

WBS Level						LCLA DCE August-2006 Description	Early Start	Early Finish	Res Code	Units	Work Rem. Bud. Qty		Work Rem. Full Burd and Escltd Cost			Contingency %	Contingency \$
1	2	3	4	5	6						Hours	\$\$	Labor	M&S	Total		
											<b>116,598</b>	<b>13,058,760</b>	<b>10,912,754</b>	<b>14,033,157</b>	<b>24,945,910</b>		<b>5,530,354</b>
<b>1</b>						<b>LCLS PROJECT - PED &amp; CONSTRUCTION</b>					<b>91,217</b>	<b>12,741,006</b>	<b>8,324,246</b>	<b>13,694,777</b>	<b>22,019,023</b>		<b>5,530,354</b>
<b>1</b>	<b>01</b>					<b>LCLS PROJECT MGMT, PLANNING &amp; ADMN (TEC)</b>					<b>20,892</b>	<b>1,045,260</b>	<b>2,025,590</b>	<b>1,128,022</b>	<b>3,153,612</b>		<b>781,688</b>
<b>1</b>	<b>01</b>	<b>03</b>				<b>Technical Integration</b>					<b>20,892</b>	<b>1,045,260</b>	<b>2,025,590</b>	<b>1,128,022</b>	<b>3,153,612</b>		<b>781,688</b>
<b>1</b>	<b>01</b>	<b>03</b>	<b>05</b>			<b>Global Controls</b>					<b>20,542</b>	<b>1,045,260</b>	<b>2,000,663</b>	<b>1,128,022</b>	<b>3,128,685</b>		<b>776,703</b>
<b>1</b>	<b>01</b>	<b>03</b>	<b>05</b>	<b>01</b>		<b>Global Controls Management</b>											
<b>1</b>	<b>01</b>	<b>03</b>	<b>05</b>	<b>02</b>		<b>LLRF Controls</b>											
<b>1</b>	<b>01</b>	<b>03</b>	<b>05</b>	<b>03</b>		<b>E-beam Diagnostics &amp; Controls</b>					<b>5,478</b>	<b>-</b>	<b>529,967</b>	<b>-</b>	<b>529,967</b>		<b>134,292</b>
<b>1</b>	<b>01</b>	<b>03</b>	<b>05</b>	<b>03</b>	<b>01</b>	<b>Controls - Wire Scanners</b>											
<b>1</b>	<b>01</b>	<b>03</b>	<b>05</b>	<b>03</b>	<b>02</b>	<b>Controls - Toroids</b>					<b>4,440</b>	<b>-</b>	<b>430,584</b>	<b>-</b>	<b>430,584</b>		<b>107,646</b>
<b>1</b>	<b>01</b>	<b>03</b>	<b>05</b>	<b>03</b>	<b>02</b>	Controls Toroids Rev1 Prototype	1-Aug-06	31-Oct-06	SL_CE1	Hrs	786		87,334		87,334	25%	21,833
<b>1</b>	<b>01</b>	<b>03</b>	<b>05</b>	<b>03</b>	<b>02</b>	Controls Toroids Rev2 Design	1-Aug-06	31-Oct-06	SL_CE1	Hrs	1,548		172,001		172,001	25%	43,000
<b>1</b>	<b>01</b>	<b>03</b>	<b>05</b>	<b>03</b>	<b>02</b>	Controls Toroids Rev2 Prototype Hardware	1-Aug-06	31-Oct-06	SL_CT1	Hrs	1,248		75,916		75,916	25%	18,979
<b>1</b>	<b>01</b>	<b>03</b>	<b>05</b>	<b>03</b>	<b>02</b>	Controls Toroids Rev2 Prototype Hardware	1-Aug-06	31-Oct-06	SL_CE1	Hrs	858		95,334		95,334	25%	23,833
<b>1</b>	<b>01</b>	<b>03</b>	<b>05</b>	<b>03</b>	<b>03</b>	<b>Controls - Faraday Cups</b>					<b>6</b>	<b>-</b>	<b>636</b>	<b>-</b>	<b>636</b>		<b>159</b>
<b>1</b>	<b>01</b>	<b>03</b>	<b>05</b>	<b>03</b>	<b>03</b>	Controls Faraday Cups Final Desgin	1-Aug-06	15-Aug-06	SL_CE1	Hrs	3		286		286	25%	72
<b>1</b>	<b>01</b>	<b>03</b>	<b>05</b>	<b>03</b>	<b>03</b>	Faraday Cups Prototype Hardware	1-Aug-06	15-Aug-06	SL_CT1	Hrs	1		30		30	25%	8
<b>1</b>	<b>01</b>	<b>03</b>	<b>05</b>	<b>03</b>	<b>03</b>	Faraday Cups Prototype Hardware	1-Aug-06	15-Aug-06	SL_CE1	Hrs	3		319		319	25%	80
<b>1</b>	<b>01</b>	<b>03</b>	<b>05</b>	<b>03</b>	<b>04</b>	<b>Controls - Tune-Up Dump</b>					<b>4</b>	<b>-</b>	<b>316</b>	<b>-</b>	<b>316</b>		<b>79</b>
<b>1</b>	<b>01</b>	<b>03</b>	<b>05</b>	<b>03</b>	<b>04</b>	Controls Tune-up Dump Final Desgin	1-Aug-06	15-Aug-06	SL_CE1	Hrs	1		77		77	25%	19
<b>1</b>	<b>01</b>	<b>03</b>	<b>05</b>	<b>03</b>	<b>04</b>	Controls Tune-up Dump Prototype Hardware	17-Aug-06	31-Aug-06	SL_CT1	Hrs	1		84		84	25%	21
<b>1</b>	<b>01</b>	<b>03</b>	<b>05</b>	<b>03</b>	<b>04</b>	Controls Tune-up Dump Prototype Hardware	17-Aug-06	31-Aug-06	SL_CE1	Hrs	1		154		154	25%	39
<b>1</b>	<b>01</b>	<b>03</b>	<b>05</b>	<b>03</b>	<b>05</b>	<b>Controls - Profile Monitors</b>					<b>1</b>	<b>-</b>	<b>119</b>	<b>-</b>	<b>119</b>		<b>30</b>
<b>1</b>	<b>01</b>	<b>03</b>	<b>05</b>	<b>03</b>	<b>05</b>	Controls Profile Monitors Final Desgin	1-Aug-06	15-Aug-06	SL_CE1	Hrs	-		-		-	25%	-
<b>1</b>	<b>01</b>	<b>03</b>	<b>05</b>	<b>03</b>	<b>05</b>	Controls Profile Monitors Prototype Hardware	17-Aug-06	31-Aug-06	SL_CT1	Hrs	1		42		42	25%	11
<b>1</b>	<b>01</b>	<b>03</b>	<b>05</b>	<b>03</b>	<b>05</b>	Controls Profile Monitors Prototype Hardware	17-Aug-06	31-Aug-06	SL_CE1	Hrs	1		77		77	25%	19
<b>1</b>	<b>01</b>	<b>03</b>	<b>05</b>	<b>03</b>	<b>06</b>	<b>Controls - E/O Diagnostics</b>											
<b>1</b>	<b>01</b>	<b>03</b>	<b>05</b>	<b>03</b>	<b>07</b>	<b>Controls - BPM</b>					<b>696</b>	<b>-</b>	<b>66,532</b>	<b>-</b>	<b>66,532</b>		<b>16,633</b>
<b>1</b>	<b>01</b>	<b>03</b>	<b>05</b>	<b>03</b>	<b>07</b>	Controls BPMs Final Desgin	1-Aug-06	28-Aug-06	SL_CP1	Hrs	14		1,084		1,084	25%	271
<b>1</b>	<b>01</b>	<b>03</b>	<b>05</b>	<b>03</b>	<b>07</b>	Controls BPMs Final Desgin	1-Aug-06	28-Aug-06	SL_CE1	Hrs	7		716		716	25%	179
<b>1</b>	<b>01</b>	<b>03</b>	<b>05</b>	<b>03</b>	<b>07</b>	Controls BPMs Final Design Review (FDR)	29-Aug-06	29-Aug-06	SL_CP1	Hrs	5		402		402	25%	100
<b>1</b>	<b>01</b>	<b>03</b>	<b>05</b>	<b>03</b>	<b>07</b>	Controls BPMs Prototype Software	1-Aug-06	30-Aug-06	SL_CP1	Hrs	49		3,904		3,904	25%	976
<b>1</b>	<b>01</b>	<b>03</b>	<b>05</b>	<b>03</b>	<b>07</b>	Controls BPMs Prototype Hardware	1-Aug-06	24-Oct-06	SL_CT1	Hrs	171		10,387		10,387	25%	2,597
<b>1</b>	<b>01</b>	<b>03</b>	<b>05</b>	<b>03</b>	<b>07</b>	Controls BPMs Prototype Hardware	1-Aug-06	24-Oct-06	SL_CE1	Hrs	451		50,039		50,039	25%	12,510
<b>1</b>	<b>01</b>	<b>03</b>	<b>05</b>	<b>03</b>	<b>08</b>	<b>Controls - Stoppers</b>					<b>11</b>	<b>-</b>	<b>1,012</b>	<b>-</b>	<b>1,012</b>		<b>253</b>
<b>1</b>	<b>01</b>	<b>03</b>	<b>05</b>	<b>03</b>	<b>08</b>	Controls Stoppers Final Desgin	1-Aug-06	15-Aug-06	SL_CE1	Hrs	2		176		176	25%	44
<b>1</b>	<b>01</b>	<b>03</b>	<b>05</b>	<b>03</b>	<b>08</b>	Controls Stoppers Prototype Hardware	17-Aug-06	31-Aug-06	SL_CT1	Hrs	5		296		296	25%	74
<b>1</b>	<b>01</b>	<b>03</b>	<b>05</b>	<b>03</b>	<b>08</b>	Controls Stoppers Prototype Hardware	17-Aug-06	31-Aug-06	SL_CE1	Hrs	5		540		540	25%	135
<b>1</b>	<b>01</b>	<b>03</b>	<b>05</b>	<b>03</b>	<b>09</b>	<b>Controls - Bunch Length Monitors</b>					<b>160</b>	<b>-</b>	<b>17,129</b>	<b>-</b>	<b>17,129</b>		<b>5,995</b>
<b>1</b>	<b>01</b>	<b>03</b>	<b>05</b>	<b>03</b>	<b>09</b>	Bunch Length Montors Final Desgin	1-Aug-06	30-Aug-06	SL_CE1	Hrs	38		4,164		4,164	35%	1,458
<b>1</b>	<b>01</b>	<b>03</b>	<b>05</b>	<b>03</b>	<b>09</b>	Bunch Length Montors Prototype Hardware	1-Sep-06	18-Sep-06	SL_CT1	Hrs	9		549		549	35%	192
<b>1</b>	<b>01</b>	<b>03</b>	<b>05</b>	<b>03</b>	<b>09</b>	Bunch Length Montors Prototype Hardware	1-Sep-06	18-Sep-06	SL_CE1	Hrs	113		12,416		12,416	35%	4,346
<b>1</b>	<b>01</b>	<b>03</b>	<b>05</b>	<b>03</b>	<b>10</b>	<b>Controls - Beam Loss Monitors</b>											
<b>1</b>	<b>01</b>	<b>03</b>	<b>05</b>	<b>03</b>	<b>11</b>	<b>Controls - Cherenkov Radiation Detector</b>					<b>10</b>	<b>-</b>	<b>870</b>	<b>-</b>	<b>870</b>		<b>305</b>
<b>1</b>	<b>01</b>	<b>03</b>	<b>05</b>	<b>03</b>	<b>11</b>	Controls CRD Final Desgin	1-Aug-06	15-Aug-06	SL_CE1	Hrs	1		154		154	35%	54
<b>1</b>	<b>01</b>	<b>03</b>	<b>05</b>	<b>03</b>	<b>11</b>	Controls CRD Prototype Hardware	17-Aug-06	31-Aug-06	SL_CT1	Hrs	4		253		253	35%	89
<b>1</b>	<b>01</b>	<b>03</b>	<b>05</b>	<b>03</b>	<b>11</b>	Controls CRD Prototype Hardware	17-Aug-06	31-Aug-06	SL_CE1	Hrs	4		463		463	35%	162
<b>1</b>	<b>01</b>	<b>03</b>	<b>05</b>	<b>03</b>	<b>12</b>	<b>Controls - Movable Collimator</b>					<b>150</b>	<b>-</b>	<b>12,769</b>	<b>-</b>	<b>12,769</b>		<b>3,192</b>
<b>1</b>	<b>01</b>	<b>03</b>	<b>05</b>	<b>03</b>	<b>12</b>	Controls Movable Collimator Prototype Hardware	1-Aug-06	30-Aug-06	SL_CT1	Hrs	75		4,517		4,517	25%	1,129
<b>1</b>	<b>01</b>	<b>03</b>	<b>05</b>	<b>03</b>	<b>12</b>	Controls Movable Collimator Prototype Hardware	1-Aug-06	30-Aug-06	SL_CE1	Hrs	75		8,252		8,252	25%	2,063
<b>1</b>	<b>01</b>	<b>03</b>	<b>05</b>	<b>04</b>		<b>Laser Controls Design</b>											
<b>1</b>	<b>01</b>	<b>03</b>	<b>05</b>	<b>05</b>		<b>Laser Heater Controls</b>					<b>504</b>	<b>-</b>	<b>50,426</b>	<b>-</b>	<b>50,426</b>		<b>17,649</b>
<b>1</b>	<b>01</b>	<b>03</b>	<b>05</b>	<b>05</b>		Laser Heater Controls Conceptual Design	15-Feb-07	14-Mar-07	SL_CP1	Hrs	80		6,593		6,593	35%	2,308
<b>1</b>	<b>01</b>	<b>03</b>	<b>05</b>	<b>05</b>		Laser Heater Controls Conceptual Design	15-Feb-07	14-Mar-07	SL_CE1	Hrs	80		9,043		9,043	35%	3,165
<b>1</b>	<b>01</b>	<b>03</b>	<b>05</b>	<b>05</b>		Conceptual Design Review	15-Mar-07	15-Mar-07	SL_CE1	Hrs	8		904		904	35%	316
<b>1</b>	<b>01</b>	<b>03</b>	<b>05</b>	<b>05</b>		Laser Heater Controls Preliminary Design	16-Mar-07	12-Apr-07	SL_CE1	Hrs	80		9,043		9,043	35%	3,165
<b>1</b>	<b>01</b>	<b>03</b>	<b>05</b>	<b>05</b>		Preliminary Design Review (PDR)	13-Apr-07	13-Apr-07	SL_CE1	Hrs	8		904		904	35%	316
<b>1</b>	<b>01</b>	<b>03</b>	<b>05</b>	<b>05</b>		Laser Heater Contrils Final Design	16-Apr-07	15-May-07	SL_CE1	Hrs	80		9,043		9,043	35%	3,165
<b>1</b>	<b>01</b>	<b>03</b>	<b>05</b>	<b>05</b>		Laser Heater Cntrls Final Design Review (FDR)	16-May-07	16-May-07	SL_CE1	Hrs	8		904		904	35%	316
<b>1</b>	<b>01</b>	<b>03</b>	<b>05</b>	<b>05</b>		Laser Heater Controls Prototype Hardware	17-May-07	1-Jun-07	SL_CT1	Hrs	80		4,951		4,951	35%	1,733
<b>1</b>	<b>01</b>	<b>03</b>	<b>05</b>	<b>05</b>		Laser Heater Controls Prototype Hardware	17-May-07	1-Jun-07	SL_CE1	Hrs	80		9,043		9,043	35%	3,165
<b>1</b>	<b>01</b>	<b>03</b>	<b>05</b>	<b>06</b>		<b>Timing Controls</b>											
<b>1</b>	<b>01</b>	<b>03</b>	<b>05</b>	<b>07</b>		<b>Vacuum Controls</b>					<b>23</b>	<b>-</b>	<b>1,875</b>	<b>-</b>	<b>1,875</b>		<b>469</b>
<b>1</b>	<b>01</b>	<b>03</b>	<b>05</b>	<b>07</b>		Vacuum Controls Prototype Software	1-Aug-06	16-Aug-06	SL_CP1	Hrs	14		1,125		1,125	25%	281

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1	2	3	4	5	6						Hours	\$\$	Labor	M&S	Total			
1	01	03	05	07		Vacuum Controls Prototype Hardware	1-Aug-06	16-Aug-06	SL_CT1	Hrs	4		265		265	25%	66	
1	01	03	05	07		Vacuum Controls Prototype Hardware	1-Aug-06	16-Aug-06	SL_CE1	Hrs	4		485		485	25%	121	
<b>1</b>	<b>01</b>	<b>03</b>	<b>05</b>	<b>09</b>		<b>Power Supply Controls</b>					<b>6,631</b>	<b>-</b>	<b>555,555</b>	<b>-</b>	<b>555,555</b>		<b>138,889</b>	
1	01	03	05	09		Controls Power Supplies Management FY06	1-Aug-06	29-Sep-06	SL_CP1	Hrs	140		11,242		11,242	25%	2,811	
1	01	03	05	09		Controls Power Supplies Technical Lead FY06	1-Aug-06	29-Sep-06	SL_CP1	Hrs	140		11,242		11,242	25%	2,811	
1	01	03	05	09		Power Conversion Project Coordinator (50% time)	1-Aug-06	29-Sep-06	SL_TSM1	Hrs	14		1,444		1,444	25%	361	
1	01	03	05	09		Misc. Power Supplies Support FY06	1-Aug-06	29-Sep-06	SL_TMUE1	Hrs	14		1,306		1,306	25%	326	
1	01	03	05	09		Misc. Power Supplies Support FY06	1-Aug-06	29-Sep-06	SL_PCT1	Hrs	14		841		841	25%	210	
1	01	03	05	09		Misc. Power Supplies Support FY06	1-Aug-06	29-Sep-06	SL_EE1	Hrs	14		1,267		1,267	25%	317	
1	01	03	05	09		Misc. Power Supplies Support FY06	1-Aug-06	29-Sep-06	SL_CT1	Hrs	14		841		841	25%	210	
1	01	03	05	09		Misc. Power Supplies Support FY06	1-Aug-06	29-Sep-06	SL_CP1	Hrs	14		1,121		1,121	25%	280	
1	01	03	05	09		Controls Power Supplies Management FY07	2-Oct-06	28-Sep-07	SL_CP1	Hrs	1,694		139,605		139,605	25%	34,901	
1	01	03	05	09		Controls Power Supplies Technical Lead FY07	2-Oct-06	28-Sep-07	SL_CP1	Hrs	339		27,938		27,938	25%	6,984	
1	01	03	05	09		Power Conversion Project Coordinator (50% time)	2-Oct-06	28-Sep-07	SL_TSM1	Hrs	169		17,946		17,946	25%	4,486	
1	01	03	05	09		Misc. Power Supplies Support FY07	2-Oct-06	28-Sep-07	SL_TMUE1	Hrs	169		16,228		16,228	25%	4,057	
1	01	03	05	09		Misc. Power Supplies Support FY07	2-Oct-06	28-Sep-07	SL_PCT1	Hrs	169		10,458		10,458	25%	2,614	
1	01	03	05	09		Misc. Power Supplies Support FY07	2-Oct-06	28-Sep-07	SL_EE1	Hrs	169		15,754		15,754	25%	3,939	
1	01	03	05	09		Misc. Power Supplies Support FY07	2-Oct-06	28-Sep-07	SL_CT1	Hrs	169		10,458		10,458	25%	2,614	
1	01	03	05	09		Misc. Power Supplies Support FY07	2-Oct-06	28-Sep-07	SL_CP1	Hrs	169		13,928		13,928	25%	3,482	
1	01	03	05	09		Controls Power Supplies Management FY08	1-Oct-07	30-Sep-08	SL_CP1	Hrs	851		71,956		71,956	25%	17,989	
1	01	03	05	09		Power Conversion Project Coordinator (50% time)	1-Oct-07	30-Sep-08	SL_TSM1	Hrs	170		18,521		18,521	25%	4,630	
1	01	03	05	09		Misc. Power Supplies Support FY08	1-Oct-07	30-Sep-08	SL_TMUE1	Hrs	170		16,748		16,748	25%	4,187	
