NCSX Work Approval Form (WAF)

WBS Number: 823
WBS Title: Design Integration
Job Number: 8203
Job Title: Design Integration
Job Manager: Tom Brown

Description:

Responsibilities include:
• Configuration development and integration support for all design and construction activities. Participating in design reviews.
• Administering the CAD database of project models and drawings. Reviewing and promoting CAD models and drawings. Establishing Intralink procedures and privileges.
• Providing support to the metrology and dimensional control efforts by analyzing metrology data in conjunction with CAD models of the parts and assemblies

Schedule: See Attachment

Approvals: Tom Brown Digitally signed by Tom Brown
DN: cn=Tom Brown, o=PPPL, ou, email=tbrown@pppl.gov, c=US
Date: 2008.02.19 08:01:01 -05'00'

_____
Job Manager

_____
Responsible Line Manager

_____
Project Manager

_____
Engineering Department Head

NCSX June 2007 ETC
TABLE I - Design Labor

WBS Number: 823
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Job	WBS	Function	Resource Requirements	Basis of Estimate
8203 - Design Integration (Brown)				
	FY08 - Station 2 and 3			
		Configuration development and integration support	670 hours for Brown 290 hours for a designer (Morris) 640 hours for a designer (Upcavage)	This effort is consistant with the necessary configuration development and integration support for all design and construction activities. The design support covers design activities to update drawings per shop generated mark-ups.
		CAD administration	5% LOE for Brown	This LOE is consistent with project experiences associated with the drawing review/Intralink administration process and appropriate through 1st Plasma.
	FY09 - Station 3 and 5			
		Configuration development and integration support	80% LOE hours for Brown 40% LOE hours for Smith 50% LOE hours for Avasarala 80% LOE hours for designer (Morris) 50% LOE hours for designer (Upcavage)	This effort is consistant with the necessary configuration development and integration support for all design and construction activities. The design support covers design activities to update drawings per shop generated mark-ups.
		CAD administration	5% LOE for Brown	This LOE is consistent with project experiences associated with the drawing review/Intralink administration process and appropriate through 1st Plasma.
	FY10 - Station 5 and 6			
		Configuration development and integration support	70% LOE hours for Brown 40% LOE hours for Smith 40% LOE hours for Avasarala 80% LOE hours for designer (Morris)	This effort is consistant with the necessary configuration development and integration support for all design and construction activities. The design support covers design activities to update drawings per shop generated mark-ups.
		CAD administration	5% LOE for Brown	This LOE is consistent with project experiences associated with the drawing review/Intralink administration process and appropriate through 1st Plasma.
	FY11 - Station 6 and test cell			
		Configuration development and integration support	70% LOE hours for Brown 40% LOE hours for Smith 40% LOE hours for Avasarala 80% LOE hours for designer (Morris)	This effort is consistant with the necessary configuration development and integration support for all design and construction activities. The design support covers design activities to update drawings per shop generated mark-ups.
		CAD administration	5% LOE for Brown	This LOE is consistent with project experiences associated with the drawing review/Intralink administration process and appropriate through 1st Plasma.

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TABLE I - Materials and Subcontracts

Description: None

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TABLE III - Fabrication and Assembly

Fabrication and Assembly		None										

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TABLE IV - Uncertainty of Estimate and Residual Risk Assessment

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Uncertainty of the Estimate

	High	Medium	Low	Uncertainty Range (%)	Comments/Other Considerations
Design Maturity		X		-15%/+25%	
Design Complexity		X			

Note: High/Medium/Low uncertainty assessment from Job Manager. Uncertainty range based on AACEI recommended practice 18R-97 as amended for NCSX.

Residual Impacts

Job	Risk Description	Likelihood of Occurring	Mitigation Plan	Basis of estimate	Cost Impact Low	Cost Impact High	Schedule Impact Low	Schedule Impact High

Notes:
[1] Low cost and schedule impacts are considered the minimum (0-percentile) impacts should the event occur.
High cost and schedule impacts are considered the maximum (100-percentile) impacts should the event occur
[2] Cost impacts should be entered as loaded costs
Cost impacts should NOT include standing army costs which are separately calculated from the schedule impact
[3] The schedule impacts should be entered as the min and max impacts on the critical path.
If there is no critical path impact then the schedule entries should be zero.
[4] Likelihood of occurrence should be entered consistent with our risk classification methodology, i.e.
VL= Very Likely (P>80%), L=Likely (80%>P>40%), U=Unlikley (40%>P>10%), VU=Very Unlikely (P<10%), NC=Non-credible (P<1%)

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