

Safe Work Instruction	Issue date: 21/12/07
<b>Working in Accordance with an Electrical Permit</b>	Review date: 01/12/10

<b>Document no.</b> SMS-06-SW-0267	<b>Work description</b> Working in accordance with an Electrical Permit and personnel register, particularly the responsibilities of the Permit Holder and those signed onto the Permit  <b>Scope</b> This instruction: <ul style="list-style-type: none"> <li>• does <b>not</b> apply to the holders of Operating Agreements issued by RailCorp to another Network Operator</li> <li>• does <b>not</b> apply to work under a Permit issued by another Network Operator for work on their asset, as the conditions of that Network Operator's Permit must be complied with</li> <li>• does <b>not</b> include requirements for the issue of electrical permits, provided in the <a href="#">Electrical Network Safety Rules</a>.</li> <li>• This instruction does <b>not</b> indicate under what circumstances are Electrical Permits are needed. This aspect is addressed in <a href="#">SMS-06-GD-0268 Working Around Electrical Equipment</a>.</li> </ul>		
<b>Review date</b> 01/06/10	<b>References</b> <ul style="list-style-type: none"> <li>• <a href="#">SMS-06-FM-0582 Electrical Permit to Work (Do not remove from Booklet)</a></li> <li>• <a href="#">SMS-06-FM-0666 Electrical Permit to Work (To be removed by Permit Issuer)</a></li> <li>• <a href="#">SMS-06-FM-0578 2-Personnel Registers</a></li> <li>• <a href="#">SMS-06-FM-0579 6- Personnel Registers</a></li> <li>• <a href="#">SMS-06-FM-0580 16-Personnel Registers</a></li> <li>• <a href="#">SMS-06-FM-0581 26-Personnel Registers</a></li> <li>• <a href="#">SMS-06-FM-0615 2-Personnel Registers Cover</a></li> <li>• <a href="#">SMS-06-FM-0616 6-Personnel Registers Cover</a></li> <li>• <a href="#">SMS-06-FM- 0617 16-Personnel Registers Cover</a></li> <li>• <a href="#">SMS-06-FM-0618 26-Personnel Registers Cover</a></li> <li>• SMS-06-GD-0667 Printing and Supply of Electrical Permit to Work Booklets</li> <li>• <a href="#">SMS-06-GD-0268 Working Around Electrical Equipment</a></li> <li>• <a href="#">SMS-11-GD-0244 Personnel Certifications - Electrical Authorisations</a></li> <li>• Engineering Standard EP 95 00 00 08 SP Permit System</li> <li>• Electrical Network Safety Rules (ENSR), in particular, the following instructions:             <ul style="list-style-type: none"> <li>- <a href="#">SMS-06-EN-0577 Electrical Permits</a></li> <li>- <a href="#">SMS-06-EN-0598 Electrical Permit to Work</a></li> <li>- <a href="#">SMS-06-EN-0583 Substation Access Permit</a></li> <li>- <a href="#">SMS-06-EN-0584 Low Voltage Access Permit</a></li> </ul> </li> </ul>		
<b>Responsible supervisor</b> <i>Insert name in BLOCK letters</i>	<b>PPE and precautions</b>	<b>Competencies or qualifications</b>	<b>Licences or permits required</b>
		Accredited Electrical Permit Holder (refer to <a href="#">SMS-11-GD-0244 Personnel Certifications - Electrical Authorisations</a> ) – see Note 1	
<b>Tools and equipment required</b>			
N/A			
IF CONTROL MEASURES ARE NOT SUITABLE AND MAJOR CHANGES ARE NEEDED, CONDUCT A RISK ASSESSMENT AND DEVELOP NEW CONTROLS ACCORDING TO <a href="#">SMS-06-PR-0104 WORKPLACE RISK MANAGEMENT</a> .			



#### Warning

Severe injury or death will result if a conducting path is formed allowing electric current to pass through the body. Read this SWI in conjunction with related SWIs.



#### Note 1


The person receiving a Substation Access Permit or Low Voltage Access Permit does not require to be an Accredited Electrical Permit Holder.