1	01	03	05	09		Misc. Power Supplies Support FY08	1-Oct-07	30-Sep-08	SL_PCT1	Hrs	170		10,793		10,793	25%	2,698	
1	01	03	05	09		Misc. Power Supplies Support FY08	1-Oct-07	30-Sep-08	SL_EE1	Hrs	170		16,260		16,260	25%	4,065	
1	01	03	05	09		Misc. Power Supplies Support FY08	1-Oct-07	30-Sep-08	SL_CT1	Hrs	170		10,793		10,793	25%	2,698	
1	01	03	05	09		Misc. Power Supplies Support FY08	1-Oct-07	30-Sep-08	SL_CP1	Hrs	170		14,374		14,374	25%	3,594	
1	01	03	05	09		Controls Power Supplies Management FY09	1-Oct-08	31-Mar-09	SL_CP1	Hrs	167		14,488		14,488	25%	3,622	
1	01	03	05	09		Injector/BC1 Drawings	1-Aug-06	30-Nov-06	SL_MDD1	Hrs	6		496		496	25%	124	
1	01	03	05	09		LINAC Drawings	1-Dec-06	28-Sep-07	SL_MDD1	Hrs	700		58,613		58,613	25%	14,653	
1	01	03	05	09		Undulator Drawings	1-Oct-07	29-Apr-08	SL_MDD1	Hrs	476		40,893		40,893	25%	10,223	
<b>1</b>	<b>01</b>	<b>03</b>	<b>05</b>	<b>10</b>		<b>PPS/BCS Controls</b>					<b>3,058</b>	<b>-</b>	<b>345,579</b>	<b>-</b>	<b>345,579</b>		<b>155,511</b>	
1	01	03	05	10		L02/L03 PPS Conceptual Design	1-Nov-06	1-Feb-07	SL_CE1	Hrs	334		37,753		37,753	45%	16,989	
1	01	03	05	10		L02/L03 Preliminary Design	2-Feb-07	31-May-07	SL_CE1	Hrs	669		75,618		75,618	45%	34,028	
1	01	03	05	10		Functional Requirements Review	2-Feb-07	1-Aug-07	SL_CE1	Hrs	77		8,703		8,703	45%	3,917	
1	01	03	05	10		L02/L03 Final Design	2-Aug-07	2-Oct-07	SL_CE1	Hrs	334		37,769		37,769	45%	16,996	
1	01	03	05	10		External Review	2-Aug-07	2-Oct-07	SL_CE1	Hrs	38		4,297		4,297	45%	1,934	
1	01	03	05	10		Final Design Review (FDR)	3-Oct-07	3-Oct-07	SL_CE1	Hrs	77		8,930		8,930	45%	4,018	
1	01	03	05	10		L02/L03 PPS Conceptual Design	1-Sep-06	1-Dec-06	SL_CE1	Hrs	334		37,437		37,437	45%	16,847	
1	01	03	05	10		L02/L03 Preliminary Design	4-Dec-06	30-Mar-07	SL_CE1	Hrs	669		75,618		75,618	45%	34,028	
1	01	03	05	10		Functional Requirements Review	4-Dec-06	1-Jun-07	SL_CE1	Hrs	77		8,703		8,703	45%	3,917	
1	01	03	05	10		L02/L03 Final Design	4-Jun-07	3-Aug-07	SL_CE1	Hrs	334		37,753		37,753	45%	16,989	
1	01	03	05	10		External Review	4-Jun-07	3-Aug-07	SL_CE1	Hrs	38		4,295		4,295	45%	1,933	
1	01	03	05	10		Final Design Review (FDR)	6-Aug-07	6-Aug-07	SL_CE1	Hrs	77		8,703		8,703	45%	3,917	
<b>1</b>	<b>01</b>	<b>03</b>	<b>05</b>	<b>11</b>		<b>Controls - MPS</b>					<b>-</b>	<b>22,000</b>	<b>-</b>	<b>23,655</b>	<b>23,655</b>		<b>4,731</b>	
1	01	03	05	11		RCV: MPS Prototype Equipment/Hardware	1-Feb-07	1-Feb-07	SL_MSEG1	\$\$		22,000		23,655		23,655	20%	4,731
<b>1</b>	<b>01</b>	<b>03</b>	<b>05</b>	<b>12</b>		<b>Global Controls Management</b>					<b>4,697</b>	<b>1,023,260</b>	<b>500,516</b>	<b>1,104,366</b>	<b>1,604,882</b>		<b>320,976</b>	
<b>1</b>	<b>01</b>	<b>03</b>	<b>05</b>	<b>12</b>	<b>01</b>	<b>Global Controls Management LOE</b>					<b>4,697</b>	<b>829,260</b>	<b>500,516</b>	<b>886,351</b>	<b>1,386,866</b>		<b>277,373</b>	
1	01	03	05	12	01	Controls Cost Account Manager - FY06	1-Aug-06	29-Sep-06	SL_TSM1	Hrs	60		6,210		6,210	20%	1,242	
1	01	03	05	12	01	Controls Technical Coordinator - FY06	1-Aug-06	29-Sep-06	SL_CE1	Hrs	301		33,160		33,160	20%	6,632	
1	01	03	05	12	01	Controls E-Beam Diagnostics Tech Lead - FY06	1-Aug-06	29-Sep-06	SL_MSPPS1	\$\$		146,600		153,637		153,637	20%	30,727
1	01	03	05	12	01	Controls - Wire Scanners Tech Lead - FY06	1-Aug-06	29-Sep-06	SL_MSPPS1	\$\$		146,600		153,637		153,637	20%	30,727
1	01	03	05	12	01	Controls XTOD Tech Lead - FY06	1-Aug-06	29-Sep-06	SL_MSPPS1	\$\$		88,000		92,224		92,224	20%	18,445
1	01	03	05	12	01	Controls Cost Account Manager - FY07	2-Oct-06	28-Sep-07	SL_TSM1	Hrs	169		17,946		17,946	20%	3,589	
1	01	03	05	12	01	Controls Deputy Cost Account Manger - FY07	2-Oct-06	28-Sep-07	SL_TSM1	Hrs	847		89,941		89,941	20%	17,988	
1	01	03	05	12	01	Controls Physicist - FY07	2-Oct-06	28-Sep-07	SL_PHH1	Hrs	847		81,346		81,346	20%	16,269	
1	01	03	05	12	01	Controls Technical Coordinator - FY07	2-Oct-06	28-Sep-07	SL_CE1	Hrs	847		95,738		95,738	20%	19,148	
1	01	03	05	12	01	Controls E-Beam Diagnostics Tech Lead - FY07	2-Oct-06	28-Sep-07	SL_MSPPS1	\$\$		110,000		118,277		118,277	20%	23,655
1	01	03	05	12	01	Controls - Wire Scanners Tech Lead - FY07	2-Oct-06	28-Sep-07	SL_MSPPS1	\$\$		110,000		118,277		118,277	20%	23,655
1	01	03	05	12	01	Controls XT/XE Tech Lead - FY07	2-Oct-06	28-Sep-07	SL_MSPPS1	\$\$		66,000		70,966		70,966	20%	14,193
1	01	03	05	12	01	Controls Cost Account Manager - FY08	1-Oct-07	30-Sep-08	SL_TSM1	Hrs	85		9,261		9,261	20%	1,852	
1	01	03	05	12	01	Controls Deputy Cost Account Manger - FY08	1-Oct-07	30-Sep-08	SL_TSM1	Hrs	425		46,303		46,303	20%	9,261	
1	01	03	05	12	01	Controls Physicist - FY08	1-Oct-07	30-Sep-08	SL_PHH1	Hrs	425		41,878		41,878	20%	8,376	
1	01	03	05	12	01	Controls Technical Coordinator - FY08	1-Oct-07	30-Sep-08	SL_CE1	Hrs	425		49,287		49,287	20%	9,857	
1	01	03	05	12	01	Controls E-Beam Diagnostics Tech Lead - FY08	1-Oct-07	30-Sep-08	SL_MSPPS1	\$\$		55,000		60,676		60,676	20%	12,135

WBS Level						LCLA DCE August-2006 Description	Early Start	Early Finish	Res Code	Units	Work Rem. Bud. Qty		Work Rem. Full Burd and Escltd Cost			Contingency %	Contingency \$
1	2	3	4	5	6						Hours	\$\$	Labor	M&S	Total		
1	01	03	05	12	01	Controls - Wire Scanners Tech Lead - FY08	1-Oct-07	30-Sep-08	SL_MSPS1	\$\$		55,000		60,676	60,676	20%	12,135
1	01	03	05	12	01	Controls XT/XE Tech Lead - FY08	1-Oct-07	30-Sep-08	SL_MSPS1	\$\$		33,000		36,406	36,406	20%	7,281
1	01	03	05	12	01	Controls Cost Account Manager - FY09	1-Oct-08	31-Mar-09	SL_TSM1	Hrs	17		1,900		1,900	20%	380
1	01	03	05	12	01	Controls Deputy Cost Account Manger - FY09	1-Oct-08	31-Mar-09	SL_TSM1	Hrs	83		9,278		9,278	20%	1,856
1	01	03	05	12	01	Controls Physicist - FY09	1-Oct-08	31-Mar-09	SL_PHH1	Hrs	83		8,391		8,391	20%	1,678
1	01	03	05	12	01	Controls Technical Coordinator - FY09	1-Oct-08	31-Mar-09	SL_CE1	Hrs	83		9,876		9,876	20%	1,975
1	01	03	05	12	01	Controls E-Beam Diagnostics Tech Lead - FY09	1-Oct-08	31-Mar-09	SL_MSPS1	\$\$		7,330		8,297	8,297	20%	1,659
1	01	03	05	12	01	Controls - Wire Scanners Tech Lead - FY09	1-Oct-08	31-Mar-09	SL_MSPS1	\$\$		7,330		8,297	8,297	20%	1,659
1	01	03	05	12	01	Controls XT/XE Tech Lead - FY09	1-Oct-08	31-Mar-09	SL_MSPS1	\$\$		4,400		4,980	4,980	20%	996
1	01	03	05	12	02	<b>Global Controls Management</b>					-	<b>194,000</b>	-	<b>218,016</b>	<b>218,016</b>		<b>43,603</b>
1	01	03	05	12	02	Controls - Travel - FY06	1-Aug-06	29-Sep-06	SL_MSTR1	\$\$		25,000		30,000	30,000	20%	6,000
1	01	03	05	12	02	Controls - Materials & Supplies - FY06	1-Aug-06	29-Sep-06	SL_MSCS1	\$\$		15,000		15,720	15,720	20%	3,144
1	01	03	05	12	02	Controls - Training - FY06	1-Aug-06	29-Sep-06	SL_MSCS1	\$\$		15,000		15,720	15,720	20%	3,144
1	01	03	05	12	02	Controls - Misc. Hardware - FY06	1-Aug-06	29-Sep-06	SL_MSEG1	\$\$		25,000		26,200	26,200	20%	5,240
1	01	03	05	12	02	Controls - Travel FY07	2-Oct-06	28-Sep-07	SL_MSTR1	\$\$		25,000		30,780	30,780	20%	6,156
1	01	03	05	12	02	Controls - Materials & Supplies - FY07	2-Oct-06	28-Sep-07	SL_MSCS1	\$\$		10,000		10,752	10,752	20%	2,150
1	01	03	05	12	02	Controls - Training - FY07	2-Oct-06	28-Sep-07	SL_MSCS1	\$\$		10,000		10,752	10,752	20%	2,150
1	01	03	05	12	02	Controls - Misc. Hardware - FY07	2-Oct-06	28-Sep-07	SL_MSEG1	\$\$		25,000		26,881	26,881	20%	5,376
1	01	03	05	12	02	Controls - Travel FY08	1-Oct-07	30-Sep-08	SL_MSTR1	\$\$		12,500		15,790	15,790	20%	3,158
1	01	03	05	12	02	Controls - Materials & Supplies - FY08	1-Oct-07	30-Sep-08	SL_MSCS1	\$\$		5,000		5,516	5,516	20%	1,103
1	01	03	05	12	02	Controls - Training - FY08	1-Oct-07	30-Sep-08	SL_MSCS1	\$\$		5,000		5,516	5,516	20%	1,103
1	01	03	05	12	02	Controls - Misc. Hardware - FY08	1-Oct-07	30-Sep-08	SL_MSEG1	\$\$		12,500		13,790	13,790	20%	2,758
1	01	03	05	12	02	Controls - Travel FY09	1-Oct-08	31-Mar-09	SL_MSTR1	\$\$		2,500		3,240	3,240	20%	648
1	01	03	05	12	02	Controls - Materials & Supplies - FY09	1-Oct-08	31-Mar-09	SL_MSCS1	\$\$		2,000		2,264	2,264	20%	453
1	01	03	05	12	02	Controls - Training - FY09	1-Oct-08	31-Mar-09	SL_MSCS1	\$\$		2,000		2,264	2,264	20%	453
1	01	03	05	12	02	Controls - Misc. Hardware - FY09	1-Oct-08	31-Mar-09	SL_MSEG1	\$\$		2,500		2,830	2,830	20%	566
1	01	03	05	13		<b>SLC Aware IOC</b>											
1	01	03	05	14		<b>Controls - S/W Application</b>											
1	01	03	05	15		<b>Controls - BCS</b>					152	-	16,745	-	16,745		4,186
1	01	03	05	15		Controls BCS Final Desgin	1-Aug-06	28-Aug-06	SL_CE1	Hrs	144		15,864		15,864	25%	3,966
1	01	03	05	15		Controls BCS Final Design Review (FDR)	29-Aug-06	29-Aug-06	SL_CE1	Hrs	8		881		881	25%	220
1	01	03	06			<b>Technical Requirements/Parameters</b>					350	-	24,927	-	24,927		4,985
1	01	03	06			Define Technical Requirements/Parameters(CON)	1-Jun-06	29-Sep-06	SL_PHS1	Hrs	350		24,927		24,927	20%	4,985
1	02					<b>INJECTOR SYSTEM</b>					7,416	1,163,055	656,774	1,228,607	1,885,381		399,385
1	02	02				<b>Injector Controls Subsystem</b>					7,416	1,163,055	656,774	1,228,607	1,885,381		399,385
1	02	02	01			<b>Personnel Protection Subsystem (PPS)</b>					707	22,000	59,255	23,056	82,311		19,425
1	02	02	01			Injector Controls Software	1-Aug-06	29-Aug-06	SL_CP1	Hrs	139		11,181		11,181	25%	2,795
1	02	02	01			RCV: 1 Battery Recharger	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		22,000		23,056	23,056	20%	4,611
1	02	02	01			Injector PPS HW	30-Aug-06	28-Sep-06	SL_CT1	Hrs	278		16,791		16,791	25%	4,198
1	02	02	01			Injector PPS HW	30-Aug-06	28-Sep-06	SL_CE1	Hrs	70		7,668		7,668	25%	1,917
1	02	02	01			Injector Controls PPS Integration and Test	29-Sep-06	13-Nov-06	SL_CP1	Hrs	40		3,293		3,293	25%	823
1	02	02	01			Injector Controls PPS Integration and Test	29-Sep-06	13-Nov-06	SL_CE1	Hrs	180		20,323		20,323	25%	5,081
1	02	02	02			<b>Beam Containment Subsystem (BCS)</b>					1,800	217,100	195,832	227,521	423,353		93,739
1	02	02	02			S	1-Aug-06	29-Sep-06	SL_CE1	Hrs	80		8,813		8,813	25%	2,203
1	02	02	02			Write Certification Procedures	1-Aug-06	29-Sep-06	SL_CE1	Hrs	320		35,253		35,253	25%	8,813
1	02	02	02			Write System Documentation	1-Aug-06	30-Jan-07	SL_CE1	Hrs	600		67,243		67,243	25%	16,811
1	02	02	02			Injector Controls Software	1-Aug-06	28-Aug-06	SL_CP1	Hrs	120		9,639		9,639	35%	3,374
1	02	02	02			RCV: 1 Cables	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		60,000		62,880	62,880	20%	12,576
1	02	02	02			RCV: 2 Local Mode Chassis	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		10,700		11,214	11,214	25%	2,803
1	02	02	02			RCV: 2 Interlock Chassis	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		10,900		11,423	11,423	20%	2,285
1	02	02	02			RCV: 2 Beam Permissive Current Loop Transmitter	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		10,700		11,214	11,214	10%	1,121
1	02	02	02			RCV: 2 Beam Permissive Current Loop Receiver	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		10,700		11,214	11,214	10%	1,121
1	02	02	02			RCV: 3 PIC Lion Cards	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		16,500		17,292	17,292	25%	4,323
1	02	02	02			RCV: 24 PIC / Lion Cards	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		43,200		45,274	45,274	25%	11,318
1	02	02	02			RCV: 2 Lion Power Supplies	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		10,800		11,318	11,318	25%	2,830
1	02	02	02			RCV: 1 Master Beam Control Panel	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		1,200		1,258	1,258	10%	126
1	02	02	02			RCV: 3 IOCs	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		16,500		17,292	17,292	10%	1,729
1	02	02	02			RCV: 1 I/O	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		12,000		12,576	12,576	10%	1,258
1	02	02	02			RCV: 4 Lions	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		4,400		4,611	4,611	20%	922
1	02	02	02			RCV: 1 Injector Lion	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		1,100		1,153	1,153	20%	231
1	02	02	02			RCV: 2 Dump Flow Switches	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		2,800		2,934	2,934	20%	587
1	02	02	02			RCV: 4 Pressure Switches	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		5,600		5,869	5,869	10%	587
1	02	02	02			Injector Control BCS HW Fabrication	30-Aug-06	25-Oct-06	SL_CE1	Hrs	460		51,242		51,242	25%	12,810
1	02	02	02			Injector Controls BCS Integration and Test	26-Oct-06	22-Nov-06	SL_CP1	Hrs	40		3,296		3,296	25%	824

