NCSX Work Approval Form (WAF) WBS Number: 44 **WBS Title: Control and Protection Systems** Job Number: 4401 **Job Title: Control and Protection Systems** Job Manager: Raki Ramkrishnan **Description:** This WBS element consists of the following subsystems: (1) Electrical Interlock Systems - This WBS element consists of the effort to design, fabricate, and install an electrical interlock system for NCSXd which ensures the proper configuration of the power system in accordance with the commanded state from the NCSX control room and access control systems, and which provides coordinated fast fault response of the power supplies when faults are detected. (2) Kirk Key Interlock System - This WBS element consists of the effort to design, procure, fabricate, and install kirk key interlocks for NCSX. (3) Real Time Control Systems This WBS element consists of the effort to develop the specification of the hardware requirements and software algorithms to be provided by WBS 5 (Central I&C) for the real time digital feedback control of the power supply system, including the high-speed digital input and output links. (4) Instrumentaion Systems -This WBS element consists of the effort to design, specify, procure, install, and implement current and voltage measurements for the NCSX coil systems. (5) Coil Protection Systems. Schedule: Approvals: Job Manager Date Responsible Line Manager Date **Project Manager** Date

Date

Engineering Department Head