



MICA CREEK PROCEDURE FOR
**H.V. SWITCHING SHEETS AND PROCEDURES MCPS
MCPS-HS&E-003**

Responsible Officer: **MCPS SWITCHING SUPERVISOR
MCPS SHIFT CHARGE ENGINEER**

Approved : MCPS Manager

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1. Purpose

To provide details to ensure the effective and safe isolation of High Voltage.

2. Scope

This procedure applies to all High Voltage Switching conducted at Mica Creek Power Station or on Mica Creek Power Station High Voltage equipment, including unit overhauls. The procedure also outlines the requirements for Low Voltage isolation where there is control of a High Voltage system.

3. Actions

3.1 Switching Sheets – Units Overhauls

- 3.1.1 In order to provide effective overall isolation, steam isolations are to be included as part of unit overhaul Switching Sheets. The most effective location for this isolation would be the boiler main stop valves for Units 3,4,5 and receiver outlet valves on Units 1 and 2.
- 3.1.2 Unit overhaul Switching Sheets should include all H.V. and L.V. isolations necessary to safely carry out work on the H.V. equipment. Certain L.V. isolations necessary (e.g. closing and tripping circuit fuses etc) are required to be de-isolated for testing purposes prior to cancellation of the main Switching Sheet electrical Permit; therefore these particular L.V. isolations should be listed in the Work Section of the Switching Sheet with "Electrical Access - H.V. Equipment Permits" (Isa Mine 846c) being separately issued to cover these isolations (i.e. Generator Transformer/Unit Transformer/11KV OCB etc). These H.V. Equip. Access permits are in addition to the Main Switching Sheet Electrical "Blanket" Permit and will be issued by the MCPS Switching Officer in charge of the unit switching. These permits may be cancelled on completion of maintenance work. Testing (i.e. checking trips and alarms) may then be carried out on that particular plant prior to cancellation of the main Electrical Permit.

3.2 Mechanical Turbine Permits/and Isolations

- 3.2.1 In order to prevent accidental "motoring" of the turbine, the Mechanical Turbine Permit (during overhauls) should be interlocked to the Electrical Switching Permit.
- 3.2.2 The recent upgrading of the "A" Station Generator Transformer 132kV C.B.'s to SF6 G.C.B.'s has altered the isolation requirements for mechanical turbine work during outages of short duration.
- 3.2.3 The 132kV G.C.B. closing action is now activated via a spring charge mechanism as opposed to the solenoid closing mechanism of the original O.C.B.'s. The stored energy of the spring charge mechanism has increased the risk of accidental closure of the 132kV C.B.'s and so extra precautions are now required for effective isolation. Therefore both the 132kV busbar selector isolators are to be opened in addition to the 3.3kV Incomer C.B.'being racked to the isolated position for Generators 3,4 and 5 in order to provide satisfactory isolation. Routine Switching Sheets will be written to cover these extra isolations.
- 3.2.4 During similar turbine work on Units 1 & 2, the 132kV G.C.B. may remain closed for the purpose of supplying auxiliary power to Unit 1 and 2.3kV Sw/bd (via Generator and Unit T/F.'s). The 11kV O.C.B. (whose closing action is activated via a closing solenoid) will be the acceptable isolation point providing (1) the O.C.B. mechanical trip button is locked and tagged in the "Tripped" position and (ii) the closing fuse at the O.C.B. are removed and tagged.

3.3 Unit Outage – Short Duration

When any unit is offline for short term work on auxiliary plant, the associated 132kV and 3.3kV C.B.'s may be left "Off" and remain switched to "Remote". No

racking of the 3,3kV C.B.'s etc. is required provided there is no turbine/generator work being carried out.

3.4 132kV OHL CB Switching

SCE's are permitted to switch 132kV overhead line CB's under normal circumstances only when in possession of a copy of an authorized Switching Sheet and under instruction from an authorised Switching Officer. SCE's or the MCPS Load Controller are permitted to switch 132kV overhead line CB's in an emergency situation only under instruction from the MCPS Switching Supervisor, or the Power Distribution Control Officer. This does not apply to load shedding.

4. Definitions

None.

5. Reference Documentation

None.

6. Attachments

None.

7. Document History

Issue Date	Nature of Changes
	Original Issue