<b>Purpose</b>	<p>To identify the responsibilities of a person holding a RailCorp Electrical Permit (Permit Holder) to make sure that all members of the work party, including the Permit Holder, are protected when working on or near electrical equipment.</p> <p>Where RailCorp personnel work under a Permit issued by another electricity Network Operator for work on their electrical asset, RailCorp personnel must comply with the conditions of that electricity Network Operator's Permit. In such a circumstance, the remainder of this instruction does not apply.</p>
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<b>Permit types</b>	<p>The RailCorp Electrical safety System provides for several types of Permit to be issued. The type of Permit depends on the location and type of work to be carried out.</p> <p>When it is also necessary to isolate a service belonging to another electricity Network Operator for the work, an Operating Agreement must be received from that electricity network Operator and the conditions of the Operating Agreement must be included on the Permit and complied with.</p> <p>When only a service belonging to another electricity Network Operator is to be isolated and worked, the work must be carried out in accordance with that electricity Network Operator's Permit system.</p> <p>The Authorised Person (Electrical) will determine the appropriate type of permit to be issued in accordance with the ENSR.</p>
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<b>Request for Electrical Permit to work</b>	Once it is established that an Electrical Permit is required, the form <a href="#">SMS-06-FM-0484 Request for Electrical Permit to Work</a> is to be submitted to the respective regional nominated electrical representative for processing.
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<b>Permit holder requirements</b>	<p>Only a person who has been instructed by an Authorised Person (Electrical) in accordance with the applicable instructions of the RailCorp Safety Manual, is permitted to be a Permit Holder.</p> <p>In the case of an Electrical Permit to Work, the <u>Permit Holder</u> must also be an Accredited Electrical Permit Holder. All Accredited Electrical Permit Holders must be re-accredited to ensure their continued competency at 2-yearly intervals.</p>
	<p><b>Note 2</b></p> <p><u>Permit Holders</u> must make sure that this instruction is received prior to accepting the Permit.</p>

