above equipment at _____ AM/PM & observed the reading to be :
 Combustible: _____% Hydrogen Sulphide: _____ ppm Oxygen: _____ % Other: (Name): _____ ppm
 Gas Tester's Signature: _____

What additional protective equipment is required? (Specify) _____

PRECAUTIONS TO BE FOLLOWED OTHER THAN THOSE LISTED ABOVE

AGREEMENT: I HAVE CHECKED BOTH THE PERMIT AND THE JOB. I UNDERSTAND THE NATURE AND EXTENT OF THE WORK AND THE PRECAUTIONS TO BE FOLLOWED IN COMPLETING THE WORK.

Permit Issued by: _____ Job Title: _____ Time: _____
 Received by: _____ Job Title: _____ Time: _____

Permit Work Complete: _____ Job Title: _____ Time: _____
 Sign For Permit Issuer: _____ Job Title: _____ Time: _____
 Off Work Not Complete: _____ Job Title: _____ Time: _____

All Safe Work Permits must be signed by both the Permit Receiver and Permit Issuer before work is started and after it is completed. Permit No: _____

SAFE WORK PERMIT

Work Order No. _____

Persons issuing or receiving plant Safe Work Permits must understand the procedures for issuing and receiving permits and must fully realize their responsibilities in this phase of plant operations.

Date Issued: _____ Time Issued: _____ **GOOD ONLY FOR DATE OF ISSUE**

Department: _____ Building: _____

Description of Work To Be Done: _____

Department or Contractor Doing Work: _____

Person in Charge of Work: _____

(Note: In the following, check Yes, No, or Not Applicable [N/A])	YES	NO	N/A
1. Have process materials (liquid, gas) been removed from the equipment?			
2. Has the equipment been cleaned by:			
(a) Steaming?			
(b) Flushing with water?			
(c) Inert gas purging?			
(d) Air ventilation?			
3. Has the necessary equipment been adequately protected by:			
(a) Blanking/Blinding off?			
(b) Double Block and Bleed			
(c) Disconnecting?			
(d) Draining and venting?			
4. Have all electrical switches been locked out?			
5. Is there an adequate supply of fresh air?			
6. Is it permissible to use:			
(a) Open flame/welding equipment?			
(b) Electrical equipment/tools?			
(c) Gasoline, propane or diesel driven equipment			
7. Can sparks ignite material around or below this level?			
8. What fire protection is necessary?			
(a) Fire extinguisher Dry chem <input type="checkbox"/> CO ₂ <input type="checkbox"/> H ₂ O <input type="checkbox"/>			
(b) Firewatch			
(c) Other (Specify) _____			
9. Have precautions been taken against radioactivity?			
10. Do atmospheric conditions and wind direction permit safe work near vents?			
11. Does this work involve asbestos?			
12. Has the confined space or vessel been prepared for safe entry?			
13. Is a gas test necessary?			

Frequency: Per Shift Per Hour Continuous Type of Gas Testing Equipment MX-241 Gas Techtor

Time	Explo Gas %	O ₂ %	CO ppm	CO ₂ %	H ₂ S ppm	NH ₂ ppm	SO ₂ Ppm	Other (Spec.)	Gas Tester's Signature

14. Identify materials normally in equipment
 (a) Toxic: _____ (b) Flammable: _____ (c) Corrosive _____ (d) Other (describe): _____

15. What personal protective equipment is required? (Specify)
 (a) Type of eye protection: _____
 (b) Type of protective clothing: _____
 (c) Type of respiratory protection: _____
 (d) Type of ear protection: _____
 (e) Other (Specify): _____

SPECIAL INSTRUCTIONS: (Specify): _____

THE PERMIT RECEIVER ACKNOWLEDGES THAT HE WILL INFORM ALL PERSONNEL WORKING UNDER THE AUTHORITY OF THIS PERMIT OF ALL INFORMATION CONTAINED HEREIN.

