

1 **Re Page B-166:**

2 Q. Provide a copy of the Work Protection Code.

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5 A. A copy of the Work Protection Code is attached.



WORK PROTECTION CODE

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2000 WORK PROTECTION CODE

FORWARD

This revised issue of the Work Protection Code supersedes all previous issues. Wherever applicable to your job at Newfoundland and Labrador Hydro, the rules set down herein must be observed at all times.

One of the prime objectives of Newfoundland and Labrador Hydro is the creation of a safe work environment in which hazards can either be eliminated or controlled. This revised issue of the Work Protection Code has been developed to help achieve this goal. It consists of important principles which have evolved through years of hands on experience and when combined with appropriate work practices will avert personal injury or property damage.

You will find that the Code is both highly specific and uncompromising, but this is essential if the Code is to succeed in its ultimate goal, that is, to establish conditions which when combined with appropriate work practices, procedures and work methods, will provide you and your fellow employees with a safe work area. Careful study and review of this document is essential for proper implementation and utilization of the Code. For your safety - and for the safety of those around you - it is imperative that the provisions of the Code be adhered to throughout the Corporation.

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President – IBEW LOCAL 1615

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Vice President – Regulated Operations

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DEFINITIONS

The following are definitions of terms that are used frequently and have specific meanings within the context of the Work Protection Code.

Where the definition of one term contains references to other definitions, these are printed in SMALL CAPITALS. In the main text of this book, definitions are also provided for each term the first time it appears in each section.

Careful study of this section is recommended, since the terms described below are critical to understanding the provisions of the Work Protection Code.

ALIVE

Capable of delivering energy by reason of being **Dynamically alive:** Connected (that is, not ISOLATED) to a source of energy, such as an electrical generator, storage battery, air compressor, oil or water pump, steam boiler, or furnace.

or

Charged: ISOLATED but not DE-ENERGIZED, containing stored energy. Examples include a compressed spring or a charged electrical capacitor. An object may also be charged because it is suspended (potential energy) or it is in motion (kinetic energy). Electrical equipment not physically connected to a source of energy may still be charged through induction because it is near live electrical apparatus. A tank or pipe may be charged if it contains substances at greater or less than atmospheric pressure, or if those substances are poisonous, contaminated or explosive.

APPLICANT	A person who applies for a WORK PERMIT or CONDITION GUARANTEE.
APPLICATION	A PC1 form used to apply for a WORK PERMIT or CONDITION GUARANTEE.
APPROVED WORK PRACTICE	Procedures approved for use in Newfoundland and Labrador Hydro. Within the Code, Approved Work Practices will be limited to those specific procedures used to control or minimize dynamic energy or charged condition not eliminated by the Work Protection.
AUTHORITY	<p>Person who occupies a position with specific responsibilities. Authorities are classified as</p> <p>Controlling: Responsible for performing, directing or authorizing changes in condition or position of the specific apparatus or devices.</p> <p>Issuing/Establishing: Responsible for preparing, establishing, making effective and terminating WORK PROTECTIONS and CONDITION GUARANTEES.</p>
CODE	The Corporate Work Protection Code.
CONDITION GUARANTEE	A guarantee issued in support of a WORK PROTECTION (other than TRADES-ADMINISTERED Red Tag (PC10A) Work Protection) certifying that an isolated or isolated and de-energized condition exists at points under the control of the issuer of the Condition Guarantee. Requirements for specific types of Condition Guarantees are as follows:

Operator Administered Condition Guarantee: a PC1 application form, a Condition Guarantee PC2 form and an ORDER-TO-OPERATE PC17A form.

Trades Administered Condition Guarantee: an ORDER-TO-OPERATE PC17B form or a RED TAG CONDITION GUARANTEE PC10C tag.

DE-ENERGIZED Electrical apparatus: Where energy has been discharged through a connection to an effective ground potential.

Mechanical apparatus: Where hazards due to temperature, pressure, chemical substances, gases, radiation and motion have been minimized or, where practical, eliminated by such measures as

- operation of valves, gates and dampers
- opening pipes or equipment to atmosphere
- purging, ventilating or cooling
- applying brakes and blocking motion
- discharging loaded springs

GUARANTEED DEVICE A device tagged with a PC3, PC10A, or PC10C tag.

HOLDER... PROSPECTIVE HOLDER
A QUALIFIED person who intends to hold Work Protection.

WORK PERMIT HOLDER

A PROSPECTIVE HOLDER who has accepted the conditions of issuance of the Work Protection.

HOLDER OF RECORD

A Holder of a WORK PROTECTION who has working and testing rights and responsibilities.

ISOLATED

Separated from sources of dynamic energy. Typically, apparatus is isolated by means of devices such as a valve or an electrical switch.

**LINE
LOCATIONS**

That equipment which lies outside of station boundaries.

**NOMINAL
VOLTAGE**

The normal operating voltage measured phase phase on multi-phase equipment **or** phase to neutral on single-phase equipment.

**OPERATING
CONTROL**

A position with the authority to perform, direct or authorize the operation of all devices under its control.

QUALIFIED

A person judged by his or her supervisor as having demonstrated competency and familiarity with rules, procedures, apparatus, equipment, the Work Protection Code and hazards associated with the work.

**RECORDING
ON**

The acceptance of all working and testing rights and responsibilities.

**RECORDING
OFF**

The relinquishing of all working and testing rights and responsibilities.

SAFE WORK AREA	<p>A specifically identified area for work, where all known hazards have been eliminated or are controlled.</p> <p><i>Note:</i> The Work Protection Code is only one component in providing a safe work area.</p>
SURRENDER	<p>The relinquishing of guaranteed conditions by a HOLDER OF RECORD or by a HOLDER of a CONDITION GUARANTEE.</p>
TERMINATION	<p>The relinquishing of guaranteed conditions by the ISSUING AUTHORITY.</p>
TEST	<p>The operation of a GUARANTEED DEVICE or the introduction of energy into the SAFE WORK AREA to check, prove, or facilitate the work process. Examples of facilitating the work process include measures such as</p> <ul style="list-style-type: none">● filling a boiler with water● establishing hydrogen seals● placing a turbine on turning gear
VERIFICATION	<p>The inspection of GUARANTEED DEVICES listed on an ORDER-TO-OPERATE to ensure that</p> <ul style="list-style-type: none">● the correct device has been guaranteed● the device is guaranteed in the correct position as long as such inspection does not require that the guaranteed condition be altered.

WORK GROUP An independent group performing work/tests under a Work Protection. This group may consist of persons from several trades or work functions. At any given time, however, the group can have only one HOLDER OF RECORD.

WORK PROTECTION A guarantee that an ISOLATED, or ISOLATED and DE-ENERGIZED, condition has been established for worker protection and will continue to exist, except for authorized tests.

There are several types of Work Protection. These are listed below, with the appropriate form or tag numbers shown in parentheses. In all cases, a Work Protection includes all necessary CONDITION GUARANTEES.

Work Permit (PC1, PC2, PC17A)

An Operator-Administered Work Protection using a PC1 APPLICATION form, a Work Permit PC2 form and an ORDER-TO-OPERATE PC17A form.

Test Operations Under a Work Permit (PC14, PC17A)

Forms used in conjunction with a Work Permit to authorize a test condition and restore to a pretest condition.

Order-to-Operate Work Protection (PC17B)

A Trades-Administered Work Protection using an ORDER-TO-OPERATE PC17B form.

Red Tag Work Protection (PC10A)

A Work Protection using a PC10A tag(s).

SECTION 1 GENERAL

1.0 PRINCIPLES

1.0.1 Creating a safe working environment

When you work on Newfoundland and Labrador Hydro equipment, safety must be a primary concern. There are two alternatives for providing worker safety:

- (a) using APPROVED WORK PRACTICES¹; or
- (b) using approved work practices in combination with procedures described in this manual for
 - ISOLATING² equipment,
 - DE-ENERGIZING³ isolated equipment, or testing equipment for isolation

¹ Procedures approved for use in Newfoundland and Labrador Hydro. Within the Code, Approved work Practices will be limited to those specific procedures used to control or minimize dynamic energy or charged condition not eliminated by the Work Protection.

² Separating from the source of dynamic energy (e.g. electrical generator, compressor, steam boiler).

³ Grounding, in the case of electrical equipment; otherwise, minimizing or eliminating hazards from heat, pressure, radiation, or other forms of energy. See Definitions section for further details.

1.0.2 Applying the Work Protection Code

Complete isolation and de-energization of isolated equipment are the first priorities for creating a SAFE WORK AREA⁴. When worker safety depends on isolating (or isolating and de-energizing) equipment, the rules and procedures of the Work Protection Code must be followed.

1.0.3 Rules for the use of isolating devices and permanently installed de-energizing devices

1.0.3.1 Isolating devices and permanently installed de-energizing devices are used to provide safe working conditions for

- Those personnel within the Safe Work Area, and
- Those outside the Safe Work Area while testing is being performed within it.

All such devices must be in the proper position to ensure protection.

1.0.3.2 Where practicable, the devices must be locked or blocked in the required position.

1.0.3.3 No change whatsoever shall be made in the position of a guaranteed isolating or de-energizing device except

⁴ A specifically identified area for work, where all known hazards have been eliminated or are controlled.

- as authorized by a Test Operations Under a Work Permit (PC14), or
- by an Order-to-Operate (PC17B) issued for testing by the Holder of Record of an Order-to-Operate Work Protection.

1.0.3.4 The devices will require the appropriate **Do Not Operate** tag for Work Protection. However, tagging is optional for

- (a) Machine tools or transport and work equipment, when controlled and isolated at the immediate work location.
- (b) Equipment that normally operates at less than 350 volts NOMINAL⁵, 207 kPa (30 psig), or 80°C (175°F), where such equipment is controlled and isolated at the immediate work location.
- (c) An overhead conductor, when the jumper of an isolating device is completely removed, and the isolating point is controlled from the immediate location where work is in progress.
- (d) At line locations, for work on pole-, structure- or tower-mounted equipment; the tagging of devices at the work pole, structure or tower is not required. Note that tag(s) must be used at poles or structures supporting electronic three-phase oil circuit reclosers.

⁵

The normal operating voltage measured *phase to phase* on multi-phase equipment or *phase to neutral* on single-phase equipment.

(e) At Stations, for work on instrumentation when

- no more than three isolating devices are required
- All isolating devices are within arm's reach of the worker
- a maintenance procedure, approved by the process described in rule 1.8, is followed.

1.0.4 Use of a Guaranteed Device requires Work Protection

If a GUARANTEED DEVICE⁶ is required for safe working conditions, a Work Protection must be established.

1.0.5 Administration of Work Protection

Work Protection may be Operator-Administered or Trades-Administered.

⁶ A device tagged with a PC3, PC10A, or PC10C tag.

1.0.5.1 Operator-Administered WORK PERMIT⁷ or CONDITION GUARANTEE⁸

- (a) An Operator-Administered Work Permit or Condition Guarantee can be issued when at least one of the required guaranteed devices is under the control of the ISSUING AUTHORITY⁹.
- (b) When the required guaranteed devices are under the control of more than one authority, one of these authorities - usually the one best able to communicate with the PROSPECTIVE HOLDER¹⁰ - is responsible for issuing the Work Permit. The Issuing Authority of the Work Permit is responsible for obtaining Condition Guarantees from each of the other Controlling Authorities.
- (c) The Issuing Authority of a Condition Guarantee is responsible for obtaining any necessary supporting Guarantees.

⁷ An Operator-Administered Work Protection using a PC1 application form, a Work Permit PC2 form and Order-to-Operate PC17A form which guarantees isolation or isolation and de-energization for work.

⁸ A guarantee issued in support of a Work Protection. (See definitions section for further information).

⁹ The person(s) with designated authority and responsibility for preparing, establishing, making effective and terminating Work Protections and Condition Guarantees.

¹⁰ A qualified person who intends to hold Work Protection.