<b>Electrical System Operator (ESO)</b>	If advice is required or to contact Authorised electrical staff, contact the ESO at the Electrical Operating Centre (EOC) on phone no. 9379 7911, or 9 7911 (internal).
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<b>Pre-work requirements</b>	<p>Before starting work, the <u>Permit Holder</u> must make sure that:</p> <ol style="list-style-type: none"> <li>The requirements of the Permit (both sides) are understood, and</li> <li>The Permit fully describes the work to be carried out, and</li> <li>The obligations of the Permit Holder for the electrical safety of staff working under their control are understood, and</li> <li>Where the Permit specifies that another Permit is also required for a part of the work, the necessary Permit is received and understood, and</li> <li>The work process is adequately controlled so that persons carrying out the work for which the Permit was issued do not work beyond the limits of the electrically safe work area (the Permit Holder may use appropriate markers to assist in the control of the work process), and</li> <li><u>All persons</u> (including the <u>Permit Holder</u>) carrying out the work for which the Permit was issued are instructed, warned and understand: <ol style="list-style-type: none"> <li>Which equipment is covered by the Permit and is safe to work on or near, and</li> <li>That all other exposed electrical equipment must be treated as live for the purposes of this Permit, and</li> <li>That no work is to be carried out on or near the isolated equipment in the electrically safe work area, other than that specified on the Permit, and</li> <li>Not to allow any part of their body, clothes, tools or material they may be using or carrying, to come within the safe approach distances of exposed equipment, other than the isolated equipment in the electrically safe work area, and</li> <li>That work process controls have been put in place and that they must not pass over or under any work area and markers, access markers, safety fences or other barriers placed in connection with the Permit, and</li> <li>To print their names and sign on to the Permit or Personnel Register prior to commencing the work for which the Permit is required.</li> </ol> </li> </ol> <p>The <u>Permit Holder</u> must sign on and off on the Permit. Other work party members must sign on and off on accordingly. (See "Personnel registers" on page 3 of this SWI.)</p> <p>For special arrangements for the piloting of trucks, refer to <a href="#">SMS-06-SW-0283 Truck Pilots</a>.</p>
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<b>Requirements during work</b>	<p>While work is being carried out, the <u>Permit Holder</u> must make sure that:</p> <ol style="list-style-type: none"> <li>The arrangements set out in "Permit holder requirements" (on page 2 of this SWI) and "Pre-work requirements" (on page 2 of this SWI) continue, and</li> <li>The Permit is retained at all times, and</li> <li>Persons signed on to the Personnel Register of the Electrical Permit must sign off prior to leaving the worksite at the end of their shift, and</li> <li>Anyone who has signed off the Personnel Register understands that permission for them to carry out work for which the Permit was issued has been withdrawn, and</li> <li>The Permit is returned no later than the time shown on the Permit, and</li> <li>If it is probable that the work will extend beyond the expiry time shown on the Permit, the <u>Permit Holder</u> must inform the Authorised Person who issued or is retrieving the Permit or the Electrical System Operator as soon as it is known that the Permit may be returned late.</li> </ol>	
<b>Requirements during work cont</b>		<p><b>Note 3</b></p> <p><i>If, for any reason the Permit Holder can no longer adequately control the work process for the work for which the Permit was issued, all persons signed on Permit must cease the work for which the Permit was issued until the Permit Holder is again able to control the work process, after which that work may recommence.</i></p>
<b>Requirements when the permit is to be returned</b>	<p>The Permit Holder must make sure that:</p> <ol style="list-style-type: none"> <li>Prior to signing off the Personnel Register attached to the Permit, all persons and material are clear of all electrical equipment for which the Permit was issued, and</li> <li>The Permit Holder and all persons who have signed on to the Permit: <ol style="list-style-type: none"> <li>Sign off the Permit, and</li> <li>Understand the permission to carry out work for which the Permit was issued has been withdrawn once they have signed off the Permit and that they must treat the equipment for which the Permit was issued as live, and</li> </ol> </li> <li>When certifying that all persons who have signed on are clear of the electrical equipment for which the Permit was issued, the Permit Holder accepts responsibility for any person who fails to sign off the Permit, and</li> <li>The Permit is signed off by the Permit Holder and is returned to the nominated person as arranged or, in the case of 1500 volt construction work where an Authority has not been issued, to the Project Engineer.</li> </ol>	
		<p><b>Note 4:</b></p> <p><i>The Permit Holder must NOT sign off on behalf of any member of the work party:</i></p> <ul style="list-style-type: none"> <li>Except if it has been verified that the work party member has left the worksite and is not reasonably practicable for them to return to sign off the permit; and</li> <li>Approval for cancelling the permit must be obtained from the Level 4 Manager responsible for the work or the Regional Manager responsible for the infrastructure region in which the work has been undertaken; and</li> <li>The name of the approving manager, the time when the approval was given and a brief description of the circumstances that have led to the request, must be recorded adjacent to where the Permit Holder signs off as accepting responsibility for persons who have failed to sign off themselves.</li> </ul>
<b>Personnel registers</b>	<p>Each Personnel Register forms a part of, and is attached to, the Permit. Persons signing on to a Personnel Register are subject to the same conditions as if they had signed on to the Permit form itself.</p> <p>When a Personnel Register is in use, any requirement in this instruction relating to the work party signing on or off Permit is to be read as a requirement to sign on or off the Personnel Register.</p> <p>Personal registers are used for Substation Access Permits and Low Voltage Access Permits, when there is insufficient space on the Permit form for all members of the working party to sign on and off.</p> <p>For the case of Electrical Permit to Work, the Personnel Registers are bound to the Permit, forming an Electrical Permit to Work booklet. If the work is to extend over several shifts, then the Permit Holder must use a separate Personnel Register for each shift.</p> <p>Personnel Register forms are issued with and bound to the Permit. The Personnel Register is to be completed by the Permit Holder, and all members of the work party must sign on and off accordingly.</p>	

