

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

<b>WBS Number: 64</b>																																													
<b>WBS Title: Bakeout Systems</b>																																													
<b>Job Number: 6401</b>																																													
<b>Job Title: Bakeout Systems</b>																																													
<b>Job Manager: Mike Kalish</b>																																													
		<b>FY07\$K</b>																<b>HOURS</b>																											
		<b>01</b>		<b>02</b>		<b>03</b>		<b>04</b>		<b>05</b>		<b>06</b>		<b>07</b>		<b>08</b>		<b>09</b>		<b>10</b>		<b>11</b>		<b>12</b>		<b>13</b>		<b>14</b>		<b>15</b>		<b>16</b>		<b>17</b>		<b>18</b>		<b>19</b>		<b>20</b>					
<b>TASK DESCRIPTION</b>		<b>41MS</b>	<b>48MS</b>	<b>37STK</b>	<b>35TRVL</b>	<b>31OT</b>	<b>ORNLEM</b>	<b>ORNLDN</b>	<b>EMEM</b>	<b>EMSM</b>	<b>EMSB</b>	<b>EMTB</b>	<b>EAEM</b>	<b>EASB</b>	<b>EEEM</b>	<b>EESM</b>	<b>EESB</b>	<b>EEETB</b>	<b>Basis of Estimate</b>																										
<b>Design</b>																		Engineering judgement based on NSTX experience. Engineering judgement based on NSTX experience. Engineering judgement based on NSTX experience. Engineering judgement based on NSTX experience.																											
Requirements definition																										80																			
Preliminary Design & Review																										160				120															
Final Design & Review																										160				120															
EA or ORNL VV Analysis to confirm																										40				40				160											
ACC Review																		40				40																							
<b>Procurement &amp; Fabrication/Installatic</b>																		See Material Take Offs in Table V. labor from Means Based on Means Based on Means																											
Procurement lead time and award																																													
Piping and Equipment (See Piping Estimate T#####)																										1830				80				80											
480 VAC Power Service																		5,000				80																							
Local Controls																		3,000				80																							
<b>PTP Testing</b>																		40				120																							
<b>TOTALS</b>		\$165,185	\$0	\$0	\$0	\$0	0	0	480	0	0	0	2150	160	240	0	0	0	0																										
31																														\$0															
		TOTAL																0	0	0	0	0	0	0	0	0	0	0	0									\$0							
<b>Notes:</b>		Notes:																																											
		1. Existing PPPL Air Compressor is not acceptable, only 22 CFM available at 100 psi. Estimate is based on using a Gast Regenerative Blower 2. This estimate is based on a Gast blower operating at the conditions shown in "Calc Summary" Tab 3. Estimate assumes once through air system 4. Estimate assumes 3" 304 SS pipe will be adequate ( may require changes by permeability issues) 5. Estimate assumes 150 C VV Bakeout 6. Estimate assumes no VV cooling is required 7. Sizing based on approx. 7 kw heat load 8. Estimate assumes no instrumentation 9. Rev 1 added Piping Support Towers 10. Rev 2 Added Ceramic Breaks and Bellows																												\$0															