

NCSX PRELIMINARY DESIGN PART I - DESCRIPTION

<b>WBS Number: 52</b>	<b>Title: NCSX Central Facilities I&amp;C</b>
<b>Originator: G. E. Oliaro</b>	
<b><u>Description</u></b>	
<u>General Description of Work to be Performed:</u> The central process control system will provide supervisory control and a common user interface to all engineering subsystems and high-energy systems. It will provide the synchronization between two or more operating machines at PPPL using shared power conversion resources. It will support current and historical trending, alarm logging, mimic displays, machine state archival, and process control and monitoring functions for NCSX. It will be designed using the Experimental Physics and Industrial Control System (EPICS). The EPICS infrastructure for the following subsystems will be designed. Day One operations will include the required I/O for control and display pages for WBS 21 Fueling Systems, WBS 4 Magnet Power Systems, WBS 62 Water Systems and WBS 63 Cryogenic Systems.  WBS 21 Fueling Systems WBS 22 Vacuum Pumping Systems WBS 23 First Wall Conditioning Thermocouples for Bakeout, GDC WBS 24 RF Heating Systems, ICH WBS 25 Neutral Beam Heating Systems WBS 42 Motor Generators WBS 43 Magnet Power Systems WBS 62 Water Systems WBS 63 Cryogenic Systems	
<u>Description of Existing Equipment/Facilities to be Reused:</u> No existing equipment from previous machines will be used in this activity. - - - - - - -	
<u>Description of Major Modifications Required to Existing Equipment/Facilities:</u> No major modifications to existing equipment or facilities will be required. - - -	