WBS Level						LCLA DCE August-2006 Description	Early Start	Early Finish	Res Code	Units	Work Rem. Bud. Qty		Work Rem. Full Burd and Escltd Cost			Contingency %	Contingency \$
1	2	3	4	5	6						Hours	\$\$	Labor	M&S	Total		
1	02	02	02	5	6	Injector Controls BCS Integration and Test	26-Oct-06	22-Nov-06	SL_CE1	Hrs	180		20,346		20,346	25%	5,086
1	02	02	03			<b>Machine Protection Subsystem (MPS)</b>					-	75,800	-	79,438	79,438		23,942
1	02	02	03			RCV: 1Custom Electronics	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		2,500		2,620	2,620	45%	1,179
1	02	02	03			RCV: 1 EVR	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		2,900		3,039	3,039	20%	608
1	02	02	03			RCV: PLICs, LIONS, TIU Electronics	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		31,000		32,488	32,488	25%	8,122
1	02	02	03			RCV: 1 Motorola 6100	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		5,600		5,869	5,869	20%	1,174
1	02	02	03			RCV:1 IOC Crate 21 Slots	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		8,400		8,803	8,803	10%	880
1	02	02	03			RCV:1 Custom Input Electronics	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		8,400		8,803	8,803	45%	3,961
1	02	02	03			RCV: 1 Custom Controller	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		17,000		17,816	17,816	45%	8,017
1	02	02	04			<b>Injector Power Conversion</b>					741	79,183	49,153	82,983	132,136		13,214
1	02	02	04	01		<b>Beamline Pwr Supplies - (Dipole Type)</b>					112	15,197	8,883	15,926	24,810		2,481
1	02	02	04	01	01	<b>10kw Power Supply - (Solenoid 1)</b>					56	-	4,442	-	4,442		444
1	02	02	04	01	01	Perform Solenoid 1 PS 10KW Pre-Install Qual Test	10-Oct-06	6-Nov-06	SL_PCE1	Hrs	16		1,809		1,809	10%	181
1	02	02	04	01	01	Perform Solenoid 1 PS 10KW Pre-Install Qual Test	10-Oct-06	6-Nov-06	SL_PCCA1	Hrs	40		2,633		2,633	10%	263
1	02	02	04	01	02	<b>30kw Power Supply - (Solenoid 2)</b>					56	15,197	4,442	15,926	20,368		2,037
1	02	02	04	01	02	Perform Solenoid 2 PS 15KW Pre-Install Qual Test	10-Oct-06	6-Nov-06	SL_PCE1	Hrs	16		1,809		1,809	10%	181
1	02	02	04	01	02	Perform Solenoid 2 PS 15KW Pre-Install Qual Test	10-Oct-06	6-Nov-06	SL_PCCA1	Hrs	40		2,633		2,633	10%	263
1	02	02	04	01	02	30kw Power Supply - (Solenoid 2)	1-Aug-06	28-Aug-06	SL_MSEG1	\$\$		15,197		15,926	15,926	10%	1,593
1	02	02	04	01	03	<b>2kw Power Supply - (B0.5 Spect)</b>											
1	02	02	04	01	04	<b>15kw Power Supply - (B1-2)</b>											
1	02	02	04	01	04	Perform BX011-BX02 PS 15KW Pre-Install Qual Test	10-Oct-06	6-Nov-06	SL_PCE1	Hrs	-		-		-	10%	-
1	02	02	04	01	04	Perform BX011-BX02 PS 15KW Pre-Install Qual Test	10-Oct-06	6-Nov-06	SL_PCCA1	Hrs	-		-		-	10%	-
1	02	02	04	01	05	<b>15kw Power Supply - (B3 Spect)</b>											
1	02	02	04	01	05	Perform BXS Spect PS 15KW Pre-Install Qual Test	10-Oct-06	6-Nov-06	SL_PCE1	Hrs	-		-		-	10%	-
1	02	02	04	01	05	Perform BXS Spect PS 15KW Pre-Install Qual Test	10-Oct-06	6-Nov-06	SL_PCCA1	Hrs	-		-		-	10%	-
1	02	02	04	01	06	<b>10kw Power Supply - (New)</b>											
1	02	02	04	01	06	Perform Wiggler PS 10KW Pre-Install Qual	10-Oct-06	6-Nov-06	SL_PCE1	Hrs	-		-		-	10%	-
1	02	02	04	01	06	Perform Wiggler PS 10KW Pre-Install Qual	10-Oct-06	6-Nov-06	SL_PCCA1	Hrs	-		-		-	10%	-
1	02	02	04	02		<b>Power Supply Controls</b>											
1	02	02	04	03		<b>Beamline Pwr Supplies - (Trim Type)</b>											
1	02	02	04	03	01	<b>12Amp Power Supply - (MCOR_1)</b>											
1	02	02	04	03	01	Perform MCOR_1 Pre-Install Qual Test	10-Oct-06	6-Nov-06	SL_PCE1	Hrs	-		-		-	10%	-
1	02	02	04	03	01	Perform MCOR_1 Pre-Install Qual Test	10-Oct-06	6-Nov-06	SL_PCCA1	Hrs	-		-		-	10%	-
1	02	02	04	03	02	<b>30Amp Power Supply - (MCOR_2)</b>											
1	02	02	04	03	02	Perform MCOR_2 Pre-Install Qual Test	10-Oct-06	6-Nov-06	SL_PCE1	Hrs	-		-		-	10%	-
1	02	02	04	03	02	Perform MCOR_2 Pre-Install Qual Test	10-Oct-06	6-Nov-06	SL_PCCA1	Hrs	-		-		-	10%	-
1	02	02	04	03	03	<b>30Amp Power Supply - (MCOR_3)</b>											
1	02	02	04	03	03	Perform MCOR_3 Pre-Install Qual Test	10-Oct-06	6-Nov-06	SL_PCE1	Hrs	-		-		-	10%	-
1	02	02	04	03	03	Perform MCOR_3 Pre-Install Qual Test	10-Oct-06	6-Nov-06	SL_PCCA1	Hrs	-		-		-	10%	-
1	02	02	04	03	04	<b>30Amp Power Supply - (MCOR_4)</b>											
1	02	02	04	03	04	Perform MCOR_4 Pre-Install Qual Test	10-Oct-06	6-Nov-06	SL_PCE1	Hrs	-		-		-	10%	-
1	02	02	04	03	04	Perform MCOR_4 Pre-Install Qual Test	10-Oct-06	6-Nov-06	SL_PCCA1	Hrs	-		-		-	10%	-
1	02	02	04	04		<b>Beamline Pwr Supply - Misc Hdwr</b>					629	63,986	40,270	67,057	107,327		10,733
1	02	02	04	04		Integ Rack HW & Internal AC Wiring - S20	1-Nov-06	14-Nov-06	SL_PCEF1	Hrs	135		8,354		8,354	10%	835
1	02	02	04	04		Integ Rack Mount Pwr Supplies&Intra Cables - S20	26-Sep-06	9-Oct-06	SL_PCEF1	Hrs	68		4,167		4,167	10%	417
1	02	02	04	04		Integ Rack/Crate Mount Cntrls&Intra-Cables - S20	26-Sep-06	6-Nov-06	SL_PCEF1	Hrs	270		16,656		16,656	10%	1,666
1	02	02	04	04		Perform Pre-Install Testing Controls - S20	15-Nov-06	7-Dec-06	SL_CCA1	Hrs	120		7,899		7,899	10%	790
1	02	02	04	04		Captar Documents	15-Aug-06	10-Oct-06	SL_PCCA1	Hrs	4		258		258	10%	26
1	02	02	04	04		Cableplant and Rack Hardware	1-Aug-06	28-Aug-06	SL_MSEG1	\$\$		16,286		17,067	17,067	10%	1,707
1	02	02	04	04		Vendor Fab/Assy - Single Bay Racks	2-Aug-06	29-Aug-06	SA_MSSC1	\$\$		25,200		26,410	26,410	10%	2,641
1	02	02	04	04		Vendor Fab/Assy - Double Bay Racks	2-Aug-06	30-Aug-06	SA_MSSC1	\$\$		22,500		23,580	23,580	10%	2,358
1	02	02	04	04		Design Cableplant and Racks	1-Aug-06	28-Aug-06	SL_PCE1	Hrs	19		2,082		2,082	10%	208
1	02	02	04	04		Design Cableplant and Racks	1-Aug-06	28-Aug-06	SL_PCCA1	Hrs	13		853		853	10%	85
1	02	02	04	05		<b>Magnet Interlock Protection System</b>											
1	02	02	05			<b>LLRF Controls</b>						263,226	-	283,033	283,033		70,758
1	02	02	05	01		<b>Readback &amp; Controls - RF Gun LLRF &amp; Temperature</b>						263,226	-	283,033	283,033		70,758
1	02	02	05	01		RCV: 1 RF Reference System	30-Oct-06	30-Oct-06	SL_MSEG1	\$\$		49,007		52,695	52,695	25%	13,174
1	02	02	05	01		RCV: 1Solid Stat Sub-Booster	30-Oct-06	30-Oct-06	SL_MSEG1	\$\$		1,885		2,027	2,027	25%	507
1	02	02	05	01		RCV: 1Bunch Length Monitor Interface	30-Oct-06	30-Oct-06	SL_MSEG1	\$\$		9,424		10,133	10,133	25%	2,533
1	02	02	05	01		RCV: 1 RF Gun Temperature Feedback	30-Oct-06	30-Oct-06	SL_MSEG1	\$\$		4,712		5,067	5,067	25%	1,267
1	02	02	05	01		RCV: 1 Beam Phase Monitor x2	30-Oct-06	30-Oct-06	SL_MSEG1	\$\$		4,712		5,067	5,067	25%	1,267
1	02	02	05	01		RCV: 15 PADs with RF head	30-Oct-06	30-Oct-06	SL_MSEG1	\$\$		70,684		76,003	76,003	25%	19,001
1	02	02	05	01		RCV: 15 PACs with RF head	30-Oct-06	30-Oct-06	SL_MSEG1	\$\$		70,684		76,003	76,003	25%	19,001
1	02	02	05	01		RCV: 1 RF Cables	30-Oct-06	30-Oct-06	SL_MSEG1	\$\$		9,424		10,133	10,133	25%	2,533

WBS Level						LCLA DCE August-2006 Description	Early Start	Early Finish	Res Code	Units	Work Rem. Bud. Qty		Work Rem. Full Burd and Escltd Cost			Contingency %	Contingency \$
1	2	3	4	5	6						Hours	\$\$	Labor	M&S	Total		
1	02	02	05	01		RCV: 1 X-Band LLRF System	30-Oct-06	30-Oct-06	SL_MSEG1	\$\$		188		202	202	25%	51
1	02	02	05	01		RCV: 2 Network	30-Oct-06	30-Oct-06	SL_MSEG1	\$\$		377		405	405	25%	101
1	02	02	05	01		RCV: 2 PPS Vacuum Interlock	30-Oct-06	30-Oct-06	SL_MSEG1	\$\$		17,907		19,254	19,254	25%	4,814
1	02	02	05	01		RCV: 1 BCS Sub-Booster Interface Trig	30-Oct-06	30-Oct-06	SL_MSEG1	\$\$		7,917		8,513	8,513	25%	2,128
1	02	02	05	01		RCV: 1 EVR	30-Oct-06	30-Oct-06	SL_MSEG1	\$\$		2,733		2,939	2,939	25%	735
1	02	02	05	01		RCV: 1 Binary I/O	30-Oct-06	30-Oct-06	SL_MSEG1	\$\$		377		405	405	25%	101
1	02	02	05	01		RCV:Motorola 6100	30-Oct-06	30-Oct-06	SL_MSEG1	\$\$		5,278		5,675	5,675	25%	1,419
1	02	02	05	01		RCV: IOC Crate 21 Slots	30-Oct-06	30-Oct-06	SL_MSEG1	\$\$		7,917		8,513	8,513	25%	2,128
1	02	02	05	02		Readback & Controls - L0 LLRF											
1	02	02	05	03		Readback & Controls - Transverse Cavity LLRF											
1	02	02	05	04		S-Band Cavity Controls											
1	02	02	05	05		EO Phase Controls											
1	02	02	06			E-Beam Diagnostics Controls					3,471	177,323	298,769	186,096	484,865		96,012
1	02	02	06	01		Controls - Wire Scanners					202	24,288	16,865	25,454	42,319		5,475
1	02	02	06	01		RCV: 5 PMTs	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		-		-	-	10%	-
1	02	02	06	01		RCV: 5 Charge Integrating ADC	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		3,300		3,458	3,458	10%	346
1	02	02	06	01		RCV: 7 Motor Contrlr/ Drives/Power Supplies	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		8,820		9,243	9,243	10%	924
1	02	02	06	01		RCV: 1 LVDT	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		4,848		5,081	5,081	10%	508
1	02	02	06	01		RCV: 1 EVR	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		1,740		1,824	1,824	10%	182
1	02	02	06	01		RCV:Motorola 6100	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		2,100		2,201	2,201	10%	220
1	02	02	06	01		RCV: IOC Crate 7 Slots	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		3,480		3,647	3,647	10%	365
1	02	02	06	01		Injector Hardware Fab	30-Aug-06	27-Sep-06	SL_CT1	Hrs	38		2,316		2,316	10%	232
1	02	02	06	01		Injector Hardware Fab	30-Aug-06	27-Sep-06	SL_CE1	Hrs	19		2,115		2,115	10%	212
1	02	02	06	01		Injector Integration and Test	28-Sep-06	4-Oct-06	SL_CT1	Hrs	72		4,399		4,399	20%	880
1	02	02	06	01		Injector Integration and Test	28-Sep-06	4-Oct-06	SL_CE1	Hrs	72		8,035		8,035	20%	1,607
1	02	02	06	02		Controls - BPM					1,547	55,675	133,569	58,347	191,916		47,979
1	02	02	06	02		Injector Control Software	1-Aug-06	28-Aug-06	SL_CP1	Hrs	51		4,096		4,096	25%	1,024
1	02	02	06	02		RCV: 16 BPM Front End Electronics	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		27,200		28,506	28,506	25%	7,126
1	02	02	06	02		RCV: 8 Echotek	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		27,200		28,506	28,506	25%	7,126
1	02	02	06	02		RCV: 2 EVRs	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		-		-	-	10%	-
1	02	02	06	02		RCV: 2 Interrack Cables	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		425		445	445	25%	111
1	02	02	06	02		RCV: 2 Binary I/Os	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		850		891	891	25%	223
1	02	02	06	02		RCV: 2 Motorola 6100	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		-		-	-	10%	-
1	02	02	06	02		RCV: 2 IOC Crate - 21 Slot	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		-		-	-	10%	-
1	02	02	06	02		Injector Hardware Fab	30-Aug-06	28-Sep-06	SL_CT1	Hrs	136		8,203		8,203	25%	2,051
1	02	02	06	02		Injector Hardware Fab	30-Aug-06	28-Sep-06	SL_CE1	Hrs	136		14,983		14,983	25%	3,746
1	02	02	06	02		Injector Integration and Test	29-Sep-06	11-Dec-06	SL_CT1	Hrs	544		33,640		33,640	25%	8,410
1	02	02	06	02		Injector Integration and Test	29-Sep-06	11-Dec-06	SL_CP1	Hrs	136		11,200		11,200	25%	2,800
1	02	02	06	02		Injector Integration and Test	29-Sep-06	11-Dec-06	SL_CE1	Hrs	544		61,446		61,446	25%	15,362
1	02	02	06	03		Controls - Toroids					800	27,700	69,738	29,030	98,767		20,442
1	02	02	06	03		Injector Rack Layout and Wiring	1-Aug-06	15-Aug-06	SL_CE1	Hrs	100		11,017		11,017	25%	2,754
1	02	02	06	03		Injector Rack Layout and Wiring	1-Aug-06	15-Aug-06	SL_CCA1	Hrs	100		6,416		6,416	25%	1,604
1	02	02	06	03		RCV: 3 EVRs	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		12,000		12,576	12,576	10%	1,258
1	02	02	06	03		RCV: 1 Crate/CPU/PMC Spa n	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		8,000		8,384	8,384	10%	838
1	02	02	06	03		RCV: 1 I/O	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		6,700		7,022	7,022	10%	702
1	02	02	06	03		RCV: Injector Interrack Cables	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		1,000		1,048	1,048	20%	210
1	02	02	06	03		Injector Hardware Fab	30-Aug-06	22-Nov-06	SL_CT1	Hrs	100		6,128		6,128	25%	1,532
1	02	02	06	03		Injector Hardware Fab	30-Aug-06	22-Nov-06	SL_CE1	Hrs	100		11,194		11,194	25%	2,799
1	02	02	06	03		Injector Integration and Test	27-Nov-06	1-Dec-06	SL_CT1	Hrs	200		12,376		12,376	25%	3,094
1	02	02	06	03		Injector Integration and Test	27-Nov-06	1-Dec-06	SL_CE1	Hrs	200		22,606		22,606	25%	5,652
1	02	02	06	05		Controls - Profile Monitors					53	31,560	4,614	33,336	37,950		4,320
