NCSX Work Approval Form (WAF) WBS Number: 51 **WBS Title: Networking Infrastructure** Job Number: 5101 Job Title: Networking Infrastructure Job Manager: Paul Sichta Description: The TCP/IP networking infrastructure will provide the common backbone for all data acquisition, and I&C communications. Schedule: See Attached Approvals: Job Manager Date Responsible Line Manager Date

Project Manager

Engineering Department Head

Date

Date

NCSX June 2007 ETC TABLE I - DESIGN LABOR

				·					•		*	\$	
	lumber: 51												
WBS T	itle: Networking Infrastr	ucture											
Job Ni	umber: 5101												
Job III	tlo: Notworking Infractru	oturo											
JOD 11	tle: Networking Infrastru anager: Paul Sichta	ciure											
JOD IVI	anager: Paul Sichta												
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Descript	ion:												
Title I and											<u> </u>		
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Activity ID	Activity Description	₹	43MS/CC	18M	37STK	15T	ECEM	ECTB	EMTB	Ä	EEEM	ETB	Basis of Estimate
7.0y	Adminy Decemporal	,	1	1	(7)	(-)		-			ш		24010 01 2011111410
													Originally manhours estimate based on NSTX experience.
													However, this estimate has been updated to reflect experience
													of experieince on other similar networking installation projects
51-10	Preliminary Design						30						
51-20	Final Design	222.216			2121		30						
51-30	Procurement	\$29.8K	\$10.0K		\$4.0K		20		400	0.10			
51-50	Installation Test		-				60	20	490	240			
E4 CO							20	20			ļ	<u> </u>	
51-60	rest												
51-60	Test	\$20.8K	\$10.0K	¢ 0 0K	\$4.0K	\$ 0 0 K	160	40	400	240	Λ	0	
51-60	Test	\$29.8K	\$10.0K	\$0.0K	\$4.0K	\$0.0K	160	40	490	240	0	0	

NCSX June 2007 ETC TABLE II - Materials and Subcontracts

WBS Number: 51		
WBS Title: Networking Infrastructure	9	
Job Number: 5101		
Job Title: Networking Infrastructure Job Manager: Paul Sichta		
Job Manager: Paul Sichta		
Materials and Subcontracts (M&S)		Pagin of Entimete
		Basis of Estimate
Description:		Dasis of Estimate
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Description:		Dasis of Estimate

NCSX June 2007 ETC TABLE III - Fabrication/Assembly Installation

WBS Number: 51					
WBS Title: Networking Infrastruction	cture				
Job Number: 5101					
Job Title: Networking Infrastruct	ure				
Job Manager: Paul Sichta					
In-house Fabrication and Assembly a	and Instal	lation			
See Table I					

NCSX June 2007 ETC TABLE IV - Uncertainty of Estimate and Residual Risk Assessment