1.0.5.2 Trades-Administered Work Protection

- (a) The use of a Trades-Administered Work Protection on operator-controlled equipment must always adhere to Regional/Plant instructions.
- (b) A Trades-Administered Work Protection may be established, regardless of the number of CONTROLLING AUTHORITIES¹¹. There are two types:

Red Tag Work Protection.¹² This can be established on the condition that all required guaranteed devices are checked and tagged by the Prospective Holder. If the Controlling Authority deems it necessary, he or she may select a qualified person who will perform the operations listed on the PC10A(s) and hang the tag(s). The Prospective Holder will check the isolation and make the Red Tag Work Protection effective.

Red Tag Work Protection is limited to the following:

- in line locations requiring the use of only one guaranteed device

¹¹ The person(s) who, by virtue of their position, are responsible for performing, directing or authorizing changes in the condition or position of apparatus or devices within their control.

¹² A PC10A tag guaranteeing isolation or isolation and de-energization for work.

- when working on station equipment, as authorized by the Prospective Holder's supervisor and Controlling Authority, where the use of up to three guaranteed devices is required.
- when working on machine tools or transport and work equipment involving the use of up to three guaranteed devices
- when testing by operation of a guaranteed device is not required.

Order-to-Operate Work Protection¹³ can be established when, as a Prospective Holder, you (or a member of your work group) have checked and tagged at least one guaranteed device. You are responsible for getting any necessary Condition Guarantees from the other Controlling Authorities.

1.0.6 Rules for issuing and accepting Condition Guarantees when dealing with a foreign (non Newfoundland and Labrador Hydro) organization

In some cases, a work Protection will require one or more guaranteed devices that are controlled by "foreign" organizations". When accepting or issuing Condition Guarantees involving foreign organizations, you must adhere to the same principles that govern your use of Condition Guarantees for Newfoundland and Labrador Hydro-controlled devices (see section 4 for more details).

¹³ Work Protection using an Order-to-Operate PC17B form which guarantees isolation or isolation and de-energization for work

Condition Guarantees may be

- (a) issued to a foreign organization, its agents or contractors, or
- (b) Accepted from a foreign organization, either verbally or in writing, provided that you obtain approval from the proper Newfoundland and Labrador Hydro authority.

When there is reason to believe that a Guarantee from a foreign organization may not be reliable, the required non-Hydro devices must be inspected and tagged by Newfoundland and Labrador Hydro staff. If necessary, Newfoundland and Labrador Hydro staff must monitor these devices while work is in progress.

1.1 GENERAL CHARACTERISTICS OF WORK PROTECTION

1.1.1 Defining a Safe Work Area

Since the safety provided by a Work Protection exists only within the boundaries of the designated Safe Work Area, it is essential that the Holder of Record - and his or her work group - has a clear understanding of

- The location of the Safe Work Area boundaries
- The proximity (and potential hazard) of any live apparatus adjacent to the Area boundaries.

1.1.2 When Work Protection is established or issued

Work Protection is established for

- (a) Any purpose associated with work - such as working clearance, tests, repairs, changes, equipment replacement or combinations thereof.
- (b) specified work, tests, and/or clearance on specified apparatus.

1.1.3 Work Protections must be independent of each other

- (a) All guaranteed devices required for particular work must be covered under one Work Protection. The apparent protection afforded by other Work Protections must never be relied upon.
- (b) Similarly, devices specified on a Work Protection as apparatus on which work is authorized must not be used as guaranteed devices for another Work Protection.

1.1.4 Work Protection coverage is highly specific

A Work Protection applies only to those individuals in a Holder of Record's work group. Under no circumstances can it be considered to protect anyone outside that group.

1.1.5 Procedures for performing additional work not specifically authorized by a Work Protection

You may perform work or tests other than those authorized under a Work Protection, but only if

- (a) It is safe to do so, and
- (b) You receive approval from the Controlling Authority before starting the work.
- (c) In the case of a **Work Permit**, you submit a PC1 detailing the additional work. The Work Permit must be checked by two QUALIFIED¹⁴ people to ensure it satisfies the requirements of the PC1 and all hazards have been addressed.
- (d) For a **PC17B** (Order-to-Operate Work Protection), The work to be done must be documented on an additional PC17B. Two qualified people must check the Work Protection to confirm that it will provide the required Safe Work Area for the additional work, and all hazards have been addressed.

1.1.6 Expanding an Operator Administered Work Protection

A work permit can be expanded only once as follows:

- PC1 submitted for extra work requiring additional guaranteed devices (late PC1).
- PC1 checked by two qualified people.

¹⁴ A person judged by his or her supervisor as having demonstrated competency and familiarity with rules, procedures, apparatus, equipment, the Work Protection Code and hazards associated with the work.

- Issuing Authority to notify all permit holders of the late PC1 and receive their permission to expand.
- PC17A prepared for extra guaranteed devices required, isolation and de-energizing completed.
- All Holders of Record recorded off.
- Complete the “Expansion” section of the PC2.
- Permit Holders again reminded of, and if deemed necessary, will observe the new guaranteed devices before recorded on as Holders of Record.
- Expansion issued by the Issuing Authority.

1.1.7 Requirements for working on the isolated portion of a guaranteed isolating device

If the guaranteed isolating device is not a guaranteed device for another Work Protection, you may work on the isolated portion of that device, subject to the following conditions:

- (a) In the case of guaranteed **electrical devices**, work on the isolated portion requires the approval of the Holder's supervisor, as well as adherence to electrical clearances as outlined in the *Health and Safety Program*.
- (b) In the case of guaranteed **mechanical devices**, work on the isolated portion of the device must be carried out in accordance with Regional/Plant Instructions.

1.2 USING DO-NOT-OPERATE TAGS FOR WORK PROTECTIONS OR CONDITION GUARANTEES

1.2.1 Guaranteed devices must be tagged for Work Protection

Where Do-Not-Operate tags are required for Work Protections or Condition Guarantees, attach the tags in a conspicuous place, clearly indicating that operation of the tagged device is prohibited. A tag must be placed on each guaranteed device for each Work Protection or Condition Guarantee.

When attaching tags to any potentially alive part of an electrical device, you must use

- A switch stick,
- Other approved insulated tool, or
- Rubber protective equipment within its approved voltage rating. In the case of control, meter, and relay circuit - as well as 120- and 240-volt circuits - you may attach the tag by hand.

1.2.2 Where to use different types of Do-Not-Operate tags

(a) **Yellow tags (PC3)** must be used for

- Operator-Administered Work Permits
- Operator-Administered Condition Guarantees

- Trades-Administered Order-to-Operate Work Protections
 - Trades-Administered Order-to-Operate Condition Guarantee
- (b) **Red tags (PC10A)** must be used for
- Red Tag Work Protection
- (c) **Red tags (PC10C)** must be used for
- Red Tag Condition Guarantees

1.2.3 Rules for series-numbered PC3 tags

- (a) When using PC3 tags, it is desirable to have only one series number used for each Work Protection or Condition Guarantee. However, if there is a substantial number of devices to be tagged, you may find it necessary to use two or more series numbers.
- (b) In all cases, the series number(s) used for a Work Protection or Condition Guarantee must be reserved exclusively for that Work Protection or Condition Guarantee.

Note: Special care must be taken to prevent the use of duplicate tag numbers when two or more authorities are administering work protection in the same work area.

1.2.4 Requirements for attaching tags

- (a) In order to avoid a hazard to personnel, equipment or service security, always use a non-conducting material when attaching tags to guaranteed devices.
- (b) Tags exposed to an adverse environment should be protected.
- (c) To prohibit the operation of all devices on a pole, structure, or tower in line locations, a belted tag hanger with a proper tag (PC3, PC10A, PC10C) may be used. The belt must be attached to the line pole, structure or tower in a conspicuous location. Climbing, operating, or working above the level of the belt is prohibited.

Note: For the purposes of the Code, all devices on the pole, structure or tower are classed as one guaranteed device when a belted tag hanger is used as described above. If belted tag hanger is not used each phase of the device must be tagged. (“Order to Operate” forms must indicate that each phase is operated ie. A, B and C.)

- (d) To prohibit the operation of all single phase devices on a pole, structure or tower in other than line locations, approved work protection barrier tape, with proper tags attached (PC3, PC10A, PC10C) may be used. The tape must be displayed in a conspicuous manner. Operation of all devices inside the barricaded area is prohibited.

Note: For the purposes of the Code, all devices on the pole structure or tower are classed as one guaranteed device when barrier tape is used as described above. If barrier tape is not used each phase of the device must be tagged. (“Order to Operate” forms must indicate that each phase is operated ie. A, B and C.)

- (e) Barrier tape will be flourescent, orange color, minimum 7.62 cm wide, with block lettering, “Personnel Protection, Do Not Operate”, inscribed.

1.3 ISOLATING FOR WORKER SAFETY

1.3.1 Rules governing the use of electrical devices for isolating apparatus

- (a) To ensure maximum safety, electrical devices used for isolation should have visible contacts, so that the position of the device can be positively determined. All phases of the device must be inspected to make sure they are open.
- (b) Where the use of switches with concealed contacts is unavoidable, isolation must be proven by a qualified person before work begins. The isolation must be proven by an approved potential test indicator, an approved voltmeter, by the position of port shutters, or by installing a grounding device. When no potential is present on the supply side of the isolating device, an approved method to check continuity must be used.

Note: Temporary de-energizing measures must not be used until after the Work Protection is issued

- (c) If the steps outlined in 1.31(a) or 1.31(b) to prove isolation cannot be completed before the Work Permit is issued, a warning to this effect must appear in the *Safety Precautions and Instructions* section of the Work Permit.

1.3.2 Rules governing the use of electrically, mechanically, or pneumatically operated devices for isolation

When electrically, mechanically, or pneumatically operated devices are used as a guaranteed device, the power source must be isolated and, when necessary to maintain the position of the device, one of the following measures must be taken to ensure worker safety:

- ✓ Lock or, failing that, securely block the device in the required position, or
- ✓ Disable the device by removing a portion of its operating mechanism.

1.3.3 Isolating mechanical apparatus

For mechanical apparatus - including prime movers; steam, air, gas and oil lines; penstocks; boilers; and receivers for containing gases and liquids - isolation must be achieved by closing valves or gates, placing stoplogs, blanks or mechanical blocks; or by using other protective devices suitable to the task.

1.3.4 Using an Approved Work Practice to control an isolation point

Occasionally, an isolating point required under a Work Permit will be controlled by an Approved Work Practice. In this case, the Issuing Authority must provide details in the *Safety Precautions and Instructions* section of the Work Permit.

Approved Work Practice(s) to be used must be fully documented (see rule 1.8, following).

1.4 DE-ENERGIZING ISOLATED APPARATUS FOR WORK SAFETY

1.4.1 Objectives of de-energizing isolated apparatus

There are three principal objectives of de-energizing isolated apparatus:

- (a) To prove isolation
- (b) To remove any hazard from a residual charge in the apparatus once it has been isolated
- (c) To ensure that the apparatus remains de-energized during the work.

1.4.2 Requirements for de-energizing isolated apparatus

- (a) If worker safety depends on the isolation of apparatus, whether or not a Work Protection is required, the apparatus must be de-energized before the work begins.

- (b) De-energizing must be maintained throughout the work period except for periods of authorized testing.
- (c) Grounds must be applied in accordance with procedures in the Safety and Health Program.

1.4.2.1 Testing for isolation as an alternative to grounding

Testing for isolation may be used as an alternative to grounding under any of the following conditions:

- (a) Where apparatus operates at **600 volts** nominal or less.
- (b) Where station apparatus is not subject to an induced or static charge, or if grounding is unsafe or not feasible.

1.4.2.2 If the apparatus is re-energized for any purpose during the course of the work, de-energizing or testing for isolation must be repeated each time isolation is established.

