

PART I - DESCRIPTION

WBS Number: 51	Title: NCSX TCP/IP Network Infrastructure
Originator: G. E. Oliaro	
<p><u>Description</u></p> <p>-</p> <p><u>General Description of Work to be Performed:</u></p> <p>The TCP/IP network infrastructure will provide the common backbone for all data acquisition, and I&C communications. The network will consist of three distinct networks: Physics, Engineering and Plant networks. All cable and switch infrastructure will minimally support 100Mbps Ethernet and all uplinks will be designed for 1Gigabit and possibly 10 Gigabit Ethernet.</p> <p>The Test Cell Ethernet infrastructure will be completely fiber optic. The cost basis will assume that current prices for 10 Mbps and 100Mbps Ethernet will correspond to 100Mbps and 1-10 Gbps Ethernet in 2005. The primary switch hubs will be deployed in five locations:</p> <ol style="list-style-type: none"> 1. D-Site FCPC <ul style="list-style-type: none"> Power Conversion Plasma Control 2. D-Site MG 3. C-Site S1 area <ul style="list-style-type: none"> RF 4. C-Site NCSX Control Room <ul style="list-style-type: none"> Test Cell, NBI 5. PPLCC <p>A fiber optic infrastructure will be deployed to all primary and secondary hubs. Two fiber optic distribution panels will be located in the Test Cell on each side of the machine. A fiber optic infrastructure will also be deployed for facility timing and synchronization. 96 Diagnostic fiber optics for video cameras and other diagnostic requirements will be deployed between the control room and the test cell and 12 fiber optics between C-Site and D-Site will be deployed for real time plasma control communications.</p> <p><u>Description of Existing Equipment/Facilities to be Reused:</u></p> <p>This network infrastructure will interface to the existing PPLnet infrastructure, but will not use any existing components in the design.</p> <p>-</p> <p>-</p> <p>-</p> <p>-</p> <p>-</p> <p><u>Description of Major Modifications Required to Existing Equipment/Facilities:</u></p> <p>No modifications to the existing PPLnet will be required for this implementation.</p> <p>-</p> <p>-</p>	