

ELECTRICAL BULLETIN

2011-03

From: David MacLeod, C.E.I., P.Eng.
Provincial Chief Electrical Inspector

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Subject: Requirements for field modifications to electrical equipment after normal work hours.

When field modifications are made to electrical equipment such as switchboards, motor control centers or panels etc., the certification of that piece of equipment may become void. The equipment may no longer be considered certified and therefore not permitted to be installed or utilized unless a special inspection is performed by a recognized Inspection Body (IB).

This bulletin is to specifically deal with the requirements where field modifications to electrical equipment is being performed after normal work hours that may require a special inspection and is to be used in conjunction with Electrical Bulletin 2002-04. (See note 1)

Normal work hours for the purpose of this Bulletin are considered to be typically 8:00 a.m. - 5 p.m.. Monday to Friday.

In many instances additional electrical work, directly related to the field modifications, must be performed by an electrical contractor under a wiring permit issued by the electrical inspection department.

Electrical equipment that has been modified by a manufacturer's technician or any associated electrical work by an electrical contractor can not be energized until inspected.

The manufacturer's technician must make arrangements to have the IB perform their special inspection and the electrical contractor must make arrangements to have their work inspected by an electrical inspector prior to the equipment being energized.

However, in many instances the IB is not available after normal work hours to perform a special inspection on the modified electrical equipment performed by the manufacturer's technician .

Therefore, where all of the requirements of Note 1 are applicable, the following procedures (items 1-9) shall be followed by the manufacturer's technician in order to allow the electrical equipment to be energized prior to the IB performing a special inspection.

1. The manufacturer's technician shall provide a letter to the IB prior to starting the work indicating that such work does not affect the electrical withstand or mechanical strength ,intended operation or purpose of the equipment usage per Electrical Bulletin 2002-04 .

2. The manufacturer's technician shall make arrangements, well in advance of starting any work, with the electrical inspection department to schedule an electrical inspector to perform an after hour's inspection of the work that has been performed by the technician.

Where additional electrical work ,directly related to the field modifications being performed by the manufacturer's technician, is being performed by an electrical contractor at the same time under a wiring permit ,the work performed by the manufacturer's technician may be inspected under that permit where an agreement has been made between the electrical contractor and the manufacturer's technician in advance to accommodate such an arrangement.

The electrical inspection department shall be advised of such an arrangement at the time the wiring permit is requested to clearly indicate that the inspection is to cover both the electrician's work and the manufacturer's technician work.

If such an arrangement can not be made, then a separate request by the manufacturer's technician must be made for an inspection of their work by the electrical inspector prior to the energization of any electrical equipment.

3. The manufacturer's technician shall test all equipment prior to energization and all test results recorded to be presented upon request by the IB and the electrical inspection department prior to energization.

4. Only after the electrical modifications performed by the manufacturer's technician and, where applicable, the electrical work performed by the electrical contractor have been inspected by the electrical inspector can the equipment be energized.

5. The manufacturer's technician shall make arrangements to have the special inspection performed on the first day in which the IB is available which shall not extend beyond two (2) days of the first day in the regular work week after the electrical work has been performed unless permission has been given by the Provincial Chief Electrical Inspector.

(i.e. work occurs on Saturday -special inspection must be completed by end of Tuesday-work occurs on Wednesday night -special inspection completed by Friday)

6. The manufacturer's technician shall provide, upon request ,any additional information or pictures that the IB may have indicated they require prior to doing the special inspection .

7. The manufacturer's technician shall be able to provide documentation ,upon request by electrical inspection department or the Provincial Chief Electrical Inspector, at any time that the work the performed is in accordance with applicable CSA standards and the manufacturer's direction or design

8.The IB is responsible to ensure the modifications are in accordance with SPE-1000 and per any manufacturer's direction or design and the electrical inspector is responsible for ensuring compliance to the Canadian Electrical Code, Part 1.

If the IB or the electrical inspector find deficiencies any time during their inspection the manufacturer's technician or electrical contractor shall make the necessary remedial repairs immediately.

Failure to comply may necessitate the equipment not be permitted to be energized or to be de-energized until such time as all deficiencies have been corrected and either or both the IB or electrical inspector inspects and accepts the remedial repairs that were identified.

9. If the equipment is required to be de-energized because remedial repairs have not been accepted by the IB or the electrical inspector, the manufacturer's technician shall advise the owner/agent that power may be disconnected for noncompliance.

The coordination of all of the above is the responsibility of the manufacturer's technician.

General Notes:

- 1.The requirements of this bulletin, except where noted for other scenarios, **only** apply when:
- a) the field modifications are performed by the manufacturer's technician
 - b) the electrical modifications require a special inspection
 - c) the electrical modifications being performed **must** occur after normal work hours
 - d) the IB is unavailable after normal work hours, and
 - e) the electrical equipment is required to be energized in order for the facility to operate properly during these off hours.

Where the equipment is not required to be energized and the special inspection can wait until the IB inspector is available the equipment shall not be energized until the special inspection has been performed. (See note 4)

2. It is recommended that if the power is required to be disconnected by the utility in order to perform the field modifications or electrical work, the utility should be notified well in advance to ensure the proper arrangements have been made and to review the requirements to have the power re-connected.

3. Where the field modifications to the electrical equipment occur during normal work hours and the IB is available then the general requirements of Electrical Bulletin 2002-04 are to be followed.

Should a situation arise where the only electrical work being performed is by the manufacturer's technician after normal work hours and the IB is available, then no inspection is required by the electrical inspection department and only the special inspection is required prior to the equipment being energized.

4. Where an IB finds that equipment has been energized prior to the special inspection and it was not, in their opinion, necessary to energize such equipment they shall continue with the inspection allowing the equipment to be energized and then report the situation to the Provincial Chief Electrical Inspector.

5. Should an electrical contractor wish to perform after hours field modifications in which a special inspection is required, a request shall be forwarded to the Provincial Chief Electrical Inspector for acceptance and direction prior to starting any field modifications and each situation shall be evaluated individually.

6. When other electrical work, directly related to the field modifications being performed by the manufacturer's technician, is being performed by an electrical contractor, unless the work is exempt per the regulations, the electrician performing such work is required to obtain a permit and such work must be inspected at the time that work is performed and prior to the equipment being energized.

An exemption to not have the electrical contractor's electrical work inspected prior to energization is not permitted at anytime.

7. The type of work described within this bulletin and Electrical Bulletin 2002-04 can not be performed under an annual maintenance permit. The field modifications to electrical equipment must always be inspected prior to energization.

8. Manufacturers who perform this type of work on a regular basis are advised to make arrangements with the electrical inspection department to be set up in the electrical inspection database so as to allow for the future request of inspections with minimal delay.

9. Failure to comply with any of the requirements of this bulletin may result in an order to have the power to the site or the equipment involved de-energized and locked out **and/ or a summary offence issued** for those found not in compliance.

*The Provincial Chief Electrical Inspector may amend, revise or delete any of the above requirements at any time in the future.

**Any questions or request for a deviation or clarification regarding this bulletin may be forwarded to the Provincial Chief Electrical Inspector David MacLeod, P.Eng. at 902-424-8018 or email: macleodd@gov.ns.ca