1.4.3 Allocating responsibility between authorities when de-energizing under a Work Protection

The authority responsible for issuing or establishing a Work Protection or Condition Guarantee must place in the de-energizing position those permanently installed de-energizing devices which are available and which are required, considering the nature of the work/tests.

When more than one permanently installed de-energizing device is available, and each is capable of providing the necessary level of protection, only one need be used as a guaranteed item to provide worker safety.

If permanently installed devices do not provide the de-energizing condition required, it becomes the responsibility of the Holder of Record to ensure that the necessary additional de-energizing operations have been performed once the Work Protection is issued, and before work commences.

Where it is necessary to perform additional de-energizing operations under a Work Permit, this requirement must be entered in the *Safety Precautions and Instructions* section of the Work Permit.

1.4.4 De-energizing with permanently installed devices

The de-energizing of apparatus may sometimes be dependent upon the position of a device located between the apparatus and a guaranteed permanently-installed de-energizing device. In this case, the position of the intervening device must be guaranteed in the proper position to provide continuity of de-energizing.

1.4.5 Procedures for de-energizing with temporary devices

- (a) If a Holder of Record is not qualified to perform the necessary de-energizing operations, a qualified person must be selected to do it.

- (b) When the de-energizing of apparatus is dependent upon the position of a device located between the apparatus and a temporary de-energizing device, the position of the intervening device must be guaranteed in the proper position to provide continuity of de-energizing.
- (c) To ensure that temporary grounding devices are not overlooked, each must be highly visible or identified by a marker or flag.
- (d) A record of the number of temporary de-energizing devices used must be maintained on an approved form. Maintaining this record is the responsibility of those Holders of Record who require the devices.

1.5 SPECIAL TRANSFER OF WORK PROTECTION

1.5.1 Holder of Record unable to continue role

Where a Holder of Record is unable to continue with his or her responsibilities (see Section 2.5), the following procedures must be observed:

- If a Holder of Record is unable to continue to exercise his or her responsibilities due to illness, injury, or other cause, the work group must cease work.

- In the case of a Trades-Administered Work Protection, a qualified substitute may be appointed by the work group's supervisor to SURRENDER¹⁵ for the absent Holder of Record.
- In the case of an Operator-Administered Work Permit, a qualified substitute must be appointed by the work group's supervisor to record the absent holder off as Holder of Record.

1.5.2 If the work or tests are to continue

If the work or tests are to continue, a qualified person must take the necessary steps to become a new Holder of Record for the work group.

1.6 RECORD OF WORK PROTECTIONS AND CONDITION GUARANTEES

1.6.1 Operator's Diary

The operator's diary must document the following:

1.6.1.1 Work Permits, and Condition Guarantees

The diary must provide details of

- ✓ issuance and work to be done

¹⁵ The relinquishing of guaranteed conditions by a Holder of Record or by a Holder of a Condition Guarantee.

- ✓ all tests performed
- ✓ termination of Work Permits or Condition Guarantees

1.6.1.2 Red Tag or Trades-Administered Work Protections and Condition Guarantees

The diary must provide details of

- ✓ the type of protection, the holders name, equipment involved, and in general the work to be done
- ✓ the start and end of the work daily
- ✓ the release of equipment by the trades group following surrender of the work protection.

1.6.2 Construction record

At construction projects, a record must be maintained of Work Protections and Condition Guarantees in effect.

1.7 WORK PROTECTION CODE FORMS

1.7.1 All Work Protection Code forms that are prepared but not issued must be marked "Defective" or "Not used" with a notation as to why it was not issued.

1.7.2 All prepared Work Protection forms, whether used or not, must be retained for analysis. The retention period must be at least one year.

1.8 APPROVED WORK PRACTICES

Approved Work Practices used to control a source of dynamic energy not eliminated by the Work Protection must be fully documented and approved in writing by the Regional/Plant Manager.

- 1.8.1** A copy of all Approved Work Practices must be submitted to the Appropriate Controlling Authority and the Chairperson of the Working Code Committee.

1.9 AUTHORIZED DEPARTURE FROM THE CODE

If it should become necessary to depart from any portion of the Code for a justifiable reason, this departure must be fully documented and result in a level of safety equal to or greater than that provided by the Code.

Departures from the Code must be authorized by the Regional/Plant Manager.

Authorization is required for each instance. The Manager must send a report fully detailing the departure, to the Chairperson of the Working Code Committee. This report (with comments) will be sent to the Chairperson of the Code Advisory Committee by the Chairperson of the Working Code Committee. If an authorized departure from the Code is required for more than one occasion, the Chairperson of the Working Code Committee and the manager (or manager's representative) at the work location requiring the departure, will document the proper procedure. The procedure will remain in effect, until the Code is revised.

SECTION 2

RESPONSIBILITIES

2.0 INTRODUCTION

Work Protection can only be effective in providing safety if everyone on the job understands and executes their responsibilities under the Code. These roles and responsibilities are explained in the following pages of this section.

2.1 CONTROLLING AUTHORITY

2.1.1 The Controlling Authority is that person who, by virtue of his or her position within Newfoundland and Labrador Hydro, is responsible for the control of specific apparatus and associated devices. This responsibility includes

- ✓ performing
- ✓ directing, or
- ✓ authorizing

changes in the condition or position of the apparatus or devices.

2.1.2 The Controlling Authority of certain equipment, such as shop equipment, machine tools, and transport and work equipment - is assigned in accordance with regional instructions.

2.1.3 Any time you require a Work Protection, the request must be submitted to the Controlling Authority.

2.2 APPLICANT FOR A WORK PERMIT

2.2.1 The Applicant for a WORK PERMIT¹ is responsible for providing the Controlling Authority with the information needed to establish the boundary of the SAFE WORK AREA² where the authorized work/tests will take place. This information must identify the following:

- (a) Any apparatus that must be ISOLATED³ or isolated and DE-ENERGIZED⁴ in order to perform the work or tests
- (b) Apparatus that must also be isolated and/or de-energized to provide working clearance
- (c) The work or tests to be performed

¹ An Operator-Administered Work Protection using a PC1 application form, a Work Permit PC2 form and an order-to-operate PC17A form which guarantees isolation or isolation and de-energization for work.

² A specifically identified area for work, where all known hazards have been eliminated or are controlled.

³ Separated from the source of dynamic energy (e.g. electrical generator, compressor, steam boiler).

⁴ Grounded, in the case of electrical equipment; otherwise, where hazards from heat, pressure, radiation, or other forms of energy have been minimized or eliminated.

- (d) Those hazards within the safe work area that are to be controlled by the use of APPROVED WORK PRACTICES⁵ - including hazards that may be present due to neighbouring live apparatus.

Note: When applying for a Work Permit, you should only include those hazards that are specifically relevant to the Work Protection. Hazards that you would normally control to ensure a safe work environment - for example, asbestos, falling, slipping, noise, radiation - should not be included.

2.3 Issuing/Establishing Authority

2.3.1 The Issuing/Establishing authority is that person responsible for

- ✓ coordinating the actions of those preparing, checking, and establishing the Work Protection or CONDITION GUARANTEE⁶
- ✓ ensuring that the Work Protection or Condition Guarantee will provide the condition required for worker safety
- ✓ obtaining all necessary supporting guarantees; and
- ✓ issuing and terminating the Work Protection or Condition Guarantee.

⁵ Procedures approved for use in Newfoundland and Labrador Hydro. Within the Code, Approved Work Practices will be limited to those specific procedures used to control or minimize dynamic energy or charged condition not eliminated by the Work Protection.

⁶ A guarantee issued in support of a Work Protection (See Definitions section for further information).

2.3.2 In cases where more than one authority is involved, it is the Issuing/Establishing Authority of the Work Protection who must coordinate the actions of all other authorities. Ultimately, he or she is responsible for ensuring that, taken together, these actions comply with the intent of the Code and will fulfill the requirements of the Work Protection.

2.3.3 If the Issuing Authority is aware of hazards not eliminated by the Work Permit, he or she must document them in the *Safety Precautions and Instructions* section of the Work Permit.

Note: Hazards noted on the Work Permit forms should include only those that are specifically relevant to the Work Protection. Hazards normally controlled to ensure a safe work environment - for example, asbestos, falling, slipping, noise, radiation - would not normally be included.

2.3.4 If, on the PC1 form there are identified hazards that will not be eliminated by the Work Permit, these must be noted in the *Safety Precautions and Instructions* section of the PC2 form.

2.3.5 The hazards identified in the *Safety Precautions and Instructions* on the PC2 form may be further described in supplementary documents such as

- Vessel Entry Permits
- Approved Work Practices

2.4 PROSPECTIVE HOLDER

2.4.1 The Prospective Holder is that person who intends to accept a Work Protection, but has not yet done so. The Prospective Holder is responsible for ensuring that

- (a) the Work Protection will provide the necessary guaranteed condition for the work group to perform their tasks; and
- (b) no member of the work group commences work on the apparatus concerned until he or she becomes a Holder of Record.

2.4.2 For an Order-to-Operate Work Protection (PC17B), the Prospective Holder must establish the required conditions for the Work Protection. This includes getting any necessary Condition Guarantee(s).

2.4.3 For a **Red Tag Protection**, the Prospective Holder is responsible for

- (a) ensuring that all required isolation or isolation and de-energization has been performed; and
- (b) ensuring the placement of the Red Tags (PC10A).

2.5 PERMIT HOLDER

2.5.1 The Permit Holder is that person who has accepted the terms of the Work Protection but has no working rights. Prior to recording on as a Holder of Record each time, the Permit Holder must

- (a) make sure that the work group does not start work until working rights have been established,
- (b) ensure that the Work Protection will provide the necessary guaranteed condition for the work group to perform their tasks,
- (c) assess the effect of tests on the safety of the work group.

2.6 HOLDER OF RECORD

2.6.1 The Holder of Record is responsible for

- (a) ensuring that all people in his or her work group are protected from the viewpoint of the Code
- (b) providing for the safety of anyone who could be jeopardized by his or her tests
- (c) the use of Approved Work Practices to protect against hazards associated with but not eliminated by the Work Protection.

Note: The Holder of Record must ensure that he or she does not hold more Work Protections than will allow for the fulfillment of his or her responsibilities.

2.6.2 The first time you become a Holder of Record of any Work Protection and **prior to starting work**, you must take the following steps:

- (a) Inform the work group of
 - ✓ the boundaries of the Safe Work Area(s)
 - ✓ the apparatus within the Safe Work Area(s) on which work is authorized
 - ✓ the actual work and/or tests that are authorized
 - ✓ the safeguards provided against the danger of neighbouring live apparatus and precautions that must be observed when working near this apparatus
 - ✓ any Approved Work Practices required to control the hazards not eliminated by the Work Protection
 - ✓ all the Safety Precautions and Instructions listed by the Issuing Authority
- (b) Accompany the work group to the Safe Work Area and clearly indicate
 - ✓ the boundaries of the Safe Work Area

- ✓ the apparatus within the Safe Work Area on which work is authorized
 - ✓ the safeguards provided against the danger of neighbouring apparatus and precautions that must be observed when working near this apparatus
- (c) Ensure that, where necessary, all additional de-energizing has been performed
- (d) If necessary, ensure that guards and warning signs are present to indicate the Safe Work Area(s) and restrict access to authorized people only.

2.6.3

Each day that work is in progress, the Holder of Record is responsible for

- (a) informing the work group - before that day's work commences - of any changes that could affect their safe work area. For example,
- ✓ the presence of any additional work groups, or
 - ✓ additional work or tests that may be in progress.

This information must be provided to the work group at the Safe Work Area.

