NCSX Work Approval Form (WAF)

WBS Number: 53
WBS Title: Data Acquistion & Facility Computing Systems
Job Number: 5301
Job Title: Data Acquistion & Facility Computing Systems
Job Manager: Paul Sichta

Description:

The Diagnostic Data Acquisition System will provide a data management software structure to catalog and manage experimental results for subsequent retrieval and analysis. The design will use the existing MIT developed MDSplus software for data acquisition, data archiving and display. Individual diagnostic local control and data acquisition hardware will be designed with standard PC architecture or in Compact PCI chassis.

Schedule:

See Attached

Approvals:

_____   _____
Job Manager   Date

_____   _____
Responsible Line Manager   Date

_____   _____
Project Manager   Date

_____   _____
Engineering Department Head   Date

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Description:
Title I and

Activity ID	Activity Description	41MS	43MS/CC	48MS	37STK	35TRVL	FY07$K ECEM	ECTB	EMTB	EASB	EEEM	EETB	Basis of Estimate
													Originally manhours estimate based on NSTX experience. However, this estimate has been updated to reflect experience of experieince on other similar networking installation projects.
53-10	Preliminary Design						40						
53-20	Final Design						80						
53-30	Procurement	$17.0K	$3.0K		$2.0K		20						
53-40	Installation							40					
53-50	MDSplus Installation						80						
53-60	MDSplus Programming - Tree Design						80						
53-70	MDSplus Programming - Shot Sync						80						
53-80	MDSplus Programming - Dispatcher						160						
53-90	MDSplus Programming - Acquisition						80						
53-110	Programming - Misc.						160						
53-120	Test						40	40					
	Subtotal Job 5301	**$17K**	**$3K**	**$0K**	**$2K**	**$0K**	**820**	**80**	**0**	**0**	**0**	**0**	

	M&S Details:	**K$**			**Basis of M&S Estimate**
	Linux MDSplus Server	$3.0K			**Based on recent purchased of parts for NSTX and other lab infrastructure projects**
	SAN - disk space (500 GB)	$6.0K			**Based on recent purchased of parts for NSTX and other lab infrastructure projects**
	misc.	$3.0K			**Based on recent purchased of parts for NSTX and other lab infrastructure projects**
	PC appl. TBD	$10.0K			**Based on recent purchased of parts for NSTX and other lab infrastructure projects**
	Total M&S	**$22.0K**			

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Materials and Subcontracts (M&S)						**Basis of Estimate**	
Description:							
See Table I							

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In-house Fabrication and Assembly and Installation										
See Table I										

NCSX June 2007 ETC
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			Although PDR, some more design needed to finalize.
				-10%/+15%	
Design Complexity			X		Duplication of NSTX architecture

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
NONE								

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 man-hours (by demographic) and M&S direct cost under basis of estimate.
Cost impacts should NOT include standing army costs which are separately calculated from the schedule impact
Project control is responsible for quantifying the low and high cost impacts based on the labor hours and M&S identified
[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%