1	02	02	06	05		Injector Rack Layout and Wiring	17-Aug-06	18-Sep-06	SL_CE1	Hrs	6		705		705	10%	71
1	02	02	06	05		Injector Rack Layout and Wiring	17-Aug-06	18-Sep-06	SL_CCA1	Hrs	6		411		411	10%	41
1	02	02	06	05		RCV: 8 Injector Profile Monitor Cameras	17-Oct-06	17-Oct-06	SL_MSEG1	\$\$		9,600		10,322	10,322	10%	1,032
1	02	02	06	05		RCV: 8 PMC Interfaced Cables	15-Sep-06	15-Sep-06	SL_MSEG1	\$\$		8,320		8,719	8,719	10%	872
1	02	02	06	05		RCV: 2 Smart Lenses	15-Sep-06	15-Sep-06	SL_MSEG1	\$\$		480		503	503	10%	50
1	02	02	06	05		RCV: 4 IOCs CPU/EVR/Span	15-Sep-06	15-Sep-06	SL_MSEG1	\$\$		8,960		9,390	9,390	10%	939
1	02	02	06	05		RCV: Injector Interrack Cables	15-Sep-06	15-Sep-06	SL_MSEG1	\$\$		200		210	210	10%	21
1	02	02	06	05		RCV: 1 IOC Crate	15-Sep-06	15-Sep-06	SL_MSEG1	\$\$		4,000		4,192	4,192	10%	419
1	02	02	06	05		Injector Hardware Fab	18-Oct-06	15-Nov-06	SL_CT1	Hrs	4		248		248	25%	62
1	02	02	06	05		Injector Hardware Fab	18-Oct-06	15-Nov-06	SL_CE1	Hrs	4		452		452	25%	113
1	02	02	06	05		Injector Integration and Test	16-Nov-06	22-Nov-06	SL_CT1	Hrs	16		990		990	25%	248
1	02	02	06	05		Injector Integration and Test	16-Nov-06	22-Nov-06	SL_CE1	Hrs	16		1,809		1,809	25%	452
1	02	02	06	06		Controls - E/O Diagnostics											

WBS Level						LCLA DCE August-2006 Description	Early Start	Early Finish	Res Code	Units	Work Rem. Bud. Qty		Work Rem. Full Burd and Escltd Cost			Contingency %	Contingency \$
1	2	3	4	5	6						Hours	\$\$	Labor	M&S	Total		
1	02	02	06	12		<b>Controls - Movable Collimator</b>					348	14,500	29,121	15,196	44,317	2,912	
1	02	02	06	12		RCV: 5 PMTs	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		4,000		4,192	4,192	0%	-
1	02	02	06	12		RCV: 5 Motor Contrlr/ Drives/Power Supplies	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		10,500		11,004	11,004	0%	-
1	02	02	06	12		Injector Hardware Fab	31-Aug-06	28-Sep-06	SL_CT1	Hrs	72		4,343		4,343	10%	434
1	02	02	06	12		Injector Hardware Fab	31-Aug-06	28-Sep-06	SL_CE1	Hrs	36		3,966		3,966	10%	397
1	02	02	06	12		Injector Integration and Test	29-Sep-06	5-Oct-06	SL_CT1	Hrs	120		7,363		7,363	10%	736
1	02	02	06	12		Injector Integration and Test	29-Sep-06	5-Oct-06	SL_CE1	Hrs	120		13,449		13,449	10%	1,345
1	02	02	06	14		<b>Controls - Faraday Cups</b>					138	500	11,956	524	12,480	3,120	
1	02	02	06	14		Injector Controls FC Rack Layout and Wiring	17-Aug-06	14-Sep-06	SL_CE1	Hrs	13		1,410		1,410	25%	353
1	02	02	06	14		Injector Controls FC Rack Layout and Wiring	17-Aug-06	14-Sep-06	SL_CCA1	Hrs	13		821		821	25%	205
1	02	02	06	14		RCV: Injector Interrack Cables	15-Sep-06	15-Sep-06	SL_MSEG1	\$\$		500		524	524	25%	131
1	02	02	06	14		Injector Faraday Cups Hardware Fab	18-Sep-06	29-Sep-06	SL_CT1	Hrs	16		965		965	25%	241
1	02	02	06	14		Injector Faraday Cups Hardware Fab	18-Sep-06	29-Sep-06	SL_CE1	Hrs	16		1,763		1,763	25%	441
1	02	02	06	14		Injector Faraday Cups Integration and Test	2-Oct-06	6-Oct-06	SL_CT1	Hrs	40		2,475		2,475	25%	619
1	02	02	06	14		Injector Faraday Cups Integration and Test	2-Oct-06	6-Oct-06	SL_CE1	Hrs	40		4,521		4,521	25%	1,130
1	02	02	06	15		<b>Controls - Tune-Up Dump</b>					246	14,200	20,913	14,882	35,795	6,748	
1	02	02	06	15		Injector Rack Layout and Wiring	1-Sep-06	29-Sep-06	SL_CE1	Hrs	13		1,410		1,410	25%	353
1	02	02	06	15		Injector Rack Layout and Wiring	1-Sep-06	29-Sep-06	SL_CCA1	Hrs	13		821		821	25%	205
1	02	02	06	15		Injector Control Software	2-Oct-06	31-Oct-06	SL_CP1	Hrs	32		2,637		2,637	25%	659
1	02	02	06	15		RCV: 1 Crate/CPU/PMC Span	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		7,000		7,336	7,336	10%	734
1	02	02	06	15		RCV: 1 I/O	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		7,000		7,336	7,336	10%	734
1	02	02	06	15		RCV: 1 Injector Interrack Cables	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		200		210	210	25%	52
1	02	02	06	15		Injector Hardware Fab	30-Aug-06	28-Sep-06	SL_CT1	Hrs	14		869		869	25%	217
1	02	02	06	15		Injector Hardware Fab	30-Aug-06	28-Sep-06	SL_CE1	Hrs	14		1,586		1,586	25%	397
1	02	02	06	15		Injector Integration and Test	1-Nov-06	7-Nov-06	SL_CT1	Hrs	40		2,475		2,475	25%	619
1	02	02	06	15		Injector Integration and Test	1-Nov-06	7-Nov-06	SL_CP1	Hrs	80		6,593		6,593	25%	1,648
1	02	02	06	15		Injector Integration and Test	1-Nov-06	7-Nov-06	SL_CE1	Hrs	40		4,521		4,521	25%	1,130
1	02	02	06	16		<b>Controls - Cherenkov Radiation Detector</b>					138	8,900	11,994	9,327	21,321	5,016	
1	02	02	06	16		Injector Rack Layout and Wiring	17-Aug-06	14-Sep-06	SL_CE1	Hrs	13		1,410		1,410	25%	353
1	02	02	06	16		Injector Rack Layout and Wiring	17-Aug-06	14-Sep-06	SL_CCA1	Hrs	13		821		821	25%	205
1	02	02	06	16		RCV: 1 Crate/CPU/EVR	15-Sep-06	15-Sep-06	SL_MSEG1	\$\$		-		-	-	10%	-
1	02	02	06	16		RCV: 1 Pneumatic I/O	15-Sep-06	15-Sep-06	SL_MSEG1	\$\$		2,000		2,096	2,096	10%	210
1	02	02	06	16		RCV: 1 Injector Interrack Cables	15-Sep-06	15-Sep-06	SL_MSEG1	\$\$		1,000		1,048	1,048	25%	262
1	02	02	06	16		RCV: 2 Actuators (motion control from AM01)	15-Sep-06	15-Sep-06	SL_MSEG1	\$\$		2,500		2,620	2,620	25%	655
1	02	02	06	16		RCV: 2 Long Haul Cables	15-Sep-06	15-Sep-06	SL_MSEG1	\$\$		3,400		3,563	3,563	25%	891
1	02	02	06	16		Injector Hardware Fab	18-Sep-06	16-Oct-06	SL_CT1	Hrs	16		978		978	25%	245
1	02	02	06	16		Injector Hardware Fab	18-Sep-06	16-Oct-06	SL_CE1	Hrs	16		1,787		1,787	25%	447
1	02	02	06	16		Injector Integration and Test	17-Oct-06	23-Oct-06	SL_CT1	Hrs	40		2,475		2,475	25%	619
1	02	02	06	16		Injector Integration and Test	17-Oct-06	23-Oct-06	SL_CE1	Hrs	40		4,521		4,521	25%	1,130
1	02	02	08			<b>Timing Controls</b>					-	117,500	-	123,140	123,140	30,785	
1	02	02	08			RCV: 1 EVG	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		3,900		4,087	4,087	25%	1,022
1	02	02	08			RCV: 4 EVR	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		11,600		12,157	12,157	25%	3,039
1	02	02	08			RCV: 8 EVG Distribution	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		76,000		79,648	79,648	25%	19,912
1	02	02	08			RCV: 8 EVR Transition Modules	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		12,000		12,576	12,576	25%	3,144
1	02	02	08			RCV: 1 Motorola 6100	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		5,600		5,869	5,869	25%	1,467
1	02	02	08			RCV: 1 IOC Crate - 21 Slots	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		8,400		8,803	8,803	25%	2,201
1	02	02	09			<b>Vacuum Controls</b>					494	99,190	39,464	103,951	143,415	21,896	
1	02	02	09			Injector Control Vacuum Software	17-Aug-06	14-Sep-06	SL_CP1	Hrs	52		4,177		4,177	25%	1,044
1	02	02	09			Injector Control Vacuum H/W in House FAB	17-Aug-06	14-Sep-06	SL_CT1	Hrs	104		6,273		6,273	25%	1,568
1	02	02	09			Injector Control Vacuum H/W in House FAB	17-Aug-06	14-Sep-06	SL_CE1	Hrs	26		2,864		2,864	25%	716
1	02	02	09			RCV: 8 Injector Ion Guage Controllers	15-Sep-06	15-Sep-06	SL_MSEG1	\$\$		13,000		13,624	13,624	10%	1,362
1	02	02	09			RCV: 18 Injector Ion Pump Power Supplies	15-Sep-06	15-Sep-06	SL_MSEG1	\$\$		43,290		45,368	45,368	10%	4,537
1	02	02	09			RCV: 4 Injector Vacuum Valve Controllers	15-Sep-06	15-Sep-06	SL_MSEG1	\$\$		10,400		10,899	10,899	25%	2,725
1	02	02	09			RCV: 1 Injector Vacuum Control IOC	15-Sep-06	15-Sep-06	SL_MSEG1	\$\$		3,250		3,406	3,406	10%	341
1	02	02	09			RCV: 1 Injector Vacuum Control I/O (PLC)	15-Sep-06	15-Sep-06	SL_MSEG1	\$\$		29,250		30,654	30,654	10%	3,065
1	02	02	09			Injector Vacuum Integration and Test	18-Sep-06	13-Oct-06	SL_CT1	Hrs	78		4,763		4,763	25%	1,191
1	02	02	09			Injector Vacuum Integration and Test	18-Sep-06	13-Oct-06	SL_CP1	Hrs	156		12,687		12,687	25%	3,172
1	02	02	09			Injector Vacuum Integration and Test	18-Sep-06	13-Oct-06	SL_CE1	Hrs	78		8,700		8,700	25%	2,175
1	02	02	10			<b>Software &amp; Controls Infrastructure</b>					-	23,133	-	24,243	24,243	8,485	
1	02	02	10	01		<b>Low Level Application Software</b>											
1	02	02	10	02		<b>High Level Application Software</b>											
1	02	02	10	03		<b>Data Communications</b>					-	16,000	-	16,768	16,768	5,869	
1	02	02	10	03		RCV: Cisco 3550-24 hubs (4)	30-Aug-06	30-Aug-06	SL_MSEG1	\$\$		16,000		16,768	16,768	35%	5,869
1	02	02	10	04		<b>Computers &amp; Crates</b>					-	7,133	-	7,475	7,475	2,616	

WBS Level						LCLA DCE August-2006 Description	Early Start	Early Finish	Res Code	Units	Work Rem. Bud. Qty		Work Rem. Full Burd and Escltd Cost			Contingency %	Contingency \$
1	2	3	4	5	6						Hours	\$\$	Labor	M&S	Total		
1	02	02	10	04	6	RCV: Infrastructure Comp, Crates H/W & Cable	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		7,133		7,475	7,475	35%	2,616
1	02	02	11			<b>EPICS VXI Control Modules</b>											
1	02	02	12			<b>Laser Controls</b>					143	4,500	9,053	4,716	13,769		2,754
1	02	02	12	01		<b>Controls - Alignment Laser</b>											
1	02	02	12	02		<b>Controls - Gun Laser</b>					143	4,500	9,053	4,716	13,769		2,754
1	02	02	12	02		RCV: Procured parts - Gun Laser Controls	15-Aug-06	15-Aug-06	SL_MSEG1	\$\$		4,500		4,716	4,716	20%	943
1	02	02	12	02		Integrate and Test Gun Laser Controls	16-Aug-06	8-Nov-06	SL_PCEF1	Hrs	59		3,600		3,600	20%	720
1	02	02	12	02		Integrate and Test Gun Laser Controls	16-Aug-06	8-Nov-06	SL_CCA1	Hrs	84		5,453		5,453	20%	1,091
1	02	02	13			<b>Laser Heater Controls</b>					60	84,100	5,247	90,428	95,676		18,376
1	02	02	13			RCV: 4 Camera	15-Jun-07	15-Jun-07	SL_MSEG1	\$\$		12,000		12,903	12,903	10%	1,290
1	02	02	13			RCV: 4 PMC Interface and Cables	15-Jun-07	15-Jun-07	SL_MSEG1	\$\$		10,400		11,183	11,183	20%	2,237
1	02	02	13			RCV: 4 Interrack Cables	15-Jun-07	15-Jun-07	SL_MSEG1	\$\$		500		538	538	25%	134
1	02	02	13			RCV: 1 Motor Drivers	15-Jun-07	15-Jun-07	SL_MSEG1	\$\$		6,500		6,989	6,989	20%	1,398
1	02	02	13			RCV: 8 Motor Drivers	15-Jun-07	15-Jun-07	SL_MSEG1	\$\$		10,400		11,183	11,183	20%	2,237
1	02	02	13			RCV: 5 IOCs CPU/EVR/Span	15-Jun-07	15-Jun-07	SL_MSEG1	\$\$		28,000		30,107	30,107	20%	6,021
1	02	02	13			RCV: 1 IOC Crate	15-Jun-07	15-Jun-07	SL_MSEG1	\$\$		10,000		10,752	10,752	20%	2,150
1	02	02	13			RCV: 1 UPS	15-Jun-07	15-Jun-07	SL_MSEG1	\$\$		1,800		1,935	1,935	20%	387
1	02	02	13			RCV: 1 Function Generator	15-Jun-07	15-Jun-07	SL_MSEG1	\$\$		4,500		4,839	4,839	25%	1,210
1	02	02	13			LTU Laser Heater Controls H/W Fab	18-Jun-07	16-Jul-07	SL_CT1	Hrs	10		619		619	25%	155
1	02	02	13			LTU Laser Heater Controls H/W Fab	18-Jun-07	16-Jul-07	SL_CE1	Hrs	10		1,130		1,130	25%	283
1	02	02	13			LTU Laser Heater Contrl Integration and Test	17-Jul-07	30-Jul-07	SL_CT1	Hrs	20		1,238		1,238	25%	309
1	02	02	13			LTU Laser Heater Contrl Integration and Test	17-Jul-07	30-Jul-07	SL_CE1	Hrs	20		2,261		2,261	25%	565
1	02	04				<b>Injector RF Subsystem</b>											
1	02	04	03			<b>S-Band Low Level Timing</b>											
1	02	04	03	01		<b>Controls Interface &amp; Timing</b>											
1	02	04	03	02		<b>LLRF Phase Reference System</b>											
1	02	04	03	03		<b>LLRF Monitor &amp; Control System</b>											
1	02	04	03	04		<b>Beam Phase Monitor Cavity</b>											
1	02	04	03	05		<b>RF System S/W Development / Docs</b>											
1	03					<b>LINAC SYSTEM</b>					27,191	5,091,651	2,274,752	5,478,632	7,753,384		2,014,887
1	03	02				<b>Linac Controls &amp; Power Conversion Subsystem</b>					26,813	4,903,651	2,230,971	5,262,683	7,493,654		1,962,703
1	03	02	01			<b>Personnel Protection System (PPS)</b>					2,514	284,280	191,679	305,672	497,351		124,338
1	03	02	01			LTU Rack Layout and Wiring	3-May-07	5-Jul-07	SL_CCA1	Hrs	348		22,908		22,908	25%	5,727
1	03	02	01			LTU Rack and Wiring Bid Prep	6-Jul-07	17-Oct-07	SL_CCA1	Hrs	160		10,575		10,575	25%	2,644
1	03	02	01			LTU Controls Software	3-May-07	24-Sep-07	SL_CP1	Hrs	174		14,340		14,340	25%	3,585
1	03	02	01			LTU Mechanical Desgin	3-May-07	24-Sep-07	SL_ME1	Hrs	40		3,995		3,995	25%	999
1	03	02	01			LTU Mechanical Fab	3-May-07	24-Sep-07	SL_ME1	Hrs	120		11,984		11,984	25%	2,996
1	03	02	01			RCV: 1000 4PR16AS cable	30-Jul-07	30-Jul-07	SL_MSEG1	\$\$		1,360		1,462	1,462	25%	366
1	03	02	01			RCV: 2000 36PR16AS cable	30-Jul-07	30-Jul-07	SL_MSEG1	\$\$		24,000		25,806	25,806	25%	6,451
1	03	02	01			RCV: 8000 Hookup wire	30-Jul-07	30-Jul-07	SL_MSEG1	\$\$		2,800		3,011	3,011	25%	753
1	03	02	01			RCV: 50 EO buttons	30-Jul-07	30-Jul-07	SL_MSEG1	\$\$		9,000		9,677	9,677	25%	2,419
1	03	02	01			RCV: 6 EE buttons	30-Jul-07	30-Jul-07	SL_MSEG1	\$\$		900		968	968	25%	242