- (b) authorizing work when the apparatus has been de-energized or declared safe to work upon
- (c) maintaining a list of people in the work group

- (d) maintaining a means of communication with, and satisfactory to
 - ✓ the Controlling Authority, and
 - ✓ the members of the work group.
- (e) ensuring that he or she is readily available to assist the work group in person with any Code related safety aspect of the job; such availability is defined as being
 - no more than 1 hour away in stations, or
 - in line locations, within the vicinity of the line where work is in progress
- (f) keeping the work group informed of any changes affecting the safe work area, including tests
- (g) monitoring, by regular visits to the safe work area(s),
 - ✓ each work group member's location
 - ✓ any Approved Work Practices being used, and
 - ✓ the integrity of any temporary de-energizing devices, signs, and physical barriers

Note: "Regular visits" are defined as a minimum of one visit to the safe work area every four hours at a station, and once per day at line locations; the duration of the visit will depend on the nature of the work or tests being performed.

- (h) ensuring that - before recording off as Holder of Record - every member of the work group is clear and has been instructed to stay clear of the apparatus.

2.6.4 Before SURRENDER⁷, the Holder of Record must

- (a) ensure that all members of the work group know the Work Protection is being surrendered, and will therefore stay clear of the apparatus; and
- (b) report the status of the equipment in the work area to the Controlling/ Issuing/Establishing Authority, including whether or not temporary de-energizing devices have been removed.

⁷

The relinquishing of guaranteed conditions by a Holder of Record or by a holder of a Condition Guarantee.

SECTION 3

OPERATOR-ADMINISTERED WORK PERMITS

3.0 HOW TO APPLY FOR A WORK PERMIT

The procedure involved in applying for a WORK PERMIT¹ varies according to where you are located when making the application

- (a) **If you are at the controlling location**, you must
 - ✓ complete the PC1 form
 - ✓ print your name and validate by initialling
 - ✓ leave the original with the CONTROLLING AUTHORITY².
- (b) **If not at the controlling location**, you must follow the same procedure for completing the PC1 form, except that you will need to mail it or otherwise communicate the information to the Controlling Authority.

¹ An Operator-Administered Work Protection using a PC1 application form, a Work Permit PC 2 form and an Order-to-Operate PC17A form.

² The person(s) who, by virtue of their position, are responsible for performing, directing or authorizing changes in the condition or position of apparatus or devices within their control.

The information may be communicated by

- telephone
- radio, or
- fax

If communicated by telephone or radio, the authority accepting the application will record the information on a PC1 form, verify the information on the PC1 with you, and enter your name and initial it.

If communicated by fax, the authority accepting the faxed application will verify the information on the PC1 form and accept it by printing his or her name in the “received by” space and initialling.

(c) Who will be issuing the Permit?

If the Work Permit is to be issued by other than the Controlling Authority, the Controlling Authority must refer the application to the ISSUING AUTHORITY³.

3.0.1 Plan ahead

Make sure that your application for a Work Permit is submitted to the Controlling Authority sufficiently in advance to allow for any planning, co-ordination with other work, or arrangements for apparatus outages that may be necessary to prepare the Work Permit.

³

The person(s) with designated authority and responsibility for preparing, establishing, making effective, and terminating WORK PROTECTIONS and CONDITION GUARANTEES

3.0.2 Information that must be provided to the Controlling Authority on the PC1 form

When applying for a Work Permit, you must submit the following to the Controlling Authority. (In some cases, a field inspection may be required to obtain this information):

- ✓ Equipment that is to be ISOLATED⁴ or isolated and DE-ENERGIZED⁵ for work
- ✓ Additional equipment that will be required to provide working clearance
- ✓ Work/tests to be performed
- ✓ Hazards identified within the safe work area that will be controlled by APPROVED WORK PRACTICES⁶, including hazards associated with neighbouring live apparatus
- ✓ Time and date when the Work Permit is to be issued and SURRENDERED⁷
- ✓ Recall time when required

⁴ Separated from the source of dynamic energy (e.g. electrical generator, compressor, steam boiler).

⁵ Grounded, in the case of electrical equipment; otherwise, where hazards from heat, pressure, radiation, or other forms of energy have been minimized or eliminated.

⁶ Procedures approved for use in Newfoundland and Labrador Hydro. Within the Code, Approved Work Practices will be limited to those specific procedures used to control or minimize dynamic energy or charged condition not eliminated by the Work Protection.

⁷ When guaranteed conditions are relinquished by a Holder of Record or by a Holder of a Condition Guarantee.

3.0.3 Information required by the Issuing Authority

The Issuing Authority is responsible for evaluating the information submitted with an application for a Work Permit. If that information is incomplete or unclear, he or she must make the necessary inquiries (or, if feasible and desirable, visits of inspection) to determine whether the Work Permit can be established safely and in conformity with the Code.

Particular attention must be given to determining

- ✓ The points of isolation and de-energization; and
- ✓ Hazards in the safe work area that are to be controlled by Approved Work Practices, including hazards associated with neighbouring live apparatus.

Although the Issuing Authority is ultimately responsible for obtaining the information necessary to issue the Work Permit, the applicant is still required to

- ✓ Provide the Issuing Authority with complete information, to the fullest possible extent
- ✓ Find out from the Issuing Authority if there is any abnormal condition - such as a temporary installation - that may be a hazard in the safe work area.

Note: Where practical, information should be exchanged directly between the people involved.

3.0.4 When additional work is required

Once the Work Permit (PC2) has been prepared, an additional PC1 must be submitted if you find that extra work (not specified in the original PC1) is required. The Work Permit must be checked by two QUALIFIED⁸ people to ensure it satisfies the requirements of the PC1 and that all hazards have been addressed. This will be indicated in the "Late Application checked by" space on the PC1.

3.1 JOINT USE OF PC1 APPLICATION

Prospective Holders may be added to a PC1, either before or after a Work Permit is issued, providing that the work and/or tests to be done are as described on the PC1.

3.2 APPLICATIONS FOR A WORK PERMIT FROM OTHER THAN THE PROSPECTIVE HOLDER

When an application for a Work Permit is submitted by other than the Prospective Holder, the person submitting the application is responsible for ensuring that the application is accurate and complete.

3.3 RE-USE OF PC1

- ✓ The issued and surrendered blocks will reflect the duration of the work.
- ✓ Enter in the notes block "This will be a daily Permit."

⁸ A person judged by his or her supervisor as having demonstrated competency and familiarity with rules, procedures, apparatus, equipment, the Work Protection Code, and hazards associated with the work.

- ✓ The Permit will be terminated each day, and a copy of the original PC1 attached to each terminated Permit.
- ✓ Each succeeding Permit will be accompanied by the original PC1.

3.4 UNFULFILLED APPLICATIONS

3.4.1 Conditions requiring that a PC1 form be cancelled

A PC1 form must be cancelled if it becomes necessary to change any information except:

- time and date of issuance and surrender
- recall
- additional Prospective Holders

3.4.2 If a PC1 is refused or cancelled

Where the application form is refused or cancelled, the Controlling Authority must write across the face of the PC1 "Refused" or "Cancelled", stating the reasons. The applicant(s) must be advised of the refusal or cancellation as soon as possible.

3.4.3 Situations that prohibit the issuing of a Work Permit

A Work Permit cannot be issued if it requires

- work on, or test operation of, a device guaranteed for another Work Protection.

- testing which would energize apparatus isolated for another Work Protection.
- use of a GUARANTEED DEVICE⁹ on which work or test operation is authorized under another Work Protection.
- work on apparatus subject to energizing by authorized tests under an existing Work Protection.

3.5 RULES FOR PREPARING AND CHECKING A WORK PERMIT

3.5.1 For PC17A(s) and PC2 forms

PC17A(s) and PC2 forms must be prepared and checked by two qualified people working independently. Where two qualified operators are not available, the Issuing Authority will select one other qualified person.

3.5.1.1 The two people involved in preparing and checking the PC17A(s) must ensure that the Order-to-Operate will accomplish the purpose described at the top of the PC17A. They must also ensure that the sequence recorded on the form can be completed without jeopardizing the safety of personnel or equipment.

3.5.1.2 The two people involved in preparing and checking the PC2 must ensure that the completion of the PC17A(s), obtaining any supporting Condition Guarantees and fulfillment of the Safety Precautions and Instructions section of the PC2 will provide the protection required to perform the work identified on the associated PC1(s).

⁹ A device tagged with a PC3, PC10A, or PC10C tag.

3.5.2 For PC17A Order-to-Operate forms associated with a Work Permit

The following rules apply

- (a) Operations must be listed in the order in which they are to be performed. Where the sequence does not matter, several operations may be listed under one sequence number.
- (b) No correction can be made to any PC17A used for establishing a Work Protection.
- (c) Insertions by the use of carets are prohibited, as is the use of ditto marks.
- (d) No devices or operations can be added to a PC17A except by the preparer, and only when the "checked by" space has not been completed.
- (e) When no tag is required, this must be indicated in the "tag number" space.

3.5.3 Hazards and Instructions noted on PC2 form

The *Safety Precautions and Instructions* section of the PC2 must describe

- ✓ the need for additional de-energizing operations
- ✓ the need to protect against dangers from neighbouring live apparatus
- ✓ agreement to control a hazard by Approved Work Practices during the work

- ✓ the issuance of the Work Permit under test conditions
- ✓ where appropriate, that concealed contacts of electrical isolating devices have not been proven open

Note: If required, additional details must be provided on attachments to the PC2.

3.5.4 These Safety Precautions and Instructions become a condition of issuance of the Work Permit.

- (a) The Work Permit preparer, checker or the issuing authority may enter information in this section.
- (b) Safety Precautions and Instructions to new Prospective Holders may be added to this section after issuance. These additions must be dated.

3.6 **ESTABLISHING THE GUARANTEED CONDITIONS FOR A WORK PERMIT**

3.6.1 **Responsibility**

The Issuing Authority must ensure the required conditions for the Work Permit are established, including getting any necessary Condition Guarantees (see Section 4, following).

3.6.2 Procedures

- (a) All operations/checking functions required to establish the necessary guaranteed conditions for a Work Permit and the placing of related Do-Not-Operate tags, must be carried out with a PC17A(s). Each operation must be initialled as it is completed. Once this PC17A is completed, it must be for the exclusive use of this Work Permit until the Work Permit is terminated.
- (b) To order all operations listed on a single page at once, the Issuing Authority's name and initial must be entered in the "ordered by" column, followed by the word "all", and the time and date.
- (c) Orders to Operate must be performed in the number sequence listed.
- (d) Where operators are not qualified to perform one or more of the operations, the Issuing Authority will select qualified people to perform these operations.

3.6.3 Verification of Guaranteed Devices

3.6.3.1 In Staffed Thermal and Hydro Plant Operations

Verification will be performed by a second qualified person. The Issuing Authority must be assured of the qualifications of the person performing the verification. **This verification is to ensure that the correct device is guaranteed in the correct position as long as this does not require disturbance of the guaranteed position.**

3.6.3.2 In Transmission and Rural Operations and Remote Hydro Plant Operations

Before accepting the Work Permit, the initial Prospective Holder (or delegate) from each work group must check - at the work location - the position of the guaranteed devices required for the protection of his or her work group. **This check is to ensure that the correct device is guaranteed in the correct position as long as it does not require the disturbance of the guaranteed conditions.**

3.7 CONDITIONS FOR ISSUING A WORK PERMIT

3.7.1 Before the Work Permit is issued

3.7.1.1 The Issuing Authority must determine that all the necessary guaranteed isolation or isolation and de-energization has been performed; this must include obtaining any necessary Condition Guarantee(s).

3.7.1.2 The Prospective Holder must ensure that no member of the work group is permitted to start work on the apparatus concerned until working rights have been established.

3.7.2 Application information confirmed

The Prospective Holder must confirm the information on the application with the Issuing Authority to indicate that he or she has a complete understanding of the information on the PC1 prior to the acceptance of the Work Permit. When possible, the Prospective Holder will print his or her name on the back of the PC1 and initial it. However, if the Prospective Holder is at a remote location, the Issuing Authority will enter this information and initial it.

