Power supply RBI.81607 manipulation sequence for LHC point 8 access

Abstract

This document explains the sequence used to switch the power supply RBI.81607 between CNGS and TI8 operation depending on LHC access conditions

Prepared by:	Verified by:	Approved by:
James RIDEWOOD - BE/OP	Jerome AXENSALVA - BE/OP	N/A

Power supply RBI.81607 manipulation sequence for LHC point 8 access
Status: Released
Release date: 08/11/09

EDMS No: 1047972
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Version	Date	Summary of changes
1.0	08/11/09	First release

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1. To go to access:

- Flatten function of RBI.81607 on the relevant LHC cycle at IREF level in trim editor(should be a recent trim in trim history)

- Disable TI8 Ltims. Go to: SPS Beam Interlocks → LHC Beam 2 BIS extraction monitor → Ltim & Prepulse → RBI816 Ltim Details → Disable ALL TI8 Ltims

- Switch off RBI.81607 (m1sba4) from MUGVIEW during the SFT cycle or a period of the supercycle where the power supply doesn't pulse. MUGVIEW is not synchronised. (note: this will stop CNGS)

- Switch TI8 side of RBI.81607 to EARTH using the POL+ button within MUGVIEW

- Once TI8 is switched to EARTH/POSITIVE polarity restart the RBI.81607 using MUGVIEW again during a period of the cycle where the power supply doesn't pulse

- CNGS beam can be extracted again in theory

- Switch off all other interlocked elements of chain 3 SPS (RBIV.81107, TBSE TI8)

- You can now stop the LHC interlocked elements (RBIH.87833, RMSI.R8B2) **if** LHC operations agree

- LHC operations can now stop their chains

2. To return following access

- Ensure LHC operations have rearmed their access chains

- If chain 3 is tripped do the following, if not these steps can be skipped:

  - The MKE4 should be put to standby from the wincc application (CNGS beam will be stopped)

  - Switch off MSE4183 and MBHC400107 (RBIH.400107)

  - Stop chain 2 using the red button. Do not remove the key.

  - Release chain 3 key and rearm boucle cablée

  - Return chain 3 key to 'interlock control' side and enable both chains 2 and 3

  - Restart all elements of chain 2 (MKE4, MSE4183, MBHC400107 (RBIH.400107), TED TT40)

- Switch off RBI.81607 (m1sba4) from MUGVIEW during the SFT cycle or a period of the supercycle where the power supply doesn't pulse. MUGVIEW is not synchronised.

- Switch TI8 side of RBI.81607 to LOAD using the POL- button within MUGVIEW

- Once TI8 is switched to LOAD/NEGATIVE polarity restart the RBI.81607 using MUGVIEW again during a period of the cycle where the power supply doesn't pulse CNGS should be extracted once again (if applicable)

- Enable Ltims (should be 3) for TI8. Go to: SPS Beam Interlocks → LHC Beam 2 BIS extraction monitor → Ltim & Prepulse → RBI816 Ltim Details → enable all 3 TI8 Ltims (ensure correct cycle is selected for TI8PPM Ltim)

- Reinstate function of RBI.81607 on LHC cycle at IREF level in trim editor (should be a recent trim in trim history)

- Restart or remove other elements of chain 3 – RBIV.81107, TBSE TI8

- You can now restart the LHC interlocked elements (RBIH.87833, RMSI.R8B2) **if** LHC operations agree.

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