1	03	02	01			RCV: 12 Limit Switches	30-Jul-07	30-Jul-07	SL_MSEG1	\$\$		1,800		1,935	1,935	25%	484
1	03	02	01			RCV: 2 Camera	30-Jul-07	30-Jul-07	SL_MSEG1	\$\$		400		430	430	25%	108
1	03	02	01			RCV: 2 Annunciator	30-Jul-07	30-Jul-07	SL_MSEG1	\$\$		2,400		2,581	2,581	25%	645
1	03	02	01			RCV: 2 Y/M Light	30-Jul-07	30-Jul-07	SL_MSEG1	\$\$		400		430	430	25%	108
1	03	02	01			RCV: 6 Search Buttons	30-Jul-07	30-Jul-07	SL_MSEG1	\$\$		1,200		1,290	1,290	25%	323
1	03	02	01			RCV: 2 Audio Amplifier	30-Jul-07	30-Jul-07	SL_MSEG1	\$\$		1,000		1,075	1,075	25%	269
1	03	02	01			RCV: 2 Audio Annunciator	30-Jul-07	30-Jul-07	SL_MSEG1	\$\$		2,000		2,150	2,150	25%	538
1	03	02	01			RCV: 10 Speakers	30-Jul-07	30-Jul-07	SL_MSEG1	\$\$		1,000		1,075	1,075	25%	269
1	03	02	01			RCV: 6 Door Hardware	30-Jul-07	30-Jul-07	SL_MSEG1	\$\$		1,500		1,613	1,613	25%	403
1	03	02	01			RCV: 3 Keybank	30-Jul-07	30-Jul-07	SL_MSEG1	\$\$		4,500		4,839	4,839	25%	1,210
1	03	02	01			RCV: 4 Hoffman Boxes	30-Jul-07	30-Jul-07	SL_MSEG1	\$\$		520		559	559	25%	140
1	03	02	01			RCV: 6 PLC Control Package	30-Jul-07	30-Jul-07	SL_MSEG1	\$\$		120,000		129,030	129,030	25%	32,257
1	03	02	01			RCV: 1 BSOIC	30-Jul-07	30-Jul-07	SL_MSEG1	\$\$		87,500		94,084	94,084	25%	23,521
1	03	02	01			RCV: 3 Battery Recharger	30-Jul-07	30-Jul-07	SL_MSEG1	\$\$		22,000		23,655	23,655	25%	5,914
1	03	02	01			Plant Labor (Crafts)	3-May-07	5-Nov-07	SL_MFAT1	Hrs	160		13,857		13,857	25%	3,464
1	03	02	01			LTU Control Hardware	3-May-07	24-Sep-07	SL_CT1	Hrs	348		21,535		21,535	25%	5,384
1	03	02	01			LTU Control Hardware	3-May-07	24-Sep-07	SL_CE1	Hrs	174		19,667		19,667	25%	4,917
1	03	02	01			LTU Build and Test Equipment Racks	18-Oct-07	7-Jan-08	SL_CT1	Hrs	696		44,189		44,189	25%	11,047
1	03	02	01			LTU Build and Test Equipment Racks	18-Oct-07	7-Jan-08	SL_CP1	Hrs	174		14,712		14,712	25%	3,678
1	03	02	01			LTU Build and Test Equipment Racks	18-Oct-07	7-Jan-08	SL_CE1	Hrs	120		13,916		13,916	25%	3,479
1	03	02	02			<b>Beam Containment System (BCS)</b>					1,248	126,200	139,782	135,696	275,478		68,869
1	03	02	02			Write Certification Procedures	27-Oct-06	11-Dec-06	SL_CE1	Hrs	20		2,261		2,261	25%	565

WBS Level						LCLA DCE August-2006 Description	Early Start	Early Finish	Res Code	Units	Work Rem. Bud. Qty		Work Rem. Full Burd and Escltd Cost			Contingency %	Contingency \$	
1	2	3	4	5	6						Hours	\$\$	Labor	M&S	Total			
1	03	02	02			Write System Documentation	27-Oct-06	11-Dec-06	SL_CE1	Hrs	8		904		904	25%	226	
1	03	02	02			L02-L03 Controls Software	1-Aug-06	30-Oct-06	SL_CP1	Hrs	64		5,184		5,184	25%	1,296	
1	03	02	02			L02-L03 Control BCS HW Fabrication	1-Aug-06	30-Oct-06	SL_CE1	Hrs	4		444		444	25%	111	
1	03	02	02			L02-L03 Controls BCS Integration and Test	31-Oct-06	6-Nov-06	SL_CE1	Hrs	24		2,713		2,713	25%	678	
1	03	02	02			Write Certification Procedures	1-Jun-07	2-Jan-08	SL_CE1	Hrs	160		18,288		18,288	25%	4,572	
1	03	02	02			Write System Documentation	1-Jun-07	2-Jan-08	SL_CE1	Hrs	48		5,487		5,487	25%	1,372	
1	03	02	02			Injector Controls Software	1-Jun-07	2-Jan-08	SL_CP1	Hrs	20		1,667		1,667	25%	417	
1	03	02	02			RCV: 750 Lion Cables	29-Jun-07	29-Jun-07	SL_MSEG1	\$\$		15,000		16,129		16,129	25%	4,032
1	03	02	02			RCV: 12 PICS	29-Jun-07	29-Jun-07	SL_MSEG1	\$\$		16,800		18,064		18,064	25%	4,516
1	03	02	02			RCV: 12 Flow Switches	29-Jun-07	29-Jun-07	SL_MSEG1	\$\$		16,800		18,064		18,064	25%	4,516
1	03	02	02			RCV: 6 Hall Probe and Chassis	29-Jun-07	29-Jun-07	SL_MSEG1	\$\$		36,000		38,709		38,709	25%	9,677
1	03	02	02			LTU BCS HW Fabrication	2-Jul-07	2-Jan-08	SL_CE1	Hrs	40		4,581		4,581	25%	1,145	
1	03	02	02			LTU BCS Integration and Test	3-Jan-08	3-Mar-08	SL_CE1	Hrs	180		20,875		20,875	25%	5,219	
1	03	02	02			Write Certification Procedures	1-Jun-07	2-Jan-08	SL_CE1	Hrs	320		36,577		36,577	25%	9,144	
1	03	02	02			Write System Documentation	1-Jun-07	2-Jan-08	SL_CE1	Hrs	120		13,716		13,716	25%	3,429	
1	03	02	02			XTOD Controls Software	1-Jun-07	2-Jan-08	SL_CP1	Hrs	20		1,667		1,667	25%	417	
1	03	02	02			RCV: 6 Fault Sensor	29-Jun-07	29-Jun-07	SL_MSEG1	\$\$		12,600		13,548		13,548	25%	3,387
1	03	02	02			RCV: 6 Specialized Electronics	29-Jun-07	29-Jun-07	SL_MSEG1	\$\$		21,000		22,580		22,580	25%	5,645
1	03	02	02			RCV: 1 PLC I/O and Chasis	29-Jun-07	29-Jun-07	SL_MSEG1	\$\$		8,000		8,602		8,602	25%	2,150
1	03	02	02			60	2-Jul-07	23-Oct-07	SL_CE1	Hrs	40		4,544		4,544	25%	1,136	
1	03	02	02			Injector Controls BCS Integration and Test	3-Jan-08	3-Mar-08	SL_CE1	Hrs	180		20,875		20,875	25%	5,219	
1	03	02	03			<b>Machine Protection System (MPS)</b>					-	<b>84,000</b>	-	<b>89,863</b>	<b>89,863</b>		<b>36,917</b>	
1	03	02	03			RCV: 4 Custom Input Electronics	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		16,800		17,606		17,606	25%	4,402
1	03	02	03			RCV: 12 Custom Input Electronics	2-Mar-07	2-Mar-07	SL_MSEG1	\$\$		50,400		54,192		54,192	45%	24,387
1	03	02	03			RCV: 12 Custom Input Electronics	29-Jun-07	29-Jun-07	SL_MSEG1	\$\$		16,800		18,064		18,064	45%	8,129
1	03	02	04			<b>Linac Power Conversion Subsystem</b>					<b>11,197</b>	<b>2,306,731</b>	<b>858,512</b>	<b>2,476,172</b>	<b>3,334,684</b>		<b>781,311</b>	
1	03	02	04	01		<b>Beamline Power Supplies - (Dipole Type)</b>					<b>1,784</b>	<b>162,950</b>	<b>149,323</b>	<b>175,117</b>	<b>324,440</b>		<b>73,889</b>	
1	03	02	04	01	01	<b>Power Supply BX11-14</b>					<b>32</b>	<b>23,260</b>	<b>2,694</b>	<b>25,010</b>	<b>27,704</b>		<b>5,854</b>	
1	03	02	04	01	01	RCV: Power Supply	30-Oct-06	30-Oct-06	SL_MSEG1	\$\$		19,800		21,290		21,290	20%	4,258
1	03	02	04	01	01	RCV: Transducers	30-Oct-06	30-Oct-06	SL_MSEG1	\$\$		1,320		1,419		1,419	25%	355
1	03	02	04	01	01	RCV: PS Controller	30-Oct-06	30-Oct-06	SL_MSEG1	\$\$		2,000		2,150		2,150	25%	538
1	03	02	04	01	01	RCV: Intra-rack Cables and Connectors	30-Oct-06	30-Oct-06	SL_MSEG1	\$\$		40		43		43	20%	9
1	03	02	04	01	01	RCV: Cirtc brkr, 3-pole, 30 A, 480V, Series Trp	30-Oct-06	30-Oct-06	SL_MSEG1	\$\$		100		108		108	20%	22
1	03	02	04	01	01	Bench test and perform safety inspection of PS	31-Oct-06	1-Nov-06	SL_PCT1	Hrs	4		248		248	25%	62	
1	03	02	04	01	01	Bench test PS Controller	31-Oct-06	31-Oct-06	SL_PCT1	Hrs	4		248		248	25%	62	
1	03	02	04	01	01	Pre-install Qual Test	2-Nov-06	6-Nov-06	SL_PCE1	Hrs	8		904		904	25%	226	
1	03	02	04	01	01	Pre-install Qual Test	2-Nov-06	6-Nov-06	SL_PCCA1	Hrs	8		527		527	25%	132	
1	03	02	04	01	01	Integrate cables	7-Nov-06	7-Nov-06	SL_TMUE1	Hrs	8		768		768	25%	192	
1	03	02	04	01	02	<b>Power Supply BX21-24</b>					<b>32</b>	<b>3,460</b>	<b>2,626</b>	<b>3,626</b>	<b>6,252</b>		<b>1,486</b>	
1	03	02	04	01	02	RCV: Transducers	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		1,320		1,383		1,383	20%	277
1	03	02	04	01	02	RCV: PS Controller	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		2,000		2,096		2,096	25%	524
1	03	02	04	01	02	RCV: Intra-rack Cables and Connectors	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		40		42		42	20%	8
1	03	02	04	01	02	RCV: Cirtc brkr, 3-pole, 30 A, 480V, Series Trp	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		100		105		105	20%	21
1	03	02	04	01	02	Bench test and perform safety inspection of PS	30-Aug-06	31-Aug-06	SL_PCT1	Hrs	4		241		241	25%	60	
1	03	02	04	01	02	Bench test PS Controller	30-Aug-06	30-Aug-06	SL_PCT1	Hrs	4		241		241	25%	60	
1	03	02	04	01	02	Pre-install Qual Test	31-Aug-06	5-Sep-06	SL_PCE1	Hrs	8		881		881	25%	220	
1	03	02	04	01	02	Pre-install Qual Test	31-Aug-06	5-Sep-06	SL_PCCA1	Hrs	8		513		513	25%	128	
1	03	02	04	01	02	Integrate cables	6-Sep-06	6-Sep-06	SL_TMUE1	Hrs	8		749		749	25%	187	
1	03	02	04	01	03	<b>Kicker Power Supply BXKIK</b>					<b>788</b>	<b>18,665</b>	<b>65,786</b>	<b>20,070</b>	<b>85,855</b>		<b>20,858</b>	
1	03	02	04	01	03	Conceptual Design Reviews	1-Aug-06	12-Oct-06	SL_PCE1	Hrs	-		-		-	25%	-	
1	03	02	04	01	03	Preliminary Design Reviews	13-Oct-06	13-Nov-06	SL_PCE1	Hrs	30		3,391		3,391	25%	848	
1	03	02	04	01	03	Final Design Reviews	14-Nov-06	17-Jan-07	SL_PCE1	Hrs	40		4,521		4,521	25%	1,130	
1	03	02	04	01	03	Documentation	1-Aug-06	19-Oct-07	SL_PCE1	Hrs	32		3,608		3,608	25%	902	
1	03	02	04	01	03	RCV: Power Supply	12-Apr-07	12-Apr-07	SL_MSEG1	\$\$		5,900		6,344		6,344	25%	1,586
1	03	02	04	01	03	RCV: Transducers	12-Apr-07	12-Apr-07	SL_MSEG1	\$\$		300		323		323	20%	65
1	03	02	04	01	03	RCV: IGBT's and Accessories	12-Apr-07	12-Apr-07	SL_MSEG1	\$\$		525		565		565	20%	113
1	03	02	04	01	03	RCV: Caps and Accessories	12-Apr-07	12-Apr-07	SL_MSEG1	\$\$		2,990		3,215		3,215	20%	643
1	03	02	04	01	03	RCV: PS Controller Hardware	12-Apr-07	12-Apr-07	SL_MSEG1	\$\$		1,500		1,613		1,613	25%	403
1	03	02	04	01	03	RCV: Analog to Digital Cnvtrr Mods - 16 Ch	18-Jan-07	18-Jan-07	SL_MSEG1	\$\$		3,000		3,226		3,226	20%	645
1	03	02	04	01	03	RCV: Digital to Analog Cnvtrr Mods - 16 Ch	18-Jan-07	18-Jan-07	SL_MSEG1	\$\$		2,200		2,366		2,366	20%	473
1	03	02	04	01	03	RCV: DIO Module - 8 Chan	18-Jan-07	18-Jan-07	SL_MSEG1	\$\$		500		538		538	20%	108
1	03	02	04	01	03	RCV: IP Carrier Board	18-Jan-07	18-Jan-07	SL_MSEG1	\$\$		800		860		860	20%	172
1	03	02	04	01	03	RCV: IO Accessories	18-Jan-07	18-Jan-07	SL_MSEG1	\$\$		350		376		376	20%	75
1	03	02	04	01	03	RCV: Intra-rack cables and conectors	12-Jul-07	12-Jul-07	SL_MSEG1	\$\$		500		538		538	20%	108



WBS Level						LCLA DCE August-2006 Description	Early Start	Early Finish	Res Code	Units	Work Rem. Bud. Qty		Work Rem. Full Burd and Escltd Cost			Contingency %	Contingency \$	
1	2	3	4	5	6						Hours	\$\$	Labor	M&S	Total			
1	03	02	04	01	03	RCV: Cirtc brkr, 3-pole, 30 A, 480V, Series Trp	12-Jul-07	12-Jul-07	SL_MSEG1	\$\$		100			108	108	20%	22
1	03	02	04	01	03	Fab & Assy- Power Supply	13-Apr-07	12-Jun-07	SL_PCT1	Hrs	166		10,272			10,272	25%	2,568
1	03	02	04	01	03	Fab & Assy- Power Supply	13-Apr-07	12-Jun-07	SL_PCE1	Hrs	83		9,382			9,382	25%	2,345
1	03	02	04	01	03	Fab & Assy- Power Supply	13-Apr-07	12-Jun-07	SL_PCCA1	Hrs	42		2,765			2,765	25%	691
1	03	02	04	01	03	Fab & Assy- PS Controller	13-Apr-07	12-Jun-07	SL_PCT1	Hrs	166		10,272			10,272	25%	2,568
1	03	02	04	01	03	Fab & Assy- PS Controller	13-Apr-07	12-Jun-07	SL_PCE1	Hrs	83		9,382			9,382	25%	2,345
1	03	02	04	01	03	Fab & Assy- PS Controller	13-Apr-07	12-Jun-07	SL_PCCA1	Hrs	42		2,765			2,765	25%	691
1	03	02	04	01	03	Pre-install Qual Test	13-Jun-07	19-Jun-07	SL_PCE1	Hrs	16		1,809			1,809	25%	452
1	03	02	04	01	03	Pre-install Qual Test	13-Jun-07	19-Jun-07	SL_PCCA1	Hrs	16		1,053			1,053	25%	263
1	03	02	04	01	03	System Integration Test	20-Jun-07	1-Aug-07	SL_PCE1	Hrs	16		1,809			1,809	25%	452
1	03	02	04	01	03	System Integration Test	20-Jun-07	1-Aug-07	SL_PCCA1	Hrs	16		1,053			1,053	25%	263
1	03	02	04	01	03	Integrate cables	2-Aug-07	15-Aug-07	SL_TMUE1	Hrs	8		768			768	25%	192
1	03	02	04	01	03	Commissioning	22-Oct-07	19-Feb-08	SL_PCE1	Hrs	16		1,856			1,856	25%	464
1	03	02	04	01	03	Commissioning	22-Oct-07	19-Feb-08	SL_PCCA1	Hrs	16		1,081			1,081	25%	270
1	03	02	04	01	04	<b>Power Supply BX31,32,35,36</b>					<b>32</b>	<b>37,960</b>	<b>2,694</b>	<b>40,816</b>	<b>43,511</b>		<b>8,944</b>	
1	03	02	04	01	04	RCV: Power Supply	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		34,500			37,096	37,096	20%	7,419
1	03	02	04	01	04	RCV: Transducers	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		1,320			1,419	1,419	20%	284
1	03	02	04	01	04	RCV: PS Controller	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		2,000			2,150	2,150	25%	538
1	03	02	04	01	04	RCV: Intra-rack Cables and Connectors	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		40			43	43	20%	9
1	03	02	04	01	04	RCV: Cirtc brkr, 3-pole, 30 A, 480V, Series Trp	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		100			108	108	20%	22
1	03	02	04	01	04	Bench test and perform safety inspection of PS	16-Mar-07	19-Mar-07	SL_PCT1	Hrs	4		248			248	25%	62
1	03	02	04	01	04	Bench test PS Controller	16-Mar-07	16-Mar-07	SL_PCT1	Hrs	4		248			248	25%	62
1	03	02	04	01	04	Pre-install Qual Test	20-Mar-07	22-Mar-07	SL_PCE1	Hrs	8		904			904	25%	226
1	03	02	04	01	04	Pre-install Qual Test	20-Mar-07	22-Mar-07	SL_PCCA1	Hrs	8		527			527	25%	132
1	03	02	04	01	04	Integrate cables	23-Mar-07	23-Mar-07	SL_TMUE1	Hrs	8		768			768	25%	192