3.7.3 Prospective Holder given all necessary information

The Issuing Authority must provide the Prospective Holder with complete information about the Work Permit to be issued, including a description of

- ✓ the boundaries of the Safe Work Area
- ✓ the equipment on which work is authorized
- ✓ all guaranteed devices used to isolate or isolate and de-energize the apparatus on which work is authorized
- ✓ all supporting guarantees
- ✓ additional apparatus isolated for working clearance, but for which work is not authorized
- ✓ the work and tests to be performed
- ✓ all information listed in the *Safety Precautions and Instructions* section of the Work Permit
- ✓ other work groups who have applied to work under the same Work Permit

If requested, the Issuing/Establishing Authority is also required to provide the Prospective Holder with

- ✓ the Work Permit documents or copies, and access to any drawings, manuals etc. used in preparing the Work Permit
- ✓ assistance in locating any guaranteed device

3.7.4 Prior to accepting the Work Permit

- (a) The Prospective Holder has the right to check the position of any necessary guaranteed device.
- (b) The Prospective Holder must ensure that the guaranteed devices listed will provide the isolation and de-energization required for the work group.
- (c) Once satisfied with the condition(s) of issuance, the Prospective Holder may then accept the Work Permit.

3.7.5 Procedures for making a Work Permit effective

- (a) To accept a Work Permit, the Prospective Holder
 - ✓ prints his or her name and validates by initialling
 - ✓ indicates the work group, and
 - ✓ enters the time and date

This information must appear in the "accepted by" space.

- (b) If the Prospective Holder is at a remote location, the Issuing Authority must enter the acceptance information and initial it.

- (c) Once the Work Permit is accepted, the Issuing Authority must make it effective by printing his or her name, validate by initialling in the "issued by" space, and add the time and date.

3.7.6 After the Work Permit has been issued

After the Work Permit is issued, entries on a PC2 are limited to:

- Acceptance by new Permit Holders
- Safety Precautions and Instructions for new holders
- Surrender and termination
- Entries pertaining to Holders of Record
- Additional PC1(s)
- Entries Relative to Permit Expansion

3.8 WORKING RIGHTS AND RESPONSIBILITIES

The working/testing rights and responsibilities of a Holder of Record will become effective and will cease to be effective when recorded on and off as a Holder of Record on the back of the PC2.

- 3.8.1** Before the work group begins work each day, the Permit Holder must be "recorded on" as Holder of Record on the back of the PC2; this establishes working/testing rights and responsibilities.

3.8.2 When work groups are finished work each day, the Holder of Record must be “recorded off” on the back of the PC2; this relinquishes working/testing rights and responsibilities.

3.8.3 If any member(s) of the work group deems it necessary, and it is feasible to do so, the Holder of Record will show them the guaranteed devices necessary for their protection.

3.9 ADDITIONAL PC1 APPLICATIONS

3.9.1 Prospective Holders may become Holders of an existing Work Permit only if the Work Permit satisfies the safety requirements of the work and/or tests to be performed, and only if sanctioned by existing holders of record.

3.9.2 When a new PC1 is submitted for work/tests not listed on the existing PC1(s), the Work Permit must be checked and verified by two qualified people to ensure that it satisfies the requirements of the PC1 and all hazards have been addressed. This will be indicated in the "Late Application checked by" spaces on the PC1.

3.10 RULES FOR CONDUCTING TESTS UNDER A WORK PERMIT

3.10.1 When testing is prohibited

You must never conduct testing under a Work Permit when

- it requires operation of a device guaranteed for another Work Protection, or
- it would energize apparatus isolated for another Work Protection.

3.10.2 Circumstances requiring a PC14 form

A PC14 is required for:

- ✓ the operation of any guaranteed device, or
- ✓ the introduction of energy into the isolated equipment which will constitute a hazard. (This does not include hazards - such as welding, lifting, power tools, etc. - that are normally associated with the work being performed.)

3.10.3 Rules governing the use of a PC14

3.10.3.1 The Holder of Record requesting the test must submit a PC14 to the Issuing Authority.

Note: If the Holder of Record is at a remote location, the Issuing Authority must enter the required PC14 information and initial it.

3.10.3.2 Before each Holder of Record authorizes the PC14, the Issuing Authority must ensure that

- the PC17A Order(s)-to-Operate associated with the PC14 is prepared and checked by two qualified people working independently

Note: Where two qualified operators are not readily available, the Issuing Authority must select one other qualified person to prepare or check the PC17A(s).

- the test information, including the operations listed on the PC17A Order(s)-to-Operate, has been communicated to the Holder of Record.

3.10.3.3 Tests of a repetitive nature may be authorized on one PC14, when work to be performed during the test period is of a minor nature (eg. adjusting limits, timing breakers, etc.).

3.10.4 Holder of Record's responsibilities when testing

Each Holder of Record must ensure that

- (a) all information necessary to assess the effect of the test on each member or the work group has been received; and
- (b) while the test is in progress, no member of the work group will be jeopardized by the test.

3.10.5 Conditions for authorizing and accepting tests

- (a) The Issuing Authority is responsible for ensuring that all Holders of Record, including the person requesting the test, have authorized the test before establishing the test condition.

- (b) The Issuing Authority must inform new Holders of Record of any PC14 presently in effect.
- (c) New Holders of Record are required to accept PC14s in the "authorization/acceptance" space, when recording on the Work Permit.

Note: Holders of Record will authorize or accept the PC14 only once.

3.10.6 While a test is in progress

There must always be a Holder of Record responsible for a test while it is in progress.

The only allowable exception to this rule is if all the following conditions are met:

- (a) The Issuing Authority and the Holder of Record agree that the test will not introduce any hazards beyond those associated with the normal operation of the equipment;
- (b) The Issuing Authority and all other Holders of Record agree that the test may continue without a Holder of Record responsible; and
- (c) The agreement of the Issuing Authority is recorded on the PC14.

3.10.7 Work Permits supported by Condition Guarantees

The Issuing Authority for the Work Permit must inform the Issuing Authority for the Condition Guarantee of any test that may energize apparatus up to the isolating points at the Condition Guarantee location. This must be done before the test commences and after it is completed.

3.10.8 Work Permits issued in a test condition

A Work Permit may be issued in a "test condition" if

- a PC14 is submitted with the application.
- the guaranteed devices that are placed in the test position are recorded on the PC17A(s) in the test position and tagged. Notation of the "fully isolated or de-energized state of test devices" must be added without a sequence number on the next line. It must be highlighted in such a way that it cannot be confused with the actual operation required.
- a PC17A to restore to the pre-test condition (establish the isolated and de-energized state) is prepared, checked, and attached to the PC14.
- a statement is recorded in the *Safety Precautions and Instructions* section of the PC2 indicating its issuance in a "test condition", including the PC14 number.

3.10.9 Restoring apparatus to a pre-test condition

- (a) The Holder of Record responsible for the test must authorize the restoration to the pretest condition.
- (b) Two qualified people must independently prepare and check the PC17A(s) required to establish the pretest condition.
- (c) After the apparatus has been restored to the pretest condition, the Issuing Authority must inform the Holder of Record responsible for the test who must ensure that all other Holders of Record are informed.
- (d) On return to the pretest condition, the Guaranteed Devices operated during the test must be verified as outlined in Section 3.6.3

3.11 WORK PERMITS SURRENDERED IN THE TEST CONDITION

- (a) Work Permits may be surrendered in the "test condition" providing the Holder(s) of Record responsible for the test represents the last work group(s) surrendering.
- (b) When more than one test is in effect at the time of surrender, the work groups responsible for the tests must surrender at the same time.
- (c) Any Work Permit surrendered under test must be terminated at the time of surrender.

- (d) When a work Permit is surrendered and terminated in the test condition and a device guaranteed under a Condition Guarantee is still in the test position, that Condition Guarantee must also be surrendered and terminated.

3.12 PROCEDURES FOR SURRENDERING AND TERMINATING A WORK PERMIT

- (a) To surrender a Work Permit, the Holder of Record
 - ✓ prints his or her name on the PC2 and validates by initialling
 - ✓ indicates the work group, and
 - ✓ enters the time and date

This information must appear in the "surrendered by" space.

- (b) If the Holder of Record is at a remote location, the Issuing Authority must enter the surrender information and initial it.

3.12.1 One Holder of Record from each work group will surrender the Work Permit by completing the "surrendered by" space, using the same line on which the Work Permit was accepted. In doing so, this person surrenders the working/testing rights for all Permit Holders in the work group.

The Issuing Authority must draw a line through the "surrendered by" space for all other Holders for that work group.

3.12.2 If a work group has surrendered and wishes to re-establish working rights on the Work Permit, they must do so under a different work group designation.

3.12.3 The Issuing Authority must ensure that one Holder of Record from each work group has surrendered the Work Permit before termination.

Note: The Issuing Authority must check both the name and work group designation to ensure that all work groups have surrendered.

3.12.4 The Issuing Authority will terminate the Work Permit when it is no longer required.

PC1

Application for Work Permit or Condition Guarantee

Application		to Controlling Authority		Page of
		for <input type="checkbox"/> Work Permit <input type="checkbox"/> Condition Guarantee		recall time
To be issued		time	day	date: yyyy/mm/dd
To be Surrendered		time	day	date: yyyy/mm/dd
Describe equipment to be isolated or isolated and de-energized including equipment required for working space			
Description of work/tests			
<p>DESCRIBE HAZARDS IN THE WORK AREA THAT WILL BE CONTROLLED BY THE HOLDER OF RECORD INCLUDING HAZARDS ASSOCIATED WITH NEIGHBOURING APPARATUS</p> <p><i>(If NO Hazards assessed specify by indicating NONE)</i></p>			
		<input type="checkbox"/> NONE		
Applicant	print & initial	work group	telephone number	
For use of Controlling Authority	received by <i>(print & initial)</i>	time	date: yyyy/mm/dd	
Late <input type="checkbox"/> yes Application For use with PC2#	Late Application checked by (print & initial)	time	Late Application checked by (print & initial)	Time
		date: yyyy/mm/dd		date: yyyy/mm/dd
	Notes			

NOTE: ALL PROSPECTIVE HOLDERS *MUST* BE RECORDED ON REVERSE.

[illegible]

PC1

Application for Work Permit or Condition Guarantee

Application	to Controlling Authority			Page of
	for <input type="checkbox"/> Work Permit <input type="checkbox"/> Condition Guarantee			recall time
	To be issued	time	day	date: yyyy/mm/dd
	To be Surrendered	time	day	date: yyyy/mm/dd
	Describe equipment to be isolated or isolated and de-energized including equipment required for working space			
Description of work/tests				
<p>DESCRIBE HAZARDS IN THE WORK AREA THAT WILL BE CONTROLLED BY THE HOLDER OF RECORD INCLUDING HAZARDS ASSOCIATED WITH NEIGHBOURING APPARATUS</p> <p><i>(If NO Hazards assessed specify by indicating NONE)</i></p> <div style="text-align: right;"><input type="checkbox"/> NONE</div>				
Applicant	print & initial		work group	telephone number
For use of Controlling Authority	received by <i>(print & initial)</i>		time	date: yyyy/mm/dd
Late <input type="checkbox"/> yes Application For use with PC2#	Late Application checked by <i>(print & initial)</i>	time	Late Application checked by <i>(print & initial)</i>	time
		date: yyyy/mm/dd		date: yyyy/mm/dd
	Notes			

