

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

<b>WBS Number: 31</b>								
<b>WBS Title: Magnetic Diagnostic Systems</b>								
<b>Job Number: 3101</b>								
<b>Job Title: Magnetic Diagnostic Systems</b>								
<b>Job Manager: Brent Stratton</b>								
<b>Materials and Subcontracts (M&amp;S)</b>								
<b>Basis of Estimate</b>								
<b>Description</b>	<b>Material</b>			<b>Labor</b>				
	<b>Type</b>	<b>Cost \$ (Note 1)</b>	<b>EMEM</b>	<b>EMSM</b>	<b>EMTB</b>	<b>EADM</b>	<b>EEEM</b>	
<b>New Scope Cost for Exiting T/Cs and Heater Power Leads at Port 12</b>								
5 Remaining Design			136					Design about 50% complete.
Distribution of wires to 2.75 ConFlat								
System Diagram								
Research Amphenol Receptical								Will modify Commercial Bud Box based upon review with tech
Impact of Cryostat								
Evaluate magnetic permeability issue								
Extend Heater Power Leads								
5a Support of Procurements under Job 1204			40					Vendor contacts, reqn, etc. - Labik - support of efforts by Dudek.
5b Engineering Support Field/Fab Activities (Title III)			25					
6 Peer Review			30					Based on previous experience on similar jobs
7 Design Drafting						30		Based on previous experience on similar jobs
Issue new drawing								
8 Install and Connect T/C Feedthroughs								Included in Job 1810
9 Install Extra Length Wire and Connect ( Solder ) Power Feedthroughs								Included in Job 1810
10 Machine Twelve 2.75 CF Blanks				36				Based on previous experience on similar jobs
11 Rubber Seal								
12 Machine 6 Commercial Aluminum Boxes				36				Based on previous experience on similar jobs
<b>NOTE: M&amp;S in Job 1204</b>	<b>TOTAL</b>	<b>\$28,700</b>	<b>231</b>	<b>72</b>	<b>0</b>	<b>30</b>	<b>0</b>	
<b>Description</b>	<b>Material</b>			<b>Labor</b>				
	<b>Type</b>	<b>Cost \$</b>	<b>EMEM</b>	<b>EMSM</b>	<b>EMTB</b>	<b>EADM</b>	<b>EEEM</b>	
<b>Existing + Added Cost for Co Wound Loops for Modular Coils</b>								
Design Protective Boxes								Work Completed
Drawings								Work Completed
Purchase SS Sheet								Work Completed
Purchase PTFE Tubing and Fiber Glass Sheath								Work Completed
Prototype								Work Completed
Formal Issue of Drawings Rev 0								Work Completed
Form 18 Protective Boxes								Work Completed
Weld end plates								Work Completed
Drawing Change , add extra slots								Work Completed
Formal Issue of Drawings Rev 1								Work Completed
Engineering Support Field/Fab Activities (Title III)								Work Completed
Fab MC co-wound loops								Work Completed
	<b>TOTAL</b>	<b>\$0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	

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Description	Material		Labor					
	Type	Cost \$	EMEM	EMSM	EMTB	EADM	EEEM	
<b>Existing + Added Cost for Co Wound Loops for 18 TF and 6 PF and 2 SolenoidCoils</b>								
Design Protective Boxes			110					TF Complete
Drawings			60					TF Complete.
Purchase SS Sheet		\$870	1					Partial.
Purchase Heat Shrink Tubing, 20 @ 100 ft		\$2,000	6					12 ordered in Dec 06 => 6 of 12 Received.
Purchase additional CoAxial cable 3500 ft		\$4,550	2					Placed order for 1900 ft
Prototype				12				TF Complete.
Formal Issue of Drawings Rev 0						0		<b>Work Completed</b>
Form 26 Protective Boxes				102				6 TF completed.
Weld end plates					18			6 TF completed.
Engineering Support Field/Fab Activities (Title III)			36					
Develop Convective Air Furnace		\$0		0				<b>Work Completed</b>
Fab TF, PF & solenoid co-wound loops				130				9 of 26 completed.
	<b>TOTAL</b>	<b>\$7,420</b>	<b>215</b>	<b>244</b>	<b>18</b>	<b>0</b>	<b>0</b>	
<b>Existing + Added Cost for Flux Loop Junction Boxes and 20 Spacer Flux Loops and 6 Protective Boxes</b>								
Purchase Material - 2.75 ConFlat Flanges		\$900	2					Based on previous experience
Purchase Material - AL and SS Plate		\$820			2			Based on previous experience
Purchase Material - 316 SS flat head screws		\$400			2			Based on previous experience
Purchase Material - Circuit Boards RF Filtered w/TB		\$3,200					32	Based on previous experience
Install 24 JB ( 410 cables ) Act #								Included in Job 1810
Terminate 24 JB ( 410 cables )								Included in Job 1810
Anneal 2.75 Conflat Flanges				12				Based on previous experience
Engineering Support Field/Fab Activities (Title III)			120					Based on previous experience
Purchase 2000 ft 0.059 CoAx-Spacer		\$3,500	2					Based on previous experience
AutoCAD Drawings of Field Runs/Tag#/Port Assignments			112					Based on previous experience
Water Jet Machine Cu Templates		\$240			8			Based on previous experience
Install 20 Templates								Included in Job 1810
Install Spacer Flux Loops								Included in Job 1810
Twist leads								Included in Job 1810
Design Protect Box & Prepare Dwg			22					Based on previous experience
Fab 6 Prot Boxes		\$200		24				Based on previous experience
Install Prot Boxes								Included in Job 1810
Prepare Drawing of Spacer Loops						60		Based on previous experience
<b>NOTE: M&amp;S in Job 1204</b>	<b>TOTAL</b>	<b>\$9,260</b>	<b>258</b>	<b>36</b>	<b>12</b>	<b>60</b>	<b>32</b>	



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Description	Material			Labor					
	Type	Cost \$	EMEM	EMSM	EMTB	EADM	EEEM		
<b>Added Cost for Voltage Loops and Protective Boxes</b>									
Drawings- Engineering Sketch of Routing			20						Based on previous experience
Drawings- Layout							16		Based on previous experience
Formal Release of Layout Drawing							4		Based on previous experience
Protective Box Design			6						Based on previous experience
Protective Box Drawing			20						Based on previous experience
Install Voltage 12 Loops on VV									Included in Job 1810
Twisted leads to Prot. Boxes									Included in Job 1810
Fab 3 Protective Boxes	316 SS by 0.048 Thk	\$120					12		Based on previous experience
Install 3 Protect. Boxes									Included in Job 1810
Engineering Support Field/Fab Activities (Title III)			6						Based on previous experience
Purchase additional 900 ft cable	0.059 OD Inconel CoAx	\$1,600	2						
	<b>TOTAL</b>	<b>\$1,720</b>	<b>54</b>	<b>0</b>	<b>12</b>	<b>20</b>	<b>0</b>		
	<b>Total</b>	<b>\$28,770</b>	<b>550</b>	<b>316</b>	<b>172</b>	<b>24</b>	<b>0</b>		