1	03	02	04	01	05	<b>Power Supply -BY1-2</b>					<b>32</b>	<b>15,260</b>	<b>2,694</b>	<b>16,408</b>	<b>19,102</b>		<b>4,054</b>	
1	03	02	04	01	05	RCV: Power Supply	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		11,800			12,688	12,688	20%	2,538
1	03	02	04	01	05	RCV: Transducers	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		1,320			1,419	1,419	20%	284
1	03	02	04	01	05	RCV: PS Controller	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		2,000			2,150	2,150	25%	538
1	03	02	04	01	05	RCV: Intra-rack Cables and Connectors	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		40			43	43		
1	03	02	04	01	05	RCV: Cirtc brkr, 3-pole, 30 A, 480V, Series Trp	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		100			108	108	20%	22
1	03	02	04	01	05	Bench test and perform safety inspection of PS	16-Mar-07	19-Mar-07	SL_PCT1	Hrs	4		248			248	25%	62
1	03	02	04	01	05	Bench test PS Controller	16-Mar-07	16-Mar-07	SL_PCT1	Hrs	4		248			248	25%	62
1	03	02	04	01	05	Pre-install Qual Test	20-Mar-07	22-Mar-07	SL_PCE1	Hrs	8		904			904	25%	226
1	03	02	04	01	05	Pre-install Qual Test	20-Mar-07	22-Mar-07	SL_PCCA1	Hrs	8		527			527	25%	132
1	03	02	04	01	05	Integrate cables	16-Mar-07	16-Mar-07	SL_TMUE1	Hrs	8		768			768	25%	192
1	03	02	04	01	06	<b>Kicker Power Supply BYKIK</b>					<b>788</b>	<b>18,665</b>	<b>65,837</b>	<b>20,070</b>	<b>85,906</b>		<b>20,790</b>	
1	03	02	04	01	06	Conceptual Design Reviews	1-Aug-06	12-Oct-06	SL_PCE1	Hrs	-		-			-	25%	-
1	03	02	04	01	06	Preliminary Design Reviews	13-Oct-06	13-Nov-06	SL_PCE1	Hrs	30		3,391			3,391	25%	848
1	03	02	04	01	06	Final Design Reviews	14-Nov-06	17-Jan-07	SL_PCE1	Hrs	40		4,521			4,521	25%	1,130
1	03	02	04	01	06	Documentation	1-Aug-06	19-Oct-07	SL_PCE1	Hrs	32		3,608			3,608	25%	902
1	03	02	04	01	06	RCV: Power Supply	12-Apr-07	12-Apr-07	SL_MSEG1	\$\$		5,900			6,344	6,344	25%	1,586
1	03	02	04	01	06	RCV: Transducers	12-Apr-07	12-Apr-07	SL_MSEG1	\$\$		300			323	323	20%	65
1	03	02	04	01	06	RCV: IGBT's and Accessories	12-Apr-07	12-Apr-07	SL_MSEG1	\$\$		525			565	565	20%	113
1	03	02	04	01	06	RCV: Caps and Accessories	12-Apr-07	12-Apr-07	SL_MSEG1	\$\$		2,990			3,215	3,215	20%	643
1	03	02	04	01	06	RCV: PS Controller Hardware	29-Jun-07	29-Jun-07	SL_MSEG1	\$\$		1,500			1,613	1,613	20%	323
1	03	02	04	01	06	RCV: Analog to Digital Cnvrtr Mods - 16 Ch	18-Jan-07	18-Jan-07	SL_MSEG1	\$\$		3,000			3,226	3,226	20%	645
1	03	02	04	01	06	RCV: Digital to Analog Cnvrtr Mods - 16 Ch	18-Jan-07	18-Jan-07	SL_MSEG1	\$\$		2,200			2,366	2,366	20%	473
1	03	02	04	01	06	RCV: DIO Module - 8 Chan	18-Jan-07	18-Jan-07	SL_MSEG1	\$\$		500			538	538	20%	108
1	03	02	04	01	06	RCV: IP Carrier Board	18-Jan-07	18-Jan-07	SL_MSEG1	\$\$		800			860	860	20%	172
1	03	02	04	01	06	RCV: IO Accessories	18-Jan-07	18-Jan-07	SL_MSEG1	\$\$		350			376	376	20%	75
1	03	02	04	01	06	RCV: Intra-rack cables and conectors	12-Jul-07	12-Jul-07	SL_MSEG1	\$\$		500			538	538	20%	108
1	03	02	04	01	06	RCV: Cirtc brkr, 3-pole, 30 A, 480V, Series Trp	12-Jul-07	12-Jul-07	SL_MSEG1	\$\$		100			108	108	20%	22
1	03	02	04	01	06	Fab & Assy- Power Supply	13-Apr-07	12-Jun-07	SL_PCT1	Hrs	166		10,272			10,272	25%	2,568
1	03	02	04	01	06	Fab & Assy- Power Supply	13-Apr-07	12-Jun-07	SL_PCE1	Hrs	83		9,382			9,382	25%	2,345
1	03	02	04	01	06	Fab & Assy- Power Supply	13-Apr-07	12-Jun-07	SL_PCCA1	Hrs	42		2,765			2,765	25%	691
1	03	02	04	01	06	Fab & Assy- PS Controller	2-Jul-07	29-Aug-07	SL_PCT1	Hrs	166		10,272			10,272	25%	2,568
1	03	02	04	01	06	Fab & Assy- PS Controller	2-Jul-07	29-Aug-07	SL_PCE1	Hrs	83		9,382			9,382	25%	2,345
1	03	02	04	01	06	Fab & Assy- PS Controller	2-Jul-07	29-Aug-07	SL_PCCA1	Hrs	42		2,765			2,765	25%	691
1	03	02	04	01	06	Pre-install Qual Test	30-Aug-07	6-Sep-07	SL_PCE1	Hrs	16		1,809			1,809	25%	452
1	03	02	04	01	06	Pre-install Qual Test	30-Aug-07	6-Sep-07	SL_PCCA1	Hrs	16		1,053			1,053	25%	263
1	03	02	04	01	06	System Integration Test	7-Sep-07	18-Oct-07	SL_PCE1	Hrs	16		1,828			1,828	25%	457
1	03	02	04	01	06	System Integration Test	7-Sep-07	18-Oct-07	SL_PCCA1	Hrs	16		1,065			1,065	25%	266
1	03	02	04	01	06	Integrate cables	19-Oct-07	1-Nov-07	SL_TMUE1	Hrs	8		788			788	25%	197

WBS Level						LCLA DCE August-2006 Description	Early Start	Early Finish	Res Code	Units	Work Rem. Bud. Qty		Work Rem. Full Burd and Escltd Cost			Contingency %	Contingency \$
1	2	3	4	5	6						Hours	\$\$	Labor	M&S	Total		
1	03	02	04	01	06	Commissioning	2-Nov-07	3-Mar-08	SL_PCE1	Hrs	16		1,856		1,856	25%	464
1	03	02	04	01	06	Commissioning	2-Nov-07	3-Mar-08	SL_PCCA1	Hrs	16		1,081		1,081	25%	270
<b>1</b>	<b>03</b>	<b>02</b>	<b>04</b>	<b>01</b>	<b>07</b>	<b>Power Supply BYW1-3</b>					<b>32</b>	<b>15,260</b>	<b>2,694</b>	<b>16,408</b>	<b>19,102</b>		<b>4,070</b>
1	03	02	04	01	07	RCV: Power Supply	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		11,800		12,688	12,688	20%	2,538
1	03	02	04	01	07	RCV: Transducers	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		1,320		1,419	1,419	20%	284
1	03	02	04	01	07	RCV: PS Controller	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		2,000		2,150	2,150	25%	538
1	03	02	04	01	07	RCV: Intra-rack Cables and Connectors	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		40		43	43	25%	11
1	03	02	04	01	07	RCV: Circt brkr, 3-pole, 30 A, 480V, Series Trp	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		100		108	108	25%	27
1	03	02	04	01	07	Bench test and perform safety inspection of PS	16-Mar-07	19-Mar-07	SL_PCT1	Hrs	4		248		248	25%	62
1	03	02	04	01	07	Bench test PS Controller	16-Mar-07	16-Mar-07	SL_PCT1	Hrs	4		248		248	25%	62
1	03	02	04	01	07	Pre-install Qual Test	20-Mar-07	22-Mar-07	SL_PCE1	Hrs	8		904		904	25%	226
1	03	02	04	01	07	Pre-install Qual Test	20-Mar-07	22-Mar-07	SL_PCCA1	Hrs	8		527		527	25%	132
1	03	02	04	01	07	Integrate cables	16-Mar-07	16-Mar-07	SL_TMUE1	Hrs	8		768		768	25%	192
<b>1</b>	<b>03</b>	<b>02</b>	<b>04</b>	<b>01</b>	<b>08</b>	<b>Muon Spoiler Power Supply MUSPLR</b>					<b>32</b>	<b>15,260</b>	<b>2,694</b>	<b>16,408</b>	<b>19,102</b>		<b>4,063</b>
1	03	02	04	01	08	RCV: Power Supply	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		11,800		12,688	12,688	20%	2,538
1	03	02	04	01	08	1RCV: Transducers	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		1,320		1,419	1,419	20%	284
1	03	02	04	01	08	RCV: PS Controller	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		2,000		2,150	2,150	25%	538
1	03	02	04	01	08	RCV: Intra-rack Cables and Connectors	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		40		43	43	20%	9
1	03	02	04	01	08	RCV: Circt brkr, 3-pole, 30 A, 480V, Series Trp	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		100		108	108	20%	22
1	03	02	04	01	08	Bench test and perform safety inspection of PS	16-Mar-07	19-Mar-07	SL_PCT1	Hrs	4		248		248	25%	62
1	03	02	04	01	08	Bench test PS Controller	16-Mar-07	16-Mar-07	SL_PCT1	Hrs	4		248		248	25%	62
1	03	02	04	01	08	Pre-install Qual Test	20-Mar-07	22-Mar-07	SL_PCE1	Hrs	8		904		904	25%	226
1	03	02	04	01	08	Pre-install Qual Test	20-Mar-07	22-Mar-07	SL_PCCA1	Hrs	8		527		527	25%	132
1	03	02	04	01	08	Integrate cables	16-Mar-07	16-Mar-07	SL_TMUE1	Hrs	8		768		768	25%	192
<b>1</b>	<b>03</b>	<b>02</b>	<b>04</b>	<b>01</b>	<b>09</b>	<b>Powe Supply BYD1-3</b>					<b>16</b>	<b>15,160</b>	<b>1,604</b>	<b>16,301</b>	<b>17,905</b>		<b>3,769</b>
1	03	02	04	01	09	RCV: Power Supply	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		11,800		12,688	12,688	20%	2,538
1	03	02	04	01	09	RCV: Transducers	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		1,320		1,419	1,419	20%	284
1	03	02	04	01	09	RCV: PS Controller	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		2,000		2,150	2,150	25%	538
1	03	02	04	01	09	RCV: Intra-rack Cables and Connectors	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		40		43	43	20%	9
1	03	02	04	01	09	Bench test and perform safety inspection of PS	16-Mar-07	19-Mar-07	SL_TMUE1	Hrs	4		384		384	25%	96
1	03	02	04	01	09	Bench test PS Controller	16-Mar-07	16-Mar-07	SL_PCE1	Hrs	4		452		452	25%	113
1	03	02	04	01	09	Integrate cables	16-Mar-07	16-Mar-07	SL_TMUE1	Hrs	8		768		768	25%	192
<b>1</b>	<b>03</b>	<b>02</b>	<b>04</b>	<b>02</b>	<b>02</b>	<b>Beamline Power Supplies - (Quad Type)</b>					<b>692</b>	<b>479,380</b>	<b>57,319</b>	<b>515,383</b>	<b>572,702</b>		<b>119,626</b>
<b>1</b>	<b>03</b>	<b>02</b>	<b>04</b>	<b>02</b>	<b>06</b>	<b>Q21201-Q21901 Switch Over</b>											
1	03	02	04	02	06	RCV: Hardware	2-Aug-06	2-Aug-06	SL_MSEG1	\$\$		-		-	-	10%	-
1	03	02	04	02	06	RCV: Intra-rack Cables and Connectors	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		-		-	-	10%	-
1	03	02	04	02	06	RCV: Circt brkr, 3-pole, 30 A, 480V, Series Trp	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		-		-	-	10%	-
1	03	02	04	02	06	Pre-install Qual Test	3-Aug-06	7-Aug-06	SL_PCE1	Hrs	-		-		-	10%	-
1	03	02	04	02	06	Pre-install Qual Test	3-Aug-06	7-Aug-06	SL_PCCA1	Hrs	-		-		-	10%	-
1	03	02	04	02	06	Integrate cables	30-Aug-06	30-Aug-06	SL_TMUE1	Hrs	-		-		-	10%	-
<b>1</b>	<b>03</b>	<b>02</b>	<b>04</b>	<b>02</b>	<b>07</b>	<b>Q24201-Q24501 Split</b>					<b>56</b>	<b>48,060</b>	<b>5,150</b>	<b>51,676</b>	<b>56,827</b>		<b>11,047</b>
1	03	02	04	02	07	RCV: Power Supply Q24601	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		11,800		12,688	12,688	20%	2,538
1	03	02	04	02	07	RCV: Power Supply Q24701B	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		11,800		12,688	12,688	20%	2,538
1	03	02	04	02	07	RCV: Power Supply Q247901B	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		11,800		12,688	12,688	20%	2,538
1	03	02	04	02	07	RCV: Transducers	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		3,960		4,258	4,258	20%	852
1	03	02	04	02	07	RCV: Cables 1C/#350 - Q24201-Q24501	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		1,500		1,613	1,613	20%	323
1	03	02	04	02	07	RCV: Cables 1C/#350 - Q24601	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		3,000		3,226	3,226	20%	645
1	03	02	04	02	07	RCV: Cables 4/0Cu - Q24701, Q24901	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		4,200		4,516	4,516	20%	903
1	03	02	04	02	07	Bench test and perform safety inspection of PS	16-Mar-07	19-Mar-07	SL_PCT1	Hrs	4		248		248	25%	62
1	03	02	04	02	07	Pre-install Qual Test	20-Mar-07	22-Mar-07	SL_PCE1	Hrs	16		1,809		1,809	25%	452
1	03	02	04	02	07	Pre-install Qual Test	20-Mar-07	22-Mar-07	SL_PCCA1	Hrs	12		790		790	25%	197
1	03	02	04	02	07	Integrate cables	16-Mar-07	16-Mar-07	SL_TMUE1	Hrs	24		2,305		2,305		
<b>1</b>	<b>03</b>	<b>02</b>	<b>04</b>	<b>02</b>	<b>08</b>	<b>Power Supply Q24601</b>											
<b>1</b>	<b>03</b>	<b>02</b>	<b>04</b>	<b>02</b>	<b>09</b>	<b>Power Supply Q24701A,Q24701B</b>											
<b>1</b>	<b>03</b>	<b>02</b>	<b>04</b>	<b>02</b>	<b>10</b>	<b>Power Supply QM21</b>					<b>24</b>	<b>15,260</b>	<b>1,979</b>	<b>16,408</b>	<b>18,387</b>		<b>3,884</b>
1	03	02	04	02	10	RCV: Power Supply	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		11,800		12,688	12,688	20%	2,538
1	03	02	04	02	10	RCV: Transducers	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		1,320		1,419	1,419	20%	284
1	03	02	04	02	10	RCV: PS Controller	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		2,000		2,150	2,150	25%	538
1	03	02	04	02	10	RCV: Intra-rack Cables and Connectors	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		40		43	43	20%	9
1	03	02	04	02	10	RCV: Circt brkr, 3-pole, 30 A, 480V, Series Trp	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		100		108	108	20%	22
1	03	02	04	02	10	Bench test and perform safety inspection of PS	16-Mar-07	19-Mar-07	SL_PCT1	Hrs	4		248		248	25%	62
1	03	02	04	02	10	Bench test PS Controller	16-Mar-07	16-Mar-07	SL_PCT1	Hrs	4		248		248	25%	62
1	03	02	04	02	10	Pre-install Qual Test	16-Mar-07	20-Mar-07	SL_PCE1	Hrs	4		452		452	25%	113
1	03	02	04	02	10	Pre-install Qual Test	16-Mar-07	20-Mar-07	SL_PCCA1	Hrs	4		263		263	25%	66

WBS Level						LCLA DCE August-2006 Description	Early Start	Early Finish	Res Code	Units	Work Rem. Bud. Qty		Work Rem. Full Burd and Escltd Cost			Contingency %	Contingency \$
1	2	3	4	5	6						Hours	\$\$	Labor	M&S	Total		
1	03	02	04	02	10	Integrate cables	21-Mar-07	21-Mar-07	SL_TMUE1	Hrs	8		768		768	25%	192
<b>1</b>	<b>03</b>	<b>02</b>	<b>04</b>	<b>02</b>	<b>11</b>	<b>Power Supply Q24901A,Q24901B</b>											