PC 2 Serial Number

PC1

Holder of Record Copy

Issued by	name	Station	telephone	time	date: yyyy/mm/dd
Safety Precautions & Instructions					
Temporary Grounds Applied	no	time:	no	time:	no
		date: yyyy/mm/dd		date: yyyy/mm/dd	
Temporary Grounds Removed	no	time:	no	time:	no
		date: yyyy/mm/dd		date: yyyy/mm/dd	
Temporary Grounds Applied	no	time:	no	time:	no
		date: yyyy/mm/dd		date: yyyy/mm/dd	
Temporary Grounds Removed	no	time:	no	time:	no
		date: yyyy/mm/dd		date: yyyy/mm/dd	
PC14 Serial number					
Established	time:	time:	time:	time:	time:
	date: yyyy/mm/dd	date: yyyy/mm/dd	date: yyyy/mm/dd	date: yyyy/mm/dd	date: yyyy/mm/dd
Returned to Pretest Condition	time:	time:	time:	time:	time:
	date: yyyy/mm/dd	date: yyyy/mm/dd	date: yyyy/mm/dd	date: yyyy/mm/dd	date: yyyy/mm/dd
Holder of Records Check List of Persons under their Protection	persons	time ON:	time OFF:	time ON:	time OFF:
		date ON:	date OFF:	date ON:	date OFF:
Surrendered to	name	station	telephone	time	date: yyyy/mm/dd



(front)

PC2 ☐ Work Permit OR ☐ Condition Guarantee

General Description of apparatus on which Work is Authorized	PC3 tag number (s)
	Quantity
Safety Precautions and Instructions	

Supporting Guarantees Required					<input type="checkbox"/> YES	<input type="checkbox"/> NO
Certificate Number	Issued time date: yyyy/mm/dd	Issuing Authority Station Name (print & initial)	Guaranteeing		Surrendered time: date: yyyy/mm/dd	
	time:		<input type="checkbox"/> isolation	On- (equipment)	time:	
	date:		<input type="checkbox"/> de-energizing	At- (location)	date:	
	time:		<input type="checkbox"/> isolation	On- (equipment)	time:	
	date:		<input type="checkbox"/> de-energizing	At - (location)	date:	
	time:		<input type="checkbox"/> isolation	On- (equipment)	time:	
	date:		<input type="checkbox"/> de-energizing	At - (location)	date:	
See Attached PC1(s), PC17A(s) and PC14(s) for Work, Tests, Isolation and De-Energizing						
serial number(s) of attached PC1(s)						
serial number(s) of attached PC17A(s)						
prepared by (print & initial)	time	checked by (print & initial)			time	
	date: yyyy/mm/dd				date: yyyy/mm/dd	
Issued by			Terminated by			
Issuing Authority (print & initial)	time	Issuing Authority (print & initial)			time	
	date: yyyy/mm/dd				date: yyyy/mm/dd	

For Expansion Use Only

serial number(s) of attached PC1(s)			
serial number(s) of attached PC17A(s)			
prepared by (print & initial)	Time	checked by (print & initial)	Time
	date: yyyy/mm/dd		date: yyyy/mm/dd
EXPANSION ISSUED BY			
Issuing Authority (print & initial)	Time		
	date: yyyy/mm/dd		

(back)

PERMIT HOLDER

IC46-NLH
Attachment

[illegible]

HOLDER OF RECORD

[illegible]

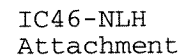
PC2 Serial Number

[illegible]

(back)

PC2 Holders of Record

Holder of Record (print & initial)	Work Group	Recorded ON:	Recorded OFF:	Holder of Record (print & initial)	Work Group	Recorded ON:	Recorded OFF:
		Time:	Time:			Time:	Time:
		Date: yyyy/mm/dd	Date: yyyy/mm/dd			Date: yyyy/mm/dd	Date: yyyy/mm/dd



Order to Operate

sheet
of

purpose of order

prepared by <i>(print & initial)</i>	checked by <i>(print & initial)</i>	OTO completed by <i>(print & initial)</i>	verified by <i>(print & initial)</i> <i>(if required)</i>
Time:	Time:	Time:	Time:
Date: yyyy/mm/dd	Date: yyyy/mm/dd	Date: yyyy/mm/dd	Date: yyyy/mm/dd



(front)

PC14

**Test Operations
Under a Work Permit**

		PC3 Tag Number(s)		PC2 Serial Number	
Test condition to be established		<div style="border-bottom: 1px dotted black; height: 20px;"></div> <div style="border-bottom: 1px dotted black; height: 20px;"></div>			
Holder of Record requesting test	print & initial	Work Group	time		
			date: yyyy/mm/dd		
Serial Numbers of PC 17A's used to establish Test Conditions					
Authorization/Acceptance to establish test condition <i>(Including the holder of record requesting test)</i> <i>(see reverse side)</i>	Work Group	Current Holder(s) of Record <i>(print & initial)</i>	Work Group	Current Holder(s) of Record <i>(print & initial)</i>	
TEST CONDITION AUTHORIZED (ISSUING AUTHORITY)		print & initial	time: date: yyyy/mm/dd		
TEST CONDITIONS ESTABLISHED (ISSUING AUTHORITY)		print & initial	time: date: yyyy/mm/dd		
TEST MAY CONTINUE WITHOUT HOLDER OF RECORD		<input type="checkbox"/> yes see reverse side			
AUTHORIZATION TO RETURN TO PRETEST <i>(Holder of Record responsible for test)</i>		print & initial	time: date: yyyy/mm/dd		
PC17A's used to Return to Pretest					<input type="checkbox"/> Permit Surrendered under test
PRETEST CONDITIONS ESTABLISHED (ISSUING AUTHORITY)		print & initial	time: date: yyyy/mm/dd		

date: _____



PC3

001

personnel
protection

do not
operate

except for
authorized testing

SECTION 4

OPERATOR-ADMINISTERED CONDITION GUARANTEES

4.0 HOW TO APPLY FOR A CONDITION GUARANTEE

A written PC1 application is required for a Condition Guarantee.

If you are applying for a Condition Guarantee, the procedure will depend on where you are located when making the application.

If you are at the controlling location, you must

- ✓ complete the PC1 form
- ✓ print your name and validate by initialling, and
- ✓ leave the original with the CONTROLLING AUTHORITY.¹

If not at the controlling location, you must follow the same procedure for completing the PC1 form, except that you will need to mail it or otherwise communicate the information to the Controlling Authority.

¹ The person(s) who, by virtue of their position, are responsible for performing, directing or authorizing changes in the condition or position of apparatus or devices within their control.

The information may be communicated by

- telephone
- radio, or
- fax

If communicated by telephone or radio, the authority accepting the application will record the information on a PC1 form, verify the information on the PC1 with you, and enter your name and initial it.

If communicated by fax, the authority accepting the faxed applications will verify the information on the PC1 and accept it by printing his name in the “received by” space and initialling.

4.1 REQUIREMENTS FOR CONDITION GUARANTEE APPLICATIONS

4.1.1 Plan ahead

Make sure that your application for a Condition Guarantee is submitted sufficiently in advance to allow for any planning, co-ordination with other work, or arrangements for apparatus outages that may be necessary.

4.1.2 Information that must be provided to the Controlling Authority

When applying for a CONDITION GUARANTEE², you will have to submit the following information:

- ✓ Equipment that is to be ISOLATED³ or isolated and DE-ENERGIZED⁴
- ✓ Work/tests to be performed
- ✓ Time and date when the Condition Guarantee is to be issued and SURRENDERED⁵

4.1.3 Responsibilities of the Issuing Authority

The ISSUING AUTHORITY⁶ is responsible for evaluating the information submitted with the application for a Condition Guarantee. If that information is incomplete or unclear, he or she must make the necessary inquiries to determine whether the Condition Guarantee can be established safely and in conformity with the Code.

² A guarantee issued in support of a WORK PROTECTION (other than RED TAG Work Protection) certifying that an isolated or isolated and de-energized condition exists at points under the control of the issuer of the Condition Guarantee.

³ Separated from the source of dynamic energy (e.g. electrical generator, compressor, steam boiler).

⁴ Grounded, in the case of electrical equipment; otherwise, where hazards from heat, pressure, radiation, or other forms of energy have been minimized or eliminated.

⁵ When guaranteed condition are relinquished by a Holder of Record or by a holder of a Condition Guarantee.

⁶ The person(s) with designated authority and responsibility for preparing, establishing, making effective, and terminating WORK PROTECTIONS and CONDITION GUARANTEES.

In particular, consideration must be given to the points of isolation or de-energization.

4.1.4 Situations that prohibit the issuing of a Condition Guarantee

A Condition Guarantee cannot be issued if

- it requires guaranteeing a device on which work has been authorized under another Work Protection.
- equipment guaranteed under the Condition Guarantee is subject to energizing by tests authorized under an existing Work Protection.

4.2 RULES FOR PREPARING AND CHECKING A CONDITION GUARANTEE

PC17A(s) and PC2 forms must be prepared and checked by two QUALIFIED⁷ people working independently. Where two qualified operators are not available, the issuing authority will select one other qualified person.

4.2.1.1 The two people involved in preparing and checking the PC17A(s) must ensure that the Order to Operate will accomplish the purpose described at the top of the PC17A. They must also ensure that the sequence recorded on the form can be completed without jeopardizing the safety of personnel or equipment.

⁷

A person judged by his or her supervisor as having demonstrated competency and familiarity with rules, procedures, apparatus, equipment, the Work Protection Code and hazards associated with the work.

The two people involved in preparing and checking the PC2 must ensure that completion of the PC17A(s), and obtaining any supporting Condition Guarantees, will provide the condition(s) requested on the attached PC1.

4.2.2 Using PC17A Order-to-Operate forms associated with a Condition Guarantee

- (a) No correction can be made to any PC17A used for establishing a condition guarantee.
- (b) Insertions by the use of carets are prohibited as is the use of ditto marks.
- (c) No devices or operations can be added to a PC17A except by the preparer, and only when the “checked by” space has not been completed.
- (d) When no tag is required, this must be indicated in the “tag number” space.

4.3 REQUIREMENTS FOR ESTABLISHING AND ISSUING A CONDITION GUARANTEE

4.3.1 Use of PC17A forms

All operations/checking functions required to establish the necessary guaranteed conditions for a Condition Guarantee and the placing of related Do-Not-Operate tags, must be carried out with a PC17A(s). Each operation must be initialled as it is completed. Once this PC17A is completed, it must be for the exclusive use of this Condition Guarantee.

4.3.2 Verification of Guaranteed Devices

4.3.2.1 In Staffed Thermal and Hydro Plant Operations

Verification will be performed by a second qualified person. The Issuing Authority must be assured of the qualifications of the person performing the verification. **This verification is to ensure that the correct device is guaranteed in the correct position as long as this does not require disturbance of the guaranteed position.**

4.3.3 Before the Condition Guarantee is issued

The Issuing Authority must determine that all the guaranteed isolation or isolation and de-energization has been performed. This must include obtaining any supporting Guarantee(s).

4.3.4 Who may be issued a Condition Guarantee

A Condition Guarantee may be issued to a Controlling Authority, foreign organization, or Prospective Holder of a PC17B.

4.3.5 Condition Guarantees are exclusive

A Condition Guarantee must not be used to support more than one Work Protection or Condition Guarantee at a time.

4.3.6 Issuing a Condition Guarantee

- (a) The Issuing Authority must acquaint the authority requiring the Condition Guarantee with complete information regarding issuance.
- (b) If the authority requiring the Condition Guarantee is satisfied that the required conditions have been met, he or she may accept the Guarantee.
- (c) After acceptance, the Issuing Authority must complete the "accepted by" space by
 - ✓ printing the name of the station, department, or individual accepting the Condition Guarantee
 - ✓ printing the station or department representative's name
 - ✓ adding the time and date of acceptance; and
 - ✓ validating the entries by initialling
- (d) The Issuing Authority will make the Condition Guarantee effective by printing his or her name and the time and date in the "issued by" space, and validate by initialling.

4.4 RULES FOR CONDUCTING TESTS WHICH INVOLVE A CONDITION GUARANTEE

4.4.1 When testing is prohibited

You must never conduct a test involving a Condition Guarantee when

- it requires operation of a device guaranteed for another Work Protection
- it would energize apparatus isolated for another Work Protection

4.4.2 Using PC14 and PC17A forms

- (a) A PC14 submitted to the Issuing Authority of the Work Permit may authorize the operation of the device(s) guaranteed under a supporting Condition Guarantee
- (b) On the PC17A associated with the PC14 form, there must be a statement in the sequence of operations specifying the requirement to operate device(s) guaranteed under the Condition Guarantee.

