

**NCSX Fabrication Project Cost and Schedule Estimating Form
(Attachment 1c - FAB)**

WBS: 64 - Vacuum Vessel and PFC Heating and Cooling Systems			Responsibility: Larry Dudek			
Activity Title	Manhours	FY2002 \$\$	Labor Type	Start Date Month/Year	End Date Month/Year	Comments
Labor						
Preliminary Design (Title I)						
	160		EMEA	November-05	January-06	Mechanical Engineering, Kalish
	40		EMSM	November-05	January-06	Electrical Design Support, Cropper
	80		EADM	November-05	January-06	Mechanical Design / Drafting, Morris
Final Design (Title II)						
	160		EMEA	January-06	March-06	Mechanical Engineering, Kalish
	80		EMSM	January-06	March-06	Electrical Design Support, Cropper
	400		EADM	January-06	March-06	Mechanical Design, Morris
	320		EADM	January-06	March-06	Electrical Design
Lab Fab/Assembly/Installation (Title III)						
	210		EMEA	Jul-06	Dec-06	Mechanical Engineering, Kalish
	160		EMSM	Jul-06	Dec-06	Electrical Design Support, Cropper
	120		EMSM	Jul-06	Dec-06	Shop Supervision, Kemp
	120		EMSM	Jul-06	Dec-06	Sr. Lab and Shop, Fabrication
	1600		EMTB	Jul-06	Dec-06	Technician, Installation Mechanical
	720		EMTB	Jul-06	Dec-06	Technician, Installation Electrical
Level of Effort						
FY2003	175		EMEA	10/1/02	9/30/03	
FY2004	260		EMEA	10/1/03	9/30/04	
FY2005	345		EMEA	10/1/04	9/30/05	
FY2006						
FY2007						
M&S Costs						
Manufacturing Development						
Purchased Design Services						
Procured Hardware/Material						
Procured Hardware/Material		127700		March-06	Dec-06	
Purchased Design Services						
Procured Installation/Assembly Costs		8000		Nov-06	Dec-06	
Other Costs						
Travel						
Allocations (WBS 81 only)						

Instructions for Completing Form

- (1) One form for each 3 digit WBS element (e.g., 111, 121, 452, etc.) => if no 3 digit WBS, use 2 digit WBS (e.g., 81, 82, 84)
- (2) For Lab labor, provide estimate in manhours => provide estimate by specific labor type.
- (3) For M&S, provide estimate in FY2002 direct dollars if procured by PPPL, or in fully loaded dollars if procured by ORNL
- (4) Start and end date provided in month/year format => March/2003