NCSX Preliminary Design Cost Estimate Summary Form (Attachment 1a)

SUMMARY DESCRIPTION

WBS Number: 132	Title: PF Coils
Originator: Mike Kalish	
<u>Description</u> : The poloidal field (PF) magnets produce the poloidal magnetic field within the NCSX device. These coils provide inductive current drive and plasma shape and position control. The central solenoid coil set consists of three inner solenoid pairs (PF-1, PF-2, and PF-3). The ring coil set consists of one mid-plane coil pair (PF-4) and two outer coil pairs (PF-5 & PF-6). All the coils are symmetric about the horizontal midplane. The coils are wound from hollow copper conductor and vacuum impregnated with glass-epoxy. They operate at the same temperature as the toroidal and modular coil sets, nominally 80K (cooled by LN ₂). This WBS element consists of the manufacturing design and fabrication of the PF conductor,assembly of the PF winding packs including interface elements for connections to power and cooling supply at the coils, and integration of the three pairs of coils with the central solenoid structural elements. <i>Nate</i> Following this PDR, the PF Coils will be divided into the PF Central Solenoid Coils (WBS 132) that	
will include the Central Solenoid Support Structure from WBS 152 and the PF Ring Coils (WBS 133). Follow-on elements External Trim Coils and ConventionalCoils Local I&C will be renumbered to WBS 134 and WBS 135 respectively.	
Description of Existing Equipment/Facilities to be Reu	<u>sed</u> : None
Description of Major Modifications Required to Existin	ng Equipment/Facilities: None