

**NCSX Work Approval Form (WAF)**

**WBS Number: 39**

**WBS Title: Diagnostics Integration & Oversight**

**Job Number: 3901**

**Job Title: Diagnostics Integration & Oversight**

**Job Manager: Brent Stratton**

**Description:**

This WBS element consists of the physics support to provide diagnostic input through the detailed design phase of the machine. As the design of the core machine continues, it is important to continue the integration of diagnostics into the device and the NCSX facility with higher levels of definition.

**Schedule:**

See Attached

**Approvals:**

\_\_\_\_\_  
Job Manager

\_\_\_\_\_  
Date

\_\_\_\_\_  
Responsible Line Manager

\_\_\_\_\_  
Date

\_\_\_\_\_  
Project Manager

\_\_\_\_\_  
Date

\_\_\_\_\_  
Engineering Department Head

\_\_\_\_\_  
Date

**NCSX June 2007 ETC  
TABLE I - DESIGN LABOR**

<b>WBS Number: 39</b>													
<b>WBS Title: Diagnostics Integration &amp; Oversight</b>													
<b>Job Number: 3901</b>													
<b>Job Title: Diagnostics Integration &amp; Oversight</b>													
<b>Job Manager: Brent Stratton</b>													
<b>Description: This is a LOE effort for design intergration, interface definition, and oversight of diagnostic systems design, fabrication, and installation</b>													
		\$		Labor Hours							Basis of Estimate		
<b>Task Description</b>		<b>M&amp;S</b>	<b>Travel</b>	<b>EMEM</b>	<b>EMSM</b>	<b>EMTB</b>	<b>EEEM</b>	<b>EETB</b>	<b>EADM</b>	<b>ECEM</b>	<b>RM2</b>		
Design integration and oversight													
	FY2007											86 Assumes 1/2 year @ 10% - based on past experience on NCSX	
	FY2008											173 Assumes 1 year @ 10% - based on experience on NCSX	
	FY2009											173 Assumes 1 year @ 10% - based on experience on NCSX	
	FY2010											345 Assumes 1 year @ 20% - based on experience on NCSX	
<b>TOTAL</b>		<b>\$0</b>	<b>\$0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>777</b>	

**NCSX June 2007 ETC**  
**TABLE II - Materials and Subcontracts**

<b>WBS Number: 39</b>										
<b>WBS Title: Diagnostics Integration &amp; Oversight</b>										
<b>Job Number: 3901</b>										
<b>Job Title: Diagnostics Integration &amp; Oversight</b>										
<b>Job Manager: Brent Stratton</b>										
<b>Materials and Subcontracts (M&amp;S)</b>										
<b>Basis of Estimate</b>										
<b>Status</b>										
<b>Description - included in Table I</b>										
<b>Material</b>										
<b>Labor</b>										

**NCSX June 2007 ETC**  
**TABLE III - Fabrication/Assembly Installation**

<b>WBS Number: 39</b>															
<b>WBS Title: Diagnostics Integration &amp; Oversight</b>															
<b>Job Number: 3901</b>															
<b>Job Title: Diagnostics Integration &amp; Oversight</b>															
<b>Job Manager: Brent Stratton</b>															
<b>In-house Fabrication and Assembly and Installation</b>															
<b>Included in Table I</b>															

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

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**Job Number: 3901**  
**Job Title: Diagnostics Integration & Oversight**  
**Job Manager: Brent Stratton**

**Uncertainty of the Estimate**

	<u>High</u>	<u>Medium</u>	<u>Low</u>	<u>Uncertainty of Estimate (%)</u>	<u>Comments/Other Considerations</u>
Design Maturity	X				Estimates based on actual NCSX experience over past several years
Design Complexity			X	-5%/+10%	Estimates based on actual NCSX experience over past several years

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

**Residual Impacts**

<u>Job</u>	<u>Risk Description</u>	<u>Likelihood of Occurring</u>	<u>Mitigation Plan</u>	<u>Basis of estimate</u>	<u>Cost Impact</u>		<u>Schedule Impact</u>	
					<u>Low</u>	<u>High</u>	<u>Low</u>	<u>High</u>
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%)