WR:	S Number: 5	1											
	S Title: Netwo	=	ruoturo										
			ucture										
Job	Number: 510	1											
Job	Title: Networ	king Infrastru	icture										
Job	Manager: Pa	ul Sichta											
00.0													
						T							
<u>Unce</u>	rtainty of the Estir	<u>mate</u>											
						Uncertainty							
			<u>High</u>	Medium	Low	Range (%)					mments/Oth	er Consi	derations
	Design Maturity			Х			Although	PDR, some more design	needed to	finalize.			
	D : 0 ! "				V	-10%/+15%	0, 1, 1						
	Design Complexity				Х		Standard	components					
Noto	High/Modium/Low un	cortainty accessment	t from Joh N	Manager Une	ortainty ra	ango basad on A	ACEI roco	mmended practice 18R-97	7 as amono	lad for NC	CV		
Note.	nigh/wediani/Low an	derianity assessment	THOM JOB N	nanager. Onc	ertainty ra	ange based on A	ACEITECO	ininended practice for-9	as annend	Jeu IOI NO	37		
Residu	ual Impacts												
											Cost Im	npact	Schedule
						Likelihood of					Cost Im	npact	Schedule
Job		Risk Descri	ption			Likelihood of Occurring	Mitig	ation Plan Bas	sis of estim	nate	Low	npact High	Schedule
		Risk Descri	ption				Mitig	ation Plan Bas	sis of estim	nate		•	
Job NONE		Risk Descri	ption				Mitig	ation Plan Bas	sis of estim	nate		•	
		Risk Descri	ption				Mitig	ation Plan Bas	sis of estim	nate		•	
		Risk Descri	ption				Mitig	ation Plan Bas	sis of estim	nate		•	
NONE		Risk Descri	ption				Mitig	ation Plan Bas	sis of estim	nate		•	
NONE Notes:				inimum (C -	organtile)	Occurring			sis of estim	nate		•	
NONE	Low cost and sched	ule impacts are consi	dered the m			Occurring impacts should	the event o	occur	sis of estim	nate		•	
NONE Notes:	Low cost and sched	ule impacts are consi	dered the m	naximum (10	0-percenti	Occurring impacts should le) impacts should	the event c	occur nt occu	sis of estim	nate		•	
NONE Notes:	Low cost and sched High cost and sched Cost impacts should	ule impacts are consi lule impacts are cons l be entered as man-h	dered the m	naximum (10 mographic) a	0-percenti and M&S d	Occurring impacts should le) impacts should le) impacts should lirect cost under	the event c	occur nt occu	sis of estim	nate		•	
NONE Notes:	Low cost and sched High cost and sched Cost impacts should Cost impacts should	ule impacts are consi lule impacts are cons I be entered as man-h I NOT include standin	dered the midered the nours (by de	naximum (100 mographic) a ts which are	0-percenti and M&S d separately	Occurring impacts should ile) impacts should irect cost under	the event o	occur nt occu estimate	sis of estim	nate		•	
NONE Notes: [1]	Low cost and sched High cost and sched Cost impacts should Cost impacts should Project control is rep	ule impacts are consi lule impacts are cons l be entered as man-h	dered the midered the nours (by deag army cosing the low a	naximum (100 mographic) a ts which are and high cost	0-percenti and M&S d separately impacts b	Occurring impacts should itely impacts should itely impacts should itention calculated from passed on the lab	the event o	occur nt occu estimate	sis of estim	nate		•	
NONE Notes:	Low cost and sched High cost and sched Cost impacts should Cost impacts should Project control is rep The schedule impact	ule impacts are consi lule impacts are cons I be entered as man-h I NOT include standin ponsible for quantifyin	dered the midered the nours (by deag army cosing the low as the min a	naximum (100 mographic) a ts which are and high cost and max impa	0-percenti and M&S d separately impacts b acts on the	Occurring impacts should itely impacts should itely impacts should itention calculated from passed on the lab	the event o	occur nt occu estimate	sis of estim	nate		•	
NONE Notes: [1] [2]	Low cost and sched High cost and sched Cost impacts should Cost impacts should Project control is rep The schedule impact If there is no critical Likelihood of occurr	ule impacts are consi lule impacts are cons I be entered as man-h I NOT include standin consible for quantifying ts should be entered path impact then the ence should be entered	dered the midered the nours (by deag army cosing the low as the min aschedule ered consiste	naximum (100 mographic) a ts which are and high cost and max impa ntries should nt with our ri	0-percenti and M&S d separately impacts b acts on the be zero sk classifi	impacts should le) impacts should le) impacts should calculated from pased on the labe critical path	the event of ald the event basis of en the scheor hours a	occur nt occu estimate dule impac nd M&S identifiec		nate		•	
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NONE Notes: [1] [2]	Low cost and sched High cost and sched Cost impacts should Cost impacts should Project control is rep The schedule impact If there is no critical Likelihood of occurr	ule impacts are consi lule impacts are cons I be entered as man-h I NOT include standin consible for quantifying ts should be entered path impact then the ence should be entered	dered the midered the nours (by deag army cosing the low as the min aschedule ered consiste	naximum (100 mographic) a ts which are and high cost and max impa ntries should nt with our ri	0-percenti and M&S d separately impacts b acts on the be zero sk classifi	impacts should le) impacts should le) impacts should calculated from pased on the labe critical path	the event of ald the event basis of en the scheor hours a	occur nt occu estimate dule impac nd M&S identifiec		nate		•	
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Activity ID	MILE- stones	Activity Description	Duration (work	Baseline Start	Baseline Finish	Shifts	Total Float	% cmplt	Proposed Budgeted	FY07	FY08	3	FY0	9	FY10	FY11	FY12
	(level 2 & 3)		days														
51 - Netw	ork and Fi	ber Infrastructure															
		iber Infrastruct-SICHTA															
DE4 40	D li i	Basim		04 1111 00*	40411000		00		4.050.70	-							
R51-10		nary Design	30	01JUL09*	12AUG09		93		4,652.70					II E	C//EM =30hr;		
R51-11	PDR		0		12AUG09		93		0.00								
R51-20	Final De	esign	60	13AUG09	05NOV09		93		4,721.21						EC//EM =30H	nr;	
R51-21	FDR		0		05NOV09		93		0.00					1			
R51-30	Procure	ement	60	06NOV09	11FEB10		93		52,884.80						EC//EM = 43=10 ;		
R51-50	Installat	tion	60	12FEB10	06MAY10		93		83,587.00						EC//E	M =60hr ; EC B =240hr ; EN	//TB =20 И//TB =490
R51-60	Test		14	07MAY10	26MAY10		93		4,766.40						■EC//I	EM =20hr ; E0	C//TB =20
Subtotal			224	01JUL09	26MAY10		93		150,612.11					X	7		