

**NCSX Conceptual Design Cost Estimate Summary Form  
(Attachment 1a)**

**SUMMARY DESCRIPTION**

<b>WBS Number: 442</b>	<b>Title: Kirk Key Interlocks</b>
<b>Originator: Raki Ramakrishnan</b>	
<b><u>Description</u></b>	
<p>This WBS element consists of the effort to design, procure, fabricate, and install kirk key interlocks for NCSX. Mechanical kirk key interlocks are used throughout the D-site power supply system to ensure the proper sequence of manual switching operations and that equipment is in the safe state prior to accessing hazardous areas. This system must be modified (as needed) to reflect the modified power supply configuration, and must include appropriate elements from the C-site elements of the power system.</p>	
<p><u>Description of Existing Equipment/Facilities to be Reused:</u> Although the existing system will need to be modified, existing spare locks and related hardware will be utilized to the maximum extent practical.</p>	
<p><u>Description of Major Modifications Required to Existing Equipment/Facilities:</u> The existing kirk key interlock logic will be modified to reflect the modified power supply configuration.</p>	

**Date: 9/15/03**