<b>1</b>	<b>03</b>	<b>02</b>	<b>04</b>	<b>02</b>	<b>12</b>	<b>Power Supply QM22</b>					<b>24</b>	<b>15,260</b>	<b>1,979</b>	<b>16,408</b>	<b>18,387</b>		<b>3,884</b>
1	03	02	04	02	12	RCV: Power Supply	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		11,800		12,688	12,688	20%	2,538
1	03	02	04	02	12	RCV: Transducers	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		1,320		1,419	1,419	20%	284
1	03	02	04	02	12	RCV: PS Controller	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		2,000		2,150	2,150	25%	538
1	03	02	04	02	12	RCV: Intra-rack Cables and Connectors	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		40		43	43	20%	9
1	03	02	04	02	12	RCV: Circt brkr, 3-pole, 30 A, 480V, Series Trp	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		100		108	108	20%	22
1	03	02	04	02	12	Bench test and perform safety inspection of PS	16-Mar-07	19-Mar-07	SL_PCT1	Hrs	4		248		248	25%	62
1	03	02	04	02	12	Bench test PS Controller	16-Mar-07	16-Mar-07	SL_PCT1	Hrs	4		248		248	25%	62
1	03	02	04	02	12	Pre-install Qual Test	16-Mar-07	20-Mar-07	SL_PCE1	Hrs	4		452		452	25%	113
1	03	02	04	02	12	Pre-install Qual Test	16-Mar-07	20-Mar-07	SL_PCCA1	Hrs	4		263		263	25%	66
1	03	02	04	02	12	Integrate cables	21-Mar-07	21-Mar-07	SL_TMUE1	Hrs	8		768		768	25%	192
<b>1</b>	<b>03</b>	<b>02</b>	<b>04</b>	<b>02</b>	<b>13</b>	<b>Power Supply Q5</b>					<b>24</b>	<b>15,260</b>	<b>1,979</b>	<b>16,408</b>	<b>18,387</b>		<b>3,884</b>
1	03	02	04	02	13	RCV: Power Supply	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		11,800		12,688	12,688	20%	2,538
1	03	02	04	02	13	RCV: Transducers	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		1,320		1,419	1,419	20%	284
1	03	02	04	02	13	RCV: PS Controller	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		2,000		2,150	2,150	25%	538
1	03	02	04	02	13	RCV: Intra-rack Cables and Connectors	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		40		43	43	20%	9
1	03	02	04	02	13	RCV: Circt brkr, 3-pole, 30 A, 480V, Series Trp	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		100		108	108	20%	22
1	03	02	04	02	13	Bench test and perform safety inspection of PS	16-Mar-07	19-Mar-07	SL_PCT1	Hrs	4		248		248	25%	62
1	03	02	04	02	13	Bench test PS Controller	16-Mar-07	16-Mar-07	SL_PCT1	Hrs	4		248		248	25%	62
1	03	02	04	02	13	Pre-install Qual Test	20-Mar-07	22-Mar-07	SL_PCE1	Hrs	4		452		452	25%	113
1	03	02	04	02	13	Pre-install Qual Test	20-Mar-07	22-Mar-07	SL_PCCA1	Hrs	4		263		263	25%	66
1	03	02	04	02	13	Integrate cables	16-Mar-07	16-Mar-07	SL_TMUE1	Hrs	8		768		768	25%	192
<b>1</b>	<b>03</b>	<b>02</b>	<b>04</b>	<b>02</b>	<b>14</b>	<b>Power Supply Q6</b>					<b>24</b>	<b>15,260</b>	<b>1,979</b>	<b>16,408</b>	<b>18,387</b>		<b>3,884</b>
1	03	02	04	02	14	RCV: Power Supply	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		11,800		12,688	12,688	20%	2,538
1	03	02	04	02	14	RCV: Transducers	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		1,320		1,419	1,419	20%	284
1	03	02	04	02	14	RCV: PS Controller	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		2,000		2,150	2,150	25%	538
1	03	02	04	02	14	RCV: Intra-rack Cables and Connectors	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		40		43	43	20%	9
1	03	02	04	02	14	RCV: Circt brkr, 3-pole, 30 A, 480V, Series Trp	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		100		108	108	20%	22
1	03	02	04	02	14	Bench test and perform safety inspection of PS	16-Mar-07	19-Mar-07	SL_PCT1	Hrs	4		248		248	25%	62
1	03	02	04	02	14	Bench test PS Controller	16-Mar-07	16-Mar-07	SL_PCT1	Hrs	4		248		248	25%	62
1	03	02	04	02	14	Pre-install Qual Test	20-Mar-07	22-Mar-07	SL_PCE1	Hrs	4		452		452	25%	113
1	03	02	04	02	14	Pre-install Qual Test	20-Mar-07	22-Mar-07	SL_PCCA1	Hrs	4		263		263	25%	66
1	03	02	04	02	14	Integrate cables	16-Mar-07	16-Mar-07	SL_TMUE1	Hrs	8		768		768	25%	192
<b>1</b>	<b>03</b>	<b>02</b>	<b>04</b>	<b>02</b>	<b>15</b>	<b>Power Supply QA0</b>					<b>24</b>	<b>15,260</b>	<b>1,979</b>	<b>16,408</b>	<b>18,387</b>		<b>3,884</b>
1	03	02	04	02	15	RCV: Power Supply	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		11,800		12,688	12,688	20%	2,538
1	03	02	04	02	15	RCV: Transducers	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		1,320		1,419	1,419	20%	284
1	03	02	04	02	15	RCV: PS Controller	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		2,000		2,150	2,150	25%	538
1	03	02	04	02	15	RCV: Intra-rack Cables and Connectors	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		40		43	43	20%	9
1	03	02	04	02	15	RCV: Circt brkr, 3-pole, 30 A, 480V, Series Trp	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		100		108	108	20%	22
1	03	02	04	02	15	Bench test and perform safety inspection of PS	16-Mar-07	19-Mar-07	SL_PCT1	Hrs	4		248		248	25%	62
1	03	02	04	02	15	Bench test PS Controller	16-Mar-07	16-Mar-07	SL_PCT1	Hrs	4		248		248	25%	62
1	03	02	04	02	15	Pre-install Qual Test	20-Mar-07	22-Mar-07	SL_PCE1	Hrs	4		452		452	25%	113
1	03	02	04	02	15	Pre-install Qual Test	20-Mar-07	22-Mar-07	SL_PCCA1	Hrs	4		263		263	25%	66
1	03	02	04	02	15	Integrate cables	16-Mar-07	16-Mar-07	SL_TMUE1	Hrs	8		768		768	25%	192
<b>1</b>	<b>03</b>	<b>02</b>	<b>04</b>	<b>02</b>	<b>16</b>	<b>Power Supply Q50Q1,Q50Q2,Q50Q3</b>					<b>24</b>	<b>15,260</b>	<b>1,979</b>	<b>16,408</b>	<b>18,387</b>		<b>3,884</b>
1	03	02	04	02	16	RCV: Power Supply	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		11,800		12,688	12,688	20%	2,538
1	03	02	04	02	16	RCV: Transducers	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		1,320		1,419	1,419	20%	284
1	03	02	04	02	16	RCV: PS Controller	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		2,000		2,150	2,150	25%	538
1	03	02	04	02	16	RCV: Intra-rack Cables and Connectors	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		40		43	43	20%	9
1	03	02	04	02	16	RCV: Circt brkr, 3-pole, 30 A, 480V, Series Trp	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		100		108	108	20%	22
1	03	02	04	02	16	Bench test and perform safety inspection of PS	16-Mar-07	19-Mar-07	SL_PCT1	Hrs	4		248		248	25%	62
1	03	02	04	02	16	Bench test PS Controller	16-Mar-07	16-Mar-07	SL_PCT1	Hrs	4		248		248	25%	62
1	03	02	04	02	16	Pre-install Qual Test	20-Mar-07	22-Mar-07	SL_PCE1	Hrs	4		452		452	25%	113
1	03	02	04	02	16	Pre-install Qual Test	20-Mar-07	22-Mar-07	SL_PCCA1	Hrs	4		263		263	25%	66
1	03	02	04	02	16	Integrate cables	16-Mar-07	16-Mar-07	SL_TMUE1	Hrs	8		768		768	25%	192
<b>1</b>	<b>03</b>	<b>02</b>	<b>04</b>	<b>02</b>	<b>17</b>	<b>Power Supply QVM1</b>					<b>24</b>	<b>15,260</b>	<b>1,979</b>	<b>16,408</b>	<b>18,387</b>		<b>3,884</b>
1	03	02	04	02	17	RCV: Power Supply	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		11,800		12,688	12,688	20%	2,538
1	03	02	04	02	17	RCV: Transducers	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		1,320		1,419	1,419	20%	284
1	03	02	04	02	17	RCV: PS Controller	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		2,000		2,150	2,150	25%	538
1	03	02	04	02	17	RCV: Intra-rack Cables and Connectors	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		40		43	43	20%	9
1	03	02	04	02	17	RCV: Circt brkr, 3-pole, 30 A, 480V, Series Trp	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		100		108	108	20%	22
1	03	02	04	02	17	Bench test and perform safety inspection of PS	16-Mar-07	19-Mar-07	SL_PCT1	Hrs	4		248		248	25%	62

WBS Level						LCLA DCE August-2006 Description	Early Start	Early Finish	Res Code	Units	Work Rem. Bud. Qty		Work Rem. Full Burd and Escltd Cost			Contingency %	Contingency \$
1	2	3	4	5	6						Hours	\$\$	Labor	M&S	Total		
1	03	02	04	02	17	Bench test PS Controller	16-Mar-07	16-Mar-07	SL_PCT1	Hrs	4		248		248	25%	62
1	03	02	04	02	17	Pre-install Qual Test	20-Mar-07	22-Mar-07	SL_PCE1	Hrs	4		452		452	25%	113
1	03	02	04	02	17	Pre-install Qual Test	20-Mar-07	22-Mar-07	SL_PCCA1	Hrs	4		263		263	25%	66
1	03	02	04	02	17	Integrate cables	16-Mar-07	16-Mar-07	SL_TMUE1	Hrs	8		768		768	25%	192
1	03	02	04	02	18	<b>Power Supply QVM2</b>					24	15,260	1,979	16,408	18,387		3,884
1	03	02	04	02	18	RCV: Power Supply	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		11,800		12,688	12,688	20%	2,538
1	03	02	04	02	18	RCV: Transducers	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		1,320		1,419	1,419	20%	284
1	03	02	04	02	18	RCV: PS Controller	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		2,000		2,150	2,150	25%	538
1	03	02	04	02	18	RCV: Intra-rack Cables and Connectors	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		40		43	43	20%	9
1	03	02	04	02	18	RCV: Cirtc brkr, 3-pole, 30 A, 480V, Series Trp	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		100		108	108	20%	22
1	03	02	04	02	18	Bench test and perform safety inspection of PS	16-Mar-07	19-Mar-07	SL_PCT1	Hrs	4		248		248	25%	62
1	03	02	04	02	18	Bench test PS Controller	16-Mar-07	16-Mar-07	SL_PCT1	Hrs	4		248		248	25%	62
1	03	02	04	02	18	Pre-install Qual Test	20-Mar-07	22-Mar-07	SL_PCE1	Hrs	4		452		452	25%	113
1	03	02	04	02	18	Pre-install Qual Test	20-Mar-07	22-Mar-07	SL_PCCA1	Hrs	4		263		263	25%	66
1	03	02	04	02	18	Integrate cables	16-Mar-07	16-Mar-07	SL_TMUE1	Hrs	8		768		768	25%	192
1	03	02	04	02	19	<b>Power Supply QVM3</b>					24	15,260	1,979	16,408	18,387		3,884
1	03	02	04	02	19	RCV: Power Supply	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		11,800		12,688	12,688	20%	2,538
1	03	02	04	02	19	RCV: Transducers	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		1,320		1,419	1,419	20%	284
1	03	02	04	02	19	RCV: PS Controller	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		2,000		2,150	2,150	25%	538
1	03	02	04	02	19	RCV: Intra-rack Cables and Connectors	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		40		43	43	20%	9
1	03	02	04	02	19	RCV: Cirtc brkr, 3-pole, 30 A, 480V, Series Trp	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		100		108	108	20%	22
1	03	02	04	02	19	Bench test and perform safety inspection of PS	16-Mar-07	19-Mar-07	SL_PCT1	Hrs	4		248		248	25%	62
1	03	02	04	02	19	Bench test PS Controller	16-Mar-07	16-Mar-07	SL_PCT1	Hrs	4		248		248	25%	62
1	03	02	04	02	19	Pre-install Qual Test	20-Mar-07	22-Mar-07	SL_PCE1	Hrs	4		452		452	25%	113
1	03	02	04	02	19	Pre-install Qual Test	20-Mar-07	22-Mar-07	SL_PCCA1	Hrs	4		263		263	25%	66
1	03	02	04	02	19	Integrate cables	16-Mar-07	16-Mar-07	SL_TMUE1	Hrs	8		768		768	25%	192
1	03	02	04	02	20	<b>Power Supply QVM4</b>					24	15,260	1,979	16,408	18,387		3,884
1	03	02	04	02	20	RCV: Power Supply	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		11,800		12,688	12,688	20%	2,538
1	03	02	04	02	20	RCV: Transducers	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		1,320		1,419	1,419	20%	284
1	03	02	04	02	20	RCV: PS Controller	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		2,000		2,150	2,150	25%	538
1	03	02	04	02	20	RCV: Intra-rack Cables and Connectors	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		40		43	43	20%	9
1	03	02	04	02	20	RCV: Cirtc brkr, 3-pole, 30 A, 480V, Series Trp	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		100		108	108	20%	22
1	03	02	04	02	20	Bench test and perform safety inspection of PS	16-Mar-07	19-Mar-07	SL_PCT1	Hrs	4		248		248	25%	62
1	03	02	04	02	20	Bench test PS Controller	16-Mar-07	16-Mar-07	SL_PCT1	Hrs	4		248		248	25%	62
1	03	02	04	02	20	Pre-install Qual Test	20-Mar-07	22-Mar-07	SL_PCE1	Hrs	4		452		452	25%	113
1	03	02	04	02	20	Pre-install Qual Test	20-Mar-07	22-Mar-07	SL_PCCA1	Hrs	4		263		263	25%	66
1	03	02	04	02	20	Integrate cables	16-Mar-07	16-Mar-07	SL_TMUE1	Hrs	8		768		768	25%	192
1	03	02	04	02	21	<b>Power Supply QVB1-3</b>					24	15,260	1,979	16,408	18,387		3,884
1	03	02	04	02	21	RCV: Power Supply	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		11,800		12,688	12,688	20%	2,538
1	03	02	04	02	21	RCV: Transducers	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		1,320		1,419	1,419	20%	284
1	03	02	04	02	21	RCV: PS Controller	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		2,000		2,150	2,150	25%	538
1	03	02	04	02	21	RCV: Intra-rack Cables and Connectors	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		40		43	43	20%	9
1	03	02	04	02	21	RCV: Cirtc brkr, 3-pole, 30 A, 480V, Series Trp	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		100		108	108	20%	22