4.4.3 Responsibilities of the Issuing Authority of the Work Permit

Where tests are conducted involving a Condition Guarantee, the Work Permit Issuing Authority is responsible for

- ordering the operation of all required devices under his or her control.
- informing the Condition Guarantee Issuing Authority of the start and completion of any test that may energize equipment at the Condition Guarantee location.
- contacting the Condition Guarantee Issuing Authority when the test (or restoration to a pre-test condition) requires the operation of any device guaranteed under the Condition Guarantee. In such cases, the following information must be provided:
 - ✓ the Condition Guarantee PC2 number
 - ✓ the PC14 number
 - ✓ a description of the test (or pretest) condition required

4.4.4 Responsibilities of the Issuing Authority of the Condition Guarantee

When required to establish a test or pretest condition, the Issuing Authority of the Condition Guarantee is responsible for

- recording the Condition Guarantee PC2 number, the PC14 number (from the Work Permit) and the condition to be established in the "purpose" section of the PC17A.
- ordering the operation of the required devices under his or her control.

- reporting the establishment of the condition to the Issuing Authority of the Work Permit including the PC17A number(s) used.
- attaching the completed PC17A(s) to the Condition Guarantee.

4.5 SURRENDERING AND TERMINATING A CONDITION GUARANTEE

4.5.1 A Work Protection must be terminated before the Condition Guarantee supporting it can be surrendered.

4.52 After surrender, the Issuing Authority must complete the "surrendered by" space by

- ✓ printing the name of the station, department, or individual surrendering the Condition Guarantee
- ✓ printing the station or department representative's name
- ✓ adding the time and date of surrender; and
- ✓ validating the entries by initialling

4.53 The Issuing Authority must terminate the Condition Guarantee after the surrender providing it is no longer required.

4.54 When a Condition Guarantee is surrendered in a test condition, it must be terminated at the time of surrender.

SECTION 5

TRADES-ADMINISTERED WORK PROTECTIONS

5.0 GENERAL

5.0.1 Permission required

When you wish to work on apparatus not under your operating control, you must first obtain permission from the CONTROLLING AUTHORITY.¹

5.0.2 Adherence to System/Station Operating Instructions

The use of a Trades-Administered Work Protection on operator-controlled equipment must always adhere to System/Station Operating Instructions.

5.0.3 Prospective Holder ensures Work Protection is independent of all others

If you are the Prospective Holder of a Trades-Administered Work Protection, you are responsible for determining

- (a) whether there are other Work Protections in effect for the apparatus on which you intend to establish your Work Protection; and

¹ The person(s) who, by virtue of their position, are responsible for performing, directing or authorizing changes in the condition or position of apparatus or devices within their control.

- (b) whether your Work Protection will use the same GUARANTEED DEVICES² as any existing Work Protection(s).

5.0.4 When a Trades-Administered Work Protection may not be established

You are prohibited from establishing a Trades-Administered Work Protection if it will require

- (a) work on, or test operation of, a device guaranteed for another Work Protection.
- (b) testing that would energize apparatus ISOLATED³ for another Work Protection.
- (c) use of a guaranteed device on which work or test operation is authorized under another Work Protection.
- (d) work on apparatus subject to energizing by authorized tests under an existing Work Protection.

5.1 WHEN TO USE TRADES-ADMINISTERED WORK PROTECTIONS

5.1.1 Red Tag (PC10A) Work Protection

You may only use Red Tag (PC10A) Work Protection when

² A device tagged with a PC3, PC10A, or PC10C tag.

³ Separated from the source of dynamic energy (e.g. electrical generator, compressor, steam boiler).

- (a) only **one** guaranteed device is required in line locations
- (b) no more than **three** guaranteed devices are required for work on
 - station equipment as authorized by both the Prospective Holder's supervisor and the Controlling Authority; or
 - machine tools, transport and work equipment
- (c) testing by operation of a guaranteed device is not required.

Note: In all other cases, a Work Permit or Order-to-Operate Work Protection PC17B must be used.

5.2 RULES FOR USING A RED TAG (PC10A) WORK PROTECTION

5.21 Information required

- (a) All operations and checking functions required to establish the guaranteed conditions must be listed on the PC10A.
- (b) Each PC10A tag must record
 - ✓ the holder's name
 - ✓ the apparatus isolated

- ✓ a brief description of the work to be performed
 - ✓ the serial numbers of the other PC10A tags to be placed
- (c) No erasures, corrections or insertions can be made to the PC10A.
- (d) The Prospective Holder must print his or her name, and validate by initialling in the "Protection Effective" space on the last tag placed.
- (e) When portable grounding devices are applied, they must be recorded on the back of a PC10A tag or other approved form.

5.2.2 Establishing the Red Tag (PC10A) Work Protection

- All operations and checking functions that are shown on the PC10A must be performed in the sequence listed. Each operation must be initialled as it is completed.
- The Prospective Holder must check and tag all Guaranteed Devices or, if the Controlling Authority deems it necessary, he or she may select a qualified person who will perform the operations listed on the PC10A and hang the tags.

After ensuring that the correct device is guaranteed in the correct position - as long as this does not require the disturbance of the guaranteed position - the Prospective Holder becomes the Holder of Record by printing his or her name in the "Protection Effective" space on the last tag placed, and validating it by initialling.

5.2.3 When testing is prohibited

Testing must never be performed under Red Tag Work Protection when

- (a) it requires operation of a guaranteed device; or
- (b) it could energize apparatus isolated for another Work Protection.

5.2.4 Surrendering the Red Tag Work Protection

When the Red Tag Work Protection is no longer required, the Holder will

- ✓ surrender the protection by completing the "Protection Surrendered" section on the same tag on which it was made effective; and
- ✓ inform the Controlling Authority of the equipment status.

5.3 RULES FOR PREPARING A PC17B ORDER-TO-OPERATE WORK PROTECTION

5.3.1 PC17B forms must be prepared and checked by two QUALIFIED⁴ people working independently.

⁴

A person judged by his or her supervisor as having demonstrated competency and familiarity with rules, procedures, apparatus, equipment, the Work Protection Code and hazards associated with the work.

5.3.1.1 When more than one form is required

If there is insufficient space on the PC17B Order-to-Operate, the order may be continued on additional PC17B(s) or PC17A(s).

5.3.2 The two people involved in preparing and checking the PC17Bs must ensure that the Order-to-Operate will accomplish the purpose described at the top of the PC17B. They must also ensure that the sequence recorded on the form can be completed without jeopardizing the safety of personnel or equipment. Additional Orders-to-Operate required to establish the Work Protection must be attached to the PC17B.

5.3.3 PC17B Order-to-Operate forms used for Work Protection

The following rules apply:

- (a) Operations must be listed in the order in which they are performed. Where the sequence does not matter, several operations may be listed under one sequence number.
- (b) No correction can be made to any PC17B used for establishing a Work Protection.
- (c) Insertions by the use of carets are prohibited, as is the use of ditto marks.
- (d) No devices or operations can be added to a PC17B except by the preparer, and only when the "check by" space has not been completed.

- (e) When no tag is required, this must be indicated in the "tag number" space.

5.4 ESTABLISHING THE GUARANTEED CONDITIONS FOR AN ORDER-TO-OPERATE WORK PROTECTION

5.4.1 Responsibility

The Prospective Holder is responsible for establishing the required conditions for the Work Protection including obtaining any necessary Condition Guarantees.

5.4.2 Procedures

- (a) All operations and checking functions required to establish the necessary guaranteed conditions for the work - as well as the placement of related Do-Not-Operate tags - must be completed using a PC17B or PC17A. Each operation must be initialled as it is completed.
- (b) To order all operations listed on a single page at once, the Prospective Holder's name and initial must be entered in the "ordered by" column, followed by the word "all", and the time and date.
- (c) Orders-to-Operate must be performed in the numbered sequence listed.

- (d) Each operation must be completed by one qualified person. Where practical and feasible the position of the guaranteed devices must be independently verified by a second qualified person. This verification is to ensure that the correct device is guaranteed in the correct position, as long as it does not require the disturbance of the guaranteed position.

5.5 MAKING AN ORDER-TO-OPERATE WORK PROTECTION EFFECTIVE

5.5.1 Accepting an Order-to-Operate Work Protection

Before accepting an Order-to-Operate Work Protection, the Prospective Holder must ensure that all necessary guaranteed isolation, and de-energization by permanently installed devices, has been performed. He or she is also responsible for seeing that all necessary Condition Guarantees have been obtained.

Note: Temporary de-energizing measures must not be performed until after the Work Protection is accepted.

5.5.2 Acceptance Procedure

Once the Prospective Holder is satisfied that the conditions required for work have been established, he or she will make the Work Protection effective - and become the Holder of Record - by printing his or her name in the "accepted by" space of the PC17B, and validate by initialling.

5.5.3 After Acceptance

After accepting the Work Protection, but before work commences, the Holder of Record is responsible for ensuring that

- (a) the work group is aware of the boundaries of the SAFE WORK AREA⁵.
- (b) any required additional DE-ENERGIZING⁶ has been performed, and that the number of portable grounding devices has been recorded on the PC17B.

5.6 RULES FOR CONDUCTING TESTS UNDER AN ORDER-TO-OPERATE WORK PROTECTION

5.6.1 When testing is prohibited

You must never conduct testing under an Order-to-Operate Work Protection when

- it requires operation of a device guaranteed for another Work Protection
- it would energize apparatus isolated for another Work Protection.

⁵ Specifically identified area for work, where all known hazards have been eliminated or are controlled.

⁶ Grounding, in the case of electrical equipment; otherwise, minimizing or eliminating hazards from heat, pressure, radiation, or other forms of energy.

5.6.2 Use of a PC17B for testing

If a guaranteed device(s) is to be moved for the purposes of a test - or establishing a pretest - then the operation must be carried out using a separate PC17B(s) that

- (a) has been prepared and checked by two qualified people working independently;
- (b) is authorized by the Holder of Record of the Work Protection; and
- (c) is attached to the Order-to-Operate Work Protection after all operations have been completed.

5.6.3 Repetitive Testing

Tests of a repetitive nature may be authorized on one PC17B; when work is of a minor nature, to be performed during the test period, (eg. adjusting links, timing breakers etc.).

5.6.4 Inform Issuing Authority

When the PC17B is supported by a Condition Guarantee(s), the Holder or Record must inform the Condition Guarantees's ISSUING AUTHORITY⁷ of the start and completion of any test that may energize apparatus up to the isolation points at the Condition Guarantee location.

⁷

The person(s) with designated authority and responsibility for preparing, establishing, making effective, and terminating WORK PROTECTIONS and CONDITION GUARANTEES.

5.6.5 Establishing an Order-to-Operate Work Protection in a test Condition

An Order-to-Operate Work Protection may be established in a test condition when

- ✓ the guaranteed devices are recorded on the Order-to-Operate Work Protection as being in the test position; and
- ✓ the guaranteed devices have been tagged.

5.7 SURRENDERING⁸ AN ORDER-TO-OPERATE WORK PROTECTION

When an Order-to-Operate Work Protection is no longer required, it must be surrendered. The Holder of Record must

- ✓ print his or her name in the "surrendered by" space and initial it; and
- ✓ inform the Controlling Authority of the equipment status.

⁸

The relinquishing of guaranteed conditions by a Holder of Record or by a holder of a Condition Guarantee.