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<b>Relief of the permit holder</b>	<p>Relief of the Permit Holder is permitted only in the case of an Electrical Permit To Work or a Low Voltage Access Permit. In the case of a Low Voltage Access Permit, relief is only permitted when Personnel Registers are in use. The relief of Permit Holder may only be used for any exceptional and unforeseen circumstance. It is not intended to cater for a planned change of shift, for which a new Personnel Register must be used.</p> <p>The Permit Holder must not transfer the Permit to a person who is not listed on the Permit as an "Approved Permit Holder". This person's name and signature must appear on the Permit together with the name and signature of the Authorised Person who instructed that person.</p> <p>The previous Permit Holder must sign off on the shaded part the Personnel Register. The relieving Permit Holder must then sign on the Personnel Register in the shaded space provided and comply with the requirements of:</p> <ul style="list-style-type: none"> <li>• "Permit holder requirements"</li> <li>• "Requirements during work"</li> <li>• "Requirements When the Permit is to be Returned"</li> <li>• "Personnel Registers".</li> </ul> <p>If the person who is to relieve the Permit Holder has not been instructed accordingly, the current Permit Holder must continue to hold the Permit until the new Permit Holder is appropriately instructed, takes over the Permit and takes charge of the work party. This can be arranged with the Authorised Person who issued the Permit or with the Electrical System Operator. Alternatively, the current Permit Holder must ensure that all persons signed on the Personnel Register cease the work for which the Permit was issued and sign off the Personnel Register.</p> <p>When the new Permit Holder is appropriately instructed, takes over the Permit and takes charge of the work party, this is to be treated as a continuation of the shift.</p>
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<b>Working with a break between shifts</b>	<p>When a Permit is received for work to be carried out over several shifts, and there are periods between the shifts during which no work party or Permit Holder is on site, the Permit Holder must make suitable arrangements for the safekeeping of the Permit at the worksite or at a location convenient to the worksite. In this situation, the following requirements apply:</p> <ol style="list-style-type: none"> <li>The Permit Holder for the following shift must be advised of these arrangements.</li> <li>Permits should not be taken to a person's private residence.</li> <li>The Permit may be kept in a place, such as a site office, or entrusted to a suitable person. In the latter case the person to whom the Permit is given for safekeeping does not become a Permit Holder and is not required to receive any instruction in the requirements of the Permit and must not make any entries on it. No work, for which the Permit is required, may be carried out whilst the Permit is in "safekeeping".</li> <li>In some circumstances, such as major closedowns, the Project Engineer may choose to nominate a particular location for the safekeeping of Permits for working with a break between shifts.</li> </ol>
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<b>Handling a lost permit or personnel register</b>	<p>If the Permit is lost, the Permit Holder must immediately report the loss to the Authorised Person (Mains) who issued or is retrieving the Permit, or to the Electrical System Operator. The Permit Holder must also advise other shift Permit Holders that no work can be carried out unless a replacement Permit has been issued.</p> <p>If the Permit or Personnel Register has been lost and the work is still in progress, the Permit Holder must obtain a duplicate Permit or Personnel Register with the same number. This must be endorsed "Replacement for Lost Permit" or "Replacement for Lost Personnel Register" and all persons still engaged in the work must sign on.</p> <p>If the Permit has been lost, the work has been completed, and a replacement Permit has not been received, the Permit Holder must give written notification to the Authorised Person (Mains) who would have retrieved the Permit that all persons and material are clear of all electrical equipment for which the Permit was issued, and all persons who signed on the original Personnel Register have been instructed to treat the equipment as live.</p> <p>If a copy of the Permit is available, this may be achieved by making a notation on the copy that "the Permit has been lost" and "signing off" on the copy.</p>
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<b>Signing on and off a personnel register bound to the Permit</b>	<p>By signing on to a Personnel Register, members of the work party acknowledge that:</p> <ol style="list-style-type: none"> <li>They have been instructed and understand the extent of the electrically safe work area and that all other electrical equipment must be treated as live, and</li> <li>They have been instructed by the Permit Holder that, in order to avoid any danger, they must confine themselves, their clothing, tools and materials within the electrically safe work area, and</li> <li>When the work is finished, or prior to leaving the worksite at the end of their shift, they must sign off the Permit, and</li> <li>Permission has been withdrawn to carry out work for which the Permit was issued, once they have signed off the Permit.</li> </ol>
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#### **Additional controls for Overhead Wiring (OHW) Work with Adjacent Track Alive**

In addition to the need for an Electrical Permit to Work to be issued for working on OHW that has been isolated, proven dead and rail-connected, a job-specific Safe Work Method Statement (SWMS) must be in place for either of the following situations:

- With the adjacent track carrying live OHW,
- Work involving rigging the line tension of a wire that is live anywhere along its length, regardless of there being one or more intervening tracks with dead OHW.

The above SWMS must be in place regardless of the level of authorisation of persons going to undertake the OHW work.