Permit issued by _____ Job Title _____ Time: _____
 Permit received by _____ Job Title _____ Time: _____
 Work completed by _____ Job Title _____ Time: _____
 Process accepted by _____ Job Title _____ Time: _____

The following person(s) acknowledges that this job is in progress during shift change and has checked both the permit and the nature of the job and understands the precautions to be followed:
 Supervisor Signature: _____ Time: _____ Shift: _____
 Supervisor Signature: _____ Time: _____ Shift: _____

DISPLAY AT WORKPLACE – MAINTENANCE COPY

Permit
NO :

SAFE WORK P E R M I T

Date: _____, 20____ Time: _____

Description of work to be done:

Location: _____ Department Doing Work: _____
 No. of Workers: _____ Permit Required By: _____

COLD WORK PERMIT

WORK CLEARANCE

1. Is equipment to be depressurized?
2. Is equipment to be isolated and tagged?
3. Is equipment to be inspected to ensure all parts are free from potential hazards?
4. Are electrical switches to be locked in the "off" position?
5. Should special protective equipment be used?

REQUIRED	NO .	DONE (Initials)

For isolating and testing not done by the Permit Issuer see: _____

REMARKS: Special precautions, etc.

Permit issued by: _____ Department: _____ (Signature)

NO WORK TO BE CARRIED OUT UNDER THIS PERMIT UNTIL ALL THE INDICATED "REQUIRED" ITEMS HAVE BEEN DONE

IT IS THE RESPONSIBILITY OF THE PERMIT ISSUER OR DESIGNATE TO CHECK CONDITIONS DURING PROGRESS OF THE WORK

Work completed (Including Clean-up) Time: _____ Signature: _____

Work Not Completed: Time: _____ Signature: _____

RETURN THIS PERMIT WHEN WORK IS COMPLETED OR AT END OF SHIFT IF WORK IS NOT COMPLETED

SAFE WORK PERMIT

Date: _____, 20____ Time: _____

Description of work to be done:

Location: _____ Department Doing Work: _____
No. of Workers: _____ Permit Required By: _____

HOT WORK PERMIT

	REQUIRED	NO.	DONE (Initials)
1. Is equipment to be thoroughly steamed?			
2. Is equipment to be thoroughly ventilated?			
3. Is equipment to be tested for gas to ensure it is gas free?			
4. Is equipment to be isolated and tagged?			
5. Is equipment to be inspected to ensure all parts are free from potential hazards?			
6. Are atmospheric conditions and wind direction to be checked to ensure safe working conditions?			
7. Should anyone be advised? (e.g. finishing dept. must check with polyethylene dept.)			
8. Is protection required for sewer basins?			
9. Is a special watchman needed?			
10. Should fire protection be on hand?			
11. Are electrical switches to be locked in the "off" position?			
12. Should special protective equipment be used?			

For isolating and testing not done by the Permit Issuer see: _____

REMARKS: Special precautions, etc.

Permit issued by: _____ Department: _____
(Signature)

NO WORK TO BE CARRIED OUT UNDER THIS PERMIT UNTIL ALL THE INDICATED "REQUIRED" ITEMS HAVE BEEN DONE

IT IS THE RESPONSIBILITY OF THE PERMIT ISSUER OR DESIGNATE TO CHECK CONDITIONS DURING PROGRESS OF THE WORK

Work completed (Including Clean-up) Time: _____ Signature: _____

Work Not Completed: Time: _____ Signature: _____

RETURN THIS PERMIT WHEN WORK IS COMPLETED OR AT END OF SHIFT IF WORK IS NOT COMPLETED

Contact us

OHS Contact Centre

(Complaints, questions, reporting serious incidents)

Anywhere in Alberta

- 1-866-415-8690

Edmonton & surrounding area

- 780-415-8690

Deaf or hearing impaired

- 1-800-232-7215 (Alberta)
- 780-427-9999 (Edmonton)

OHS Online Incident Reporting

(Potentially serious, mine or mine site incidents)

oirportal.labour.alberta.ca/pre-screening/

Website

alberta.ca/OHS

Get copies of the *OHS Act*, Regulations and Code

Alberta Queen's Printer

qp.gov.ab.ca

Occupational Health and Safety

alberta.ca/ohs-act-regulation-code.aspx

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