PC17B

Order to Operate - Trade Use

purpose of order <input type="checkbox"/> order to operate <input type="checkbox"/> work protection <input type="checkbox"/> test <input type="checkbox"/> condition guarantee							sheet _____ of _____	
describe equipment, work/tests								
seq. number	device	remove tag no.	operation	place tag no.	lock no.	ordered by	completed	
							initials	time/verified by if required
prepared by (<i>print & initial</i>)		checked by (<i>print & initial</i>)		OTO completed by (<i>print & initial</i>)		verified by (<i>Print & initial</i>) (<i>if required</i>)		
Time:		Time:		Time:		Time:		
Date:		Date:		Date:		Date:		
yyyy/mm/dd		yyyy/mm/dd		yyyy/mm/dd		yyyy/mm/dd		
Supporting Guarantees Required <input type="checkbox"/> yes <input type="checkbox"/> no								
Certificate Number	Issued time/date	Issuing Authority Representative	Guaranteeing		Surrendered time/date			
			<input type="checkbox"/> isolation	On- (equipment)				
			<input type="checkbox"/> de-energizing	At - (location)				
			<input type="checkbox"/> isolation	On- (equipment)				
			<input type="checkbox"/> de-energizing	At - (location)				
work protection <input type="checkbox"/> condition guarantee <input type="checkbox"/>	accepted by (print & initial)			time	date: yyyy/mm/dd		temp. grounds installed	number
issued by (print & initial)			time	date: yyyy/mm/dd				

Holder of Records check list of work group	persons working		on	off	persons working		on	off
temp. grounds removed	number	work protection	surrendering by (print & initial)			time:		
						date: yyyy/mm/dd		
	condition guarantee	surrendering by (print & initial)			time:			
					date: yyyy/mm/dd			
FOR RECORD KEEPING PURPOSES								
If "Hold Off" required to perform operation, related information may be recorded here	holder		issued by - cont. auth.			representative		
	on (equipment)			at (location)				
	Hold off effective	Time:		hold off surrendered	Time:			
		Date: yyyy/mm/dd			Date: yyyy/mm/dd			
Notes	<div style="border: 1px solid black; height: 150px; margin-top: 10px;"></div>							

HYDRO

PCTOC
(front)

Red Tag Condition Guarantee

Apparatus Isolated	
Description of Work	

Operations to Establish Guaranteed Condition

seq. no.	device	operation	init.

Operations Completed	<i>print & initial</i>
	Time:
	Date: yyyy/mm/dd

Accepted by	<i>print & initial</i>
	Time:
	Date: yyyy/mm/dd

Surrendered by	<i>print & initial</i>
	Time:
	Date: yyyy/mm/dd

do not operate

Personnel Protection

HYDRO

PCTOC
(back)

Red Tag Condition Guarantee

Temporary Grounds Applied	No.	Time:
		Date: yyyy/mm/dd

Temporary Grounds Removed	No.	Time:
		Date: yyyy/mm/dd

Order to Operate

seq. no.	device	operation	init.

Operations Completed	<i>print & initial</i>
	Time:
	Date: yyyy/mm/dd

do not operate

Personnel Protection



PC3

001

personnel
protection

do not
operate

except for
authorized testing

SECTION 6

TRADES-ADMINISTERED CONDITION GUARANTEES

6.0 GENERAL

A Trades-Administered Condition Guarantee can be issued only when the Issuer controls all devices guaranteed by the Condition Guarantee.

6.1 HOW TO APPLY FOR A TRADES-ADMINISTERED CONDITION GUARANTEE

If you wish to apply for a Trades-Administered Condition Guarantee, you must complete a PC1 application form and, if you are at the controlling location, submit the form to the CONTROLLING AUTHORITY¹.

If you are not at the controlling location, the information required for the PC1 may be communicated by

- mail
- telephone
- radio, or
- fax

¹ The person(s) who, by virtue of their position, are responsible for performing, direction or authorizing changes in the condition or position of apparatus or devices within their control.

If communicated by telephone or radio, the authority accepting the application will record the information on a PC1 form, verify the information on the PC1 with you, and enter your name and initial it.

If communicated by fax, the authority accepting the faxed applications will verify the information on the PC1 and accept it by printing his name in the “received by” space and initialling.

6.1.1 If the Condition Guarantee is to be established right away, and if the applicant and issuer are in immediate contact, the information may be recorded directly on the PC10C tag or PC17B form.

6.1.2 Information that must be provided to the Controlling Authority

When applying for a Condition Guarantee, you must provide the following information to the controlling Authority:

- ✓ the apparatus to be ISOLATED² or isolated and DE-ENERGIZED³
- ✓ work/tests to be performed
- ✓ time and date of issuance and SURRENDER⁴

² Separated from the source of dynamic energy (e.g. electrical generator, compressor, steam boiler).

³ Grounded, in the case of electrical equipment; otherwise, where hazards from heat, pressure, radiation, or other forms of energy have been minimized or eliminated.

⁴ The relinquishing of guaranteed conditions by a Holder or Record or by a holder of a Condition Guarantee.

6.2 SITUATIONS THAT PROHIBIT THE ISSUING OF A TRADES-ADMINISTERED CONDITION GUARANTEE

A Trades-Administered Condition Guarantee cannot be issued if

- it requires guaranteeing a device on which work has been authorized under a Work Protection
- equipment guaranteed under the Condition Guarantee is subject to energizing by tests authorized under an existing Work Protection.

6.3 RULES FOR PREPARING AND CHECKING CONDITION GUARANTEES

6.3.1 Red Tag Condition Guarantees (PC10C)

- (a) You may establish a Red Tag Condition Guarantee if it requires the guaranteeing of only one device, and the operation of the device is not required for testing.
- (b) No erasures, corrections or insertions can be made to the PC10C.

6.3.2 Order-to-Operate Condition Guarantees (PC17B)

- (a) A PC17B form must be used whenever more than one GUARANTEED DEVICE⁵ is required for a Trades-Administered Condition Guarantee.
- (b) All Order-to-Operate Condition Guarantees must be prepared and checked by two QUALIFIED⁶ people working independently.
- (c) If there is insufficient space on the PC17B Order-to-Operate, the order may be continued on additional PC17B(s) or PC17A(s).
- (d) Operations must be listed in the order in which they are to be performed. Where the sequence does not matter, several operations may be listed under one sequence number.
- (e) No correction can be made to any PC17B or associated PC17A(s).
- (f) Insertions by the use of carets is prohibited, as is the use of ditto marks.
- (g) When no tag is required, this must be indicated in the "tag number" space.

⁵ A device tagged with a PC3, PC10A, or PC10C tag.

⁶ A person judged by his or her supervisor as having demonstrated competency and familiarity with rules, procedures, apparatus, equipment, the Work Protection Code and hazards associated with the work.

- (h) No devices or operations can be added to a PC17A or a PC17B except by the preparer, and only when the "checked by" space has not been completed.

6.4 ESTABLISHING THE GUARANTEED CONDITIONS FOR AN ORDER-TO-OPERATE CONDITION GUARANTEE (PC17B)

6.4.1 Responsibility

The Issuer is responsible for ensuring the required conditions for the Condition Guarantee are established.

6.4.2 Use of PC10C tags and PC17B forms

- (a) All operations/checking functions required to establish the necessary guaranteed conditions, and the placement of related Do-Not-Operate tags must be carried out using the Order-to-Operate section on the PC10C tag or on the PC17B form.
- (b) To order all operations listed on a single page of the PC17B form at once, the Issuer's name and initials must be entered in the "ordered by" column, followed by the word "all".
- (c) Orders-to-Operate must be performed in the number sequence listed. Each operation must be initialled as it is completed.

- (d) When portable grounding devices are applied to prove isolation from a foreign organization they must be recorded on the back of a PC10C tag or other approved form.

6.5 RULES FOR ISSUING A PC17B CONDITION GUARANTEE

6.5.1 Before issuing the Condition Guarantee

The ISSUING AUTHORITY⁷ must determine that all necessary guaranteed isolation and de-energizing has been performed.

6.5.2 Who may be issued a Trades-Administered Condition Guarantee

A Condition Guarantee may be issued to another controlling Authority, foreign organization, or Prospective Holder of a PC17B.

6.5.3 Condition Guarantees are exclusive

- A Condition Guarantee must not be used to support more than one Work Protection.
- A Trades-Administered Condition Guarantee must not be used to support another Trades-Administered Condition Guarantee.

⁷

The person(s) with designated authority and responsibility for preparing, establishing, making effective, and terminating WORK PROTECTIONS and CONDITION GUARANTEES.

6.5.4 Issuing a Condition Guarantee

- (a) The Issuing Authority must acquaint the authority requiring the condition Guarantee with complete information regarding issuance.
- (b) If the authority requiring the Condition Guarantee is satisfied that the required conditions have been met, he or she may accept the Guarantee.
- (c) After acceptance, the Issuing Authority must complete the "accepted by" space by
 - ✓ printing the name of the station, department, or individual accepting the Condition Guarantee
 - ✓ printing the station or department representative's name
 - ✓ adding the time and date of acceptance; and
 - ✓ validating the entries by initialling.
- (d) In the case of a PC17B, the Issuing Authority will make the condition Guarantee effective by printing his or her name and the time and date in the "issued by" space, and validate by initialling.

6.6 RULES FOR CONDUCTING TESTS WHICH INVOLVE A TRADES-ADMINISTERED CONDITION GUARANTEE

6.6.1 When testing is prohibited

You must never conduct a test involving a Trades-Administered Condition Guarantee when

- it requires operation of a device guaranteed for another Work Protection, or
- it would energize apparatus isolated for another Work Protection

6.6.2 Authorizing the Test

- (a) A PC14 submitted to the Issuing Authority of the Work Permit or a PC17B prepared by the Holder of Record may authorize the operation of the device(s) guaranteed under a supporting Condition Guarantee.
- (b) On the Order-to-Operate associated with the PC14 or PC17B, there must be a statement in the sequence of operations specifying the requirement to operate the device(s) guaranteed under the Condition Guarantee.

6.6.3 Responsibilities of the Issuing Authority of the Work Permit

Where tests are conducted involving a Condition Guarantee, the Issuing Authority of the Work Permit is responsible for

- ordering the operation of all required devices under his or her control
- informing the Issuing Authority of the Condition Guarantee as to the start and completion of any test that may energize equipment at the Condition Guarantee location; and
- contacting the Issuing Authority of the Condition Guarantee when the test (or restoration to a pretest condition) requires the operation of any device under the Condition Guarantee. In such cases, the following information must be provided:
 - ✓ the Condition Guarantee PC17B number
 - ✓ the PC14 number
 - ✓ a description of the test (or pretest) condition required.

6.6.4 Responsibilities of the Order-to-Operate PC17B Work Protection Holder

Where tests are conducted involving a Condition Guarantee, the PC17B holder is responsible for

- ordering the operation of all required devices under his or her control
- informing the Issuing Authority of the Condition Guarantee as to the start and completion of any test that may energize equipment at the Condition Guarantee location; and

- contacting the Issuing Authority of the condition Guarantee when the test (or restoration to pretest condition) requires the operation of any device guaranteed under the Condition Guarantee. In such cases, the following information must be provided:
 - ✓ the number of the Order-to-Operate PC17B prepared for the test
 - ✓ a description of the test (or pretest) condition required.

6.6.5 Responsibilities of the Issuing Authority of the Condition Guarantee

When required to establish a test or pretest condition, the Issuing Authority of the condition Guarantee is responsible for

- recording the Work Protection PC2 or PC17B number, the PC14 number (from the Work Permit) or PC17B number (from the Order-to-Operate Work Protection), as well as the condition to be established in the "Purpose" section of the PC17A or PC17B.
- ordering the operation of all required devices under his or her control
- reporting to the Issuing Authority of the Work Permit or Holder of the PC17B that the condition has been established, as well as providing the PC17A or PC17B number(s) used; and

- attaching the completed PC17A or PC17B to the Condition Guarantee.

6.7 SURRENDERING A CONDITION GUARANTEE

6.7.1 A Work Protection must be terminated before the Condition Guarantee supporting it can be surrendered.

6.7.2 After surrender, the Issuing Authority must complete the "surrendered by" space by

- ✓ printing the station or department representative's name
- ✓ adding the time and date of surrender
- ✓ validating the entries by initialling