Jefferson Lab

THOMAS JEFFERSON NATIONAL ACCELERATOR FACILITY

| 12000 Jefferson Avenue | HALL B PROCEDURE NO.: |
| Newport News, VA 23606 | **B000000401-P021** Rev B |

| TITLE: **Hall B Torus Operations Power Up Checklists** |

BY: G. Biallas

DATE: 26Sep16

Intended Checker and Approvers:
CHK: P. Ghoshal
1. APP: R. Fair

REV.	ECO#	DESCRIPTION	BY	CHK.	APP.	APP.	DATE
B	NA	Removed from Sec, 3: Vapor-cooled leads exhaust heaters On and Controls Calibrated Added to Sec. 8: Check that the Torus Magnet Ground cable is connected to the spaceframe, Check that the Hi-Pot test to 500 V is complete (with Ground Fault Detector fuse and jumper removed) & Check that the PSU Ground Fault Detector fuse and jumper has been re-installed	GB	PG	RF		15Nov17
A	NA	Added two checks to Section 5 per ERR recommendation	GB	PG	RF		26Sep16

SUMMARY OF CHANGES FROM PREVIOUS REVISION:

Ensure that the following checklist has been completed:
**B000000901-P006 Hall B Check Lists for Cool Down
of Cryogenic Systems**

Section 1, Initial List, Instrument Checks

B000000401-P025 Hall B Pre-Power-Up Instrument Checkout Procedure

	BY (Initials)	Date
Magnet PLC Operational		
Low Voltage Chassis and cRIO DAQ Operational		
Fast DAQ cRIO Operational		
CCM Temperature Sensors Checked		
Thermal Shield Temperature Sensors Checked		
CCM Strain Gauges Checked		
CCM OOPs Load Cells Checked		
Axial and Vertical Support Strain Gauges Checked		
Hall Sensors Checked		
EPICs Screens Operational		

Section 2, Initial List, Water-Cooled Leads

B000000401-P022 Hall B Torus Pre-Power-Up Water-Cooled Leads Checkout Procedure

Bolted Connections at Torus Service Tower End Checked		
Bolted Connections at Power Supply End Checked		
Water Connections at Torus Service Tower End Checked		
Water Connections at Power Supply End Checked		
Water Flow Rate Checked		
Electrical Isolation Box at Power Supply End Checked		

Section 3, Initial List, Vapor-Cooled Leads

B000000401-P023 Hall B Torus Pre-Power-Up Vapor-Cooled Leads Checkout Procedure

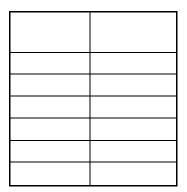|		
Vapor-Cooled Lead Flows calibrated and programmed		
Vapor-Cooled flag heaters On and set to temperature		
Electrical Isolation Box at Torus Service Tower End Checked		

Section 4, Initial List, Magnet Power Supply

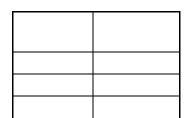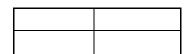B000000402- P001 Hall B Superconducting Magnets Pre-Power-Up Power Supply Internal Interlock Checklist

EPICs Screens Operational		

Section 5, Initial List, Low Current Voltage Tap Check

B000000401-P017 Torus Low Current Voltage Tap Check Procedure

EPICs Screens Operational		

Hall B Torus Operations Power Up Checklists

	BY (Initials)	Date
Check voltage tap test panel switches are in the MAGNET OPERATION position		
Ensure that the voltage tap test panel switches are administratively locked		

Section 6, Initial List, Interlock Checks

	BY (Initials)	Date
B000000401-P027 Hall B Pre-Power-Up Interlock Checkout Procedure		
EPICs Screens Operational		

Section 7, Initial List, Quench Detector Checks

	BY (Initials)	Date
B000000401-P026 Hall B Pre-Power-Up Quench Detector Tuning		
EPICs Screens Operational		

Section 8, Environmental Checks

	BY (Initials)	Date
Check that the Torus Magnet Ground cable is connected to the spaceframe		
Check that the Hi-Pot test to 500 V is complete (with Ground Fault Detector fuse and jumper removed)		
Check that the PSU Ground Fault Detector fuse and jumper has been re-installed		
Check that there is no loose ferromagnetic material within the 5 Gauss boundary		
Check that pump trolleys, etc. have been either tied off or locked down so they cannot move		
Check that the Torus magnet has been roped off at the 5 Gauss boundary		
Check that all other relevant magnetic field boundaries have been marked		
Check that no cranes or manlifts are operational		
Ensure that the crane has its hook in its uppermost position		
Ensure that flashing beacons are operational		
Post appropriate signage at all entrances to the hall (including the truck ramp)		
Inform all personnel within the hall that power-up of the Torus magnet is imminent		
Power-Up of Torus Magnet authorized to start		