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C-A OPERATIONS PROCEDURES MANUAL

15.3.3.21 How to Clear Cycloconverter Faults

(Booster/AGS Ring Power Supply Systems Group Procedure EPS-S-021)

Note: This document was formerly a C-A Group Procedure. The content of the group procedure was reviewed by the Technical Supervisor. All approvals and/or issue dates of the original group procedure are maintained for present use.

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Hand Processed Changes

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Approved: _____ Signature on File _____
Collider-Accelerator Department Chairman Date

M. Bannon

Group Procedure EP-S-021
Revision 00

Cycloconverter Occasional Start Up Loops

1.0 PURPOSE:

- 1.1 Sometimes the cycloconverter enters into this loop where it can't decide between old logic and new logic.
- 1.2 There is this condition that exists where the system will hang up and the cycloconverter is stuck in a loop and seems it can not get out of .
- 1.3 When this happens all the visible faults are clear yet when you press the "On" push button nothing happens.

2.0 PROCEDURE:

- 2.1 The reason for this is the fact that the cycloconverter is dependent on 3 independent logic systems. And if they all do not agree with each other there seems to get into this limbo state.
- 2.2 The 3 systems are:
 - 2.2.1 The Simatic S5 PLC in the Cycloconverter from Siemens.
 - 2.2.2 The Allen Bradley PLC 5 for the MMPS controls.
 - 2.2.3 The Old Siemens relay logic.
- 2.3 The way around this limbo state for now until we redesign all the systems new at Siemens is as follow:
 - 2.3.1 Go to LE1 console in the old control room and turn the 19R control switch (A25b1) (CCW)(counterclockwise) and then release the switch. This will issue a PL3 (protection level 3) to all systems.
 - 2.3.2 Press the Rectifier Standby push button in Rack 5074 to reset the MMPS PLC.
 - 2.3.3 Press the Cycloconverter standby push button in +CR1 Rack to clear all cycloconverter faults (note: it may be necessary to press it again to clear faults because sometimes the air vane switches in the SCR Cycloconverter Racks are slow to pick up.)
 - 2.3.4 Then if all faults are cleared, then press the Cycloconverter "On" push button and it should come on.

If there are any questions or problems contact one of the system engineers Roger Bonati.