1	03	02	04	02	21	Bench test and perform safety inspection of PS	16-Mar-07	19-Mar-07	SL_PCT1	Hrs	4		248		248	25%	62
1	03	02	04	02	21	Bench test PS Controller	16-Mar-07	16-Mar-07	SL_PCT1	Hrs	4		248		248	25%	62
1	03	02	04	02	21	Pre-install Qual Test	20-Mar-07	22-Mar-07	SL_PCE1	Hrs	4		452		452	25%	113
1	03	02	04	02	21	Pre-install Qual Test	20-Mar-07	22-Mar-07	SL_PCCA1	Hrs	4		263		263	25%	66
1	03	02	04	02	21	Integrate cables	16-Mar-07	16-Mar-07	SL_TMUE1	Hrs	8		768		768	25%	192
1	03	02	04	02	22	<b>Power Supply QDL31-34</b>					24	27,260	1,979	29,311	31,290		6,464
1	03	02	04	02	22	RCV: Power Supply	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		23,800		25,591	25,591	20%	5,118
1	03	02	04	02	22	RCV: Transducers	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		1,320		1,419	1,419	20%	284
1	03	02	04	02	22	RCV: PS Controller	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		2,000		2,150	2,150	25%	538
1	03	02	04	02	22	RCV: Intra-rack Cables and Connectors	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		40		43	43	20%	9
1	03	02	04	02	22	RCV: Cirtc brkr, 3-pole, 30 A, 480V, Series Trp	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		100		108	108	20%	22
1	03	02	04	02	22	Bench test and perform safety inspection of PS	16-Mar-07	19-Mar-07	SL_PCT1	Hrs	4		248		248	25%	62
1	03	02	04	02	22	Bench test PS Controller	16-Mar-07	16-Mar-07	SL_PCT1	Hrs	4		248		248	25%	62
1	03	02	04	02	22	Pre-install Qual Test	20-Mar-07	22-Mar-07	SL_PCE1	Hrs	4		452		452	25%	113
1	03	02	04	02	22	Pre-install Qual Test	20-Mar-07	22-Mar-07	SL_PCCA1	Hrs	4		263		263	25%	66
1	03	02	04	02	22	Integrate cables	16-Mar-07	16-Mar-07	SL_TMUE1	Hrs	8		768		768	25%	192
1	03	02	04	02	23	<b>Power Supply QE31-36</b>					24	15,260	1,979	16,408	18,387		3,884
1	03	02	04	02	23	RCV: Power Supply	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		11,800		12,688	12,688	20%	2,538
1	03	02	04	02	23	RCV: Transducers	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		1,320		1,419	1,419	20%	284
1	03	02	04	02	23	RCV: PS Controller	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		2,000		2,150	2,150	25%	538
1	03	02	04	02	23	RCV: Intra-rack Cables and Connectors	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		40		43	43	20%	9

WBS Level						LCLA DCE August-2006 Description	Early Start	Early Finish	Res Code	Units	Work Rem. Bud. Qty		Work Rem. Full Burd and Escltd Cost			Contingency %	Contingency \$
1	2	3	4	5	6						Hours	\$\$	Labor	M&S	Total		
1	03	02	04	02	23	RCV: Circt brkr, 3-pole, 30 A, 480V, Series Trp	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		100		108	108	20%	22
1	03	02	04	02	23	Bench test and perform safety inspection of PS	16-Mar-07	19-Mar-07	SL_PCT1	Hrs	4		248		248	25%	62
1	03	02	04	02	23	Bench test PS Controller	16-Mar-07	16-Mar-07	SL_PCT1	Hrs	4		248		248	25%	62
1	03	02	04	02	23	Pre-install Qual Test	20-Mar-07	22-Mar-07	SL_PCE1	Hrs	4		452		452	25%	113
1	03	02	04	02	23	Pre-install Qual Test	20-Mar-07	22-Mar-07	SL_PCCA1	Hrs	4		263		263	25%	66
1	03	02	04	02	23	Integrate cables	16-Mar-07	16-Mar-07	SL_TMUE1	Hrs	8		768		768	25%	192
<b>1</b>	<b>03</b>	<b>02</b>	<b>04</b>	<b>02</b>	<b>24</b>	<b>Power Supply QEM1</b>					<b>24</b>	<b>15,260</b>	<b>1,979</b>	<b>16,408</b>	<b>18,387</b>		<b>3,884</b>
1	03	02	04	02	24	RCV: Power Supply	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		11,800		12,688	12,688	20%	2,538
1	03	02	04	02	24	RCV: Transducers	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		1,320		1,419	1,419	20%	284
1	03	02	04	02	24	RCV: PS Controller	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		2,000		2,150	2,150	25%	538
1	03	02	04	02	24	RCV: Intra-rack Cables and Connectors	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		40		43	43	20%	9
1	03	02	04	02	24	RCV: Circt brkr, 3-pole, 30 A, 480V, Series Trp	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		100		108	108	20%	22
1	03	02	04	02	24	Bench test and perform safety inspection of PS	16-Mar-07	19-Mar-07	SL_PCT1	Hrs	4		248		248	25%	62
1	03	02	04	02	24	Bench test PS Controller	16-Mar-07	16-Mar-07	SL_PCT1	Hrs	4		248		248	25%	62
1	03	02	04	02	24	Pre-install Qual Test	20-Mar-07	22-Mar-07	SL_PCE1	Hrs	4		452		452	25%	113
1	03	02	04	02	24	Pre-install Qual Test	20-Mar-07	22-Mar-07	SL_PCCA1	Hrs	4		263		263	25%	66
1	03	02	04	02	24	Integrate cables	16-Mar-07	16-Mar-07	SL_TMUE1	Hrs	8		768		768	25%	192
<b>1</b>	<b>03</b>	<b>02</b>	<b>04</b>	<b>02</b>	<b>25</b>	<b>Power Supply QEM2</b>					<b>24</b>	<b>15,260</b>	<b>1,979</b>	<b>16,408</b>	<b>18,387</b>		<b>3,884</b>
1	03	02	04	02	25	RCV: Power Supply	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		11,800		12,688	12,688	20%	2,538
1	03	02	04	02	25	RCV: Transducers	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		1,320		1,419	1,419	20%	284
1	03	02	04	02	25	RCV: PS Controller	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		2,000		2,150	2,150	25%	538
1	03	02	04	02	25	RCV: Intra-rack Cables and Connectors	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		40		43	43	20%	9
1	03	02	04	02	25	RCV: Circt brkr, 3-pole, 30 A, 480V, Series Trp	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		100		108	108	20%	22
1	03	02	04	02	25	Bench test and perform safety inspection of PS	16-Mar-07	19-Mar-07	SL_PCT1	Hrs	4		248		248	25%	62
1	03	02	04	02	25	Bench test PS Controller	16-Mar-07	16-Mar-07	SL_PCT1	Hrs	4		248		248	25%	62
1	03	02	04	02	25	Pre-install Qual Test	20-Mar-07	22-Mar-07	SL_PCE1	Hrs	4		452		452	25%	113
1	03	02	04	02	25	Pre-install Qual Test	20-Mar-07	22-Mar-07	SL_PCCA1	Hrs	4		263		263	25%	66
1	03	02	04	02	25	Integrate cables	16-Mar-07	16-Mar-07	SL_TMUE1	Hrs	8		768		768	25%	192
<b>1</b>	<b>03</b>	<b>02</b>	<b>04</b>	<b>02</b>	<b>26</b>	<b>Power Supply QEM3</b>					<b>24</b>	<b>15,260</b>	<b>1,979</b>	<b>16,408</b>	<b>18,387</b>		<b>3,884</b>
1	03	02	04	02	26	RCV: Power Supply	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		11,800		12,688	12,688	20%	2,538
1	03	02	04	02	26	RCV: Transducers	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		1,320		1,419	1,419	20%	284
1	03	02	04	02	26	RCV: PS Controller	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		2,000		2,150	2,150	25%	538
1	03	02	04	02	26	RCV: Intra-rack Cables and Connectors	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		40		43	43	20%	9
1	03	02	04	02	26	RCV: Circt brkr, 3-pole, 30 A, 480V, Series Trp	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		100		108	108	20%	22
1	03	02	04	02	26	Bench test and perform safety inspection of PS	16-Mar-07	19-Mar-07	SL_PCT1	Hrs	4		248		248	25%	62
1	03	02	04	02	26	Bench test PS Controller	16-Mar-07	16-Mar-07	SL_PCT1	Hrs	4		248		248	25%	62
1	03	02	04	02	26	Pre-install Qual Test	20-Mar-07	22-Mar-07	SL_PCE1	Hrs	4		452		452	25%	113
1	03	02	04	02	26	Pre-install Qual Test	20-Mar-07	22-Mar-07	SL_PCCA1	Hrs	4		263		263	25%	66
1	03	02	04	02	26	Integrate cables	16-Mar-07	16-Mar-07	SL_TMUE1	Hrs	8		768		768	25%	192
<b>1</b>	<b>03</b>	<b>02</b>	<b>04</b>	<b>02</b>	<b>27</b>	<b>Power Supply QEM4</b>					<b>24</b>	<b>15,260</b>	<b>1,979</b>	<b>16,408</b>	<b>18,387</b>		<b>3,884</b>
1	03	02	04	02	27	RCV: Power Supply	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		11,800		12,688	12,688	20%	2,538
1	03	02	04	02	27	RCV: Transducers	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		1,320		1,419	1,419	20%	284
1	03	02	04	02	27	RCV: PS Controller	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		2,000		2,150	2,150	25%	538
1	03	02	04	02	27	RCV: Intra-rack Cables and Connectors	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		40		43	43	20%	9
1	03	02	04	02	27	RCV: Circt brkr, 3-pole, 30 A, 480V, Series Trp	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		100		108	108	20%	22
1	03	02	04	02	27	Bench test and perform safety inspection of PS	16-Mar-07	19-Mar-07	SL_PCT1	Hrs	4		248		248	25%	62
1	03	02	04	02	27	Bench test PS Controller	16-Mar-07	16-Mar-07	SL_PCT1	Hrs	4		248		248	25%	62
1	03	02	04	02	27	Pre-install Qual Test	20-Mar-07	22-Mar-07	SL_PCE1	Hrs	4		452		452	25%	113
1	03	02	04	02	27	Pre-install Qual Test	20-Mar-07	22-Mar-07	SL_PCCA1	Hrs	4		263		263	25%	66
1	03	02	04	02	27	Integrate cables	16-Mar-07	16-Mar-07	SL_TMUE1	Hrs	8		768		768	25%	192
<b>1</b>	<b>03</b>	<b>02</b>	<b>04</b>	<b>02</b>	<b>28</b>	<b>Power Supply QT11,13,21,23,31,33,41,43</b>					<b>24</b>	<b>25,260</b>	<b>1,979</b>	<b>27,161</b>	<b>29,139</b>		<b>6,034</b>
1	03	02	04	02	28	RCV: Power Supply	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		21,800		23,440	23,440	20%	4,688
1	03	02	04	02	28	RCV: Transducers	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		1,320		1,419	1,419	20%	284
1	03	02	04	02	28	RCV: PS Controller	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		2,000		2,150	2,150	25%	538
1	03	02	04	02	28	RCV: Intra-rack Cables and Connectors	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		40		43	43	20%	9
1	03	02	04	02	28	RCV: Circt brkr, 3-pole, 30 A, 480V, Series Trp	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		100		108	108	20%	22
1	03	02	04	02	28	Bench test and perform safety inspection of PS	16-Mar-07	19-Mar-07	SL_PCT1	Hrs	4		248		248	25%	62
1	03	02	04	02	28	Bench test PS Controller	16-Mar-07	16-Mar-07	SL_PCT1	Hrs	4		248		248	25%	62
1	03	02	04	02	28	Pre-install Qual Test	20-Mar-07	22-Mar-07	SL_PCE1	Hrs	4		452		452	25%	113
1	03	02	04	02	28	Pre-install Qual Test	20-Mar-07	22-Mar-07	SL_PCCA1	Hrs	4		263		263	25%	66
1	03	02	04	02	28	Integrate cables	16-Mar-07	16-Mar-07	SL_TMUE1	Hrs	8		768		768	25%	192
<b>1</b>	<b>03</b>	<b>02</b>	<b>04</b>	<b>02</b>	<b>29</b>	<b>Power Supply QT12,22,32,42</b>					<b>24</b>	<b>25,260</b>	<b>1,979</b>	<b>27,161</b>	<b>29,139</b>		<b>6,034</b>
1	03	02	04	02	29	RCV: Power Supply	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		21,800		23,440	23,440	20%	4,688
1	03	02	04	02	29	RCV: Transducers	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		1,320		1,419	1,419	20%	284

WBS Level						LCLA DCE August-2006 Description	Early Start	Early Finish	Res Code	Units	Work Rem. Bud. Qty		Work Rem. Full Burd and Escltd Cost			Contingency %	Contingency \$
1	2	3	4	5	6						Hours	\$\$	Labor	M&S	Total		
1	03	02	04	02	29	RCV: PS Controller	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		2,000		2,150	2,150	25%	538
1	03	02	04	02	29	RCV: Intra-rack Cables and Connectors	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		40		43	43	20%	9
1	03	02	04	02	29	RCV: Cirtc brkr, 3-pole, 30 A, 480V, Series Trp	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		100		108	108	20%	22
1	03	02	04	02	29	Bench test and perform safety inspection of PS	16-Mar-07	19-Mar-07	SL_PCT1	Hrs	4		248		248	25%	62
1	03	02	04	02	29	Bench test PS Controller	16-Mar-07	16-Mar-07	SL_PCT1	Hrs	4		248		248	25%	62
1	03	02	04	02	29	Pre-install Qual Test	20-Mar-07	22-Mar-07	SL_PCE1	Hrs	4		452		452	25%	113
1	03	02	04	02	29	Pre-install Qual Test	20-Mar-07	22-Mar-07	SL_PCCA1	Hrs	4		263		263	25%	66
1	03	02	04	02	29	Integrate cables	16-Mar-07	16-Mar-07	SL_TMUE1	Hrs	8		768		768	25%	192
1	03	02	04	02	30	<b>Power Supply QUM1</b>					24	15,260	1,979	16,408	18,387		3,884
1	03	02	04	02	30	RCV: Power Supply	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		11,800		12,688	12,688	20%	2,538
1	03	02	04	02	30	RCV: Transducers	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		1,320		1,419	1,419	20%	284
1	03	02	04	02	30	RCV: PS Controller	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		2,000		2,150	2,150	25%	538
1	03	02	04	02	30	RCV: Intra-rack Cables and Connectors	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		40		43	43	20%	9
1	03	02	04	02	30	RCV: Cirtc brkr, 3-pole, 30 A, 480V, Series Trp	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		100		108	108	20%	22
1	03	02	04	02	30	Bench test and perform safety inspection of PS	16-Mar-07	19-Mar-07	SL_PCT1	Hrs	4		248		248	25%	62
1	03	02	04	02	30	Bench test PS Controller	16-Mar-07	16-Mar-07	SL_PCT1	Hrs	4		248		248	25%	62
1	03	02	04	02	30	Pre-install Qual Test	20-Mar-07	22-Mar-07	SL_PCE1	Hrs	4		452		452	25%	113
1	03	02	04	02	30	Pre-install Qual Test	20-Mar-07	22-Mar-07	SL_PCCA1	Hrs	4		263		263	25%	66
1	03	02	04	02	30	Integrate cables	16-Mar-07	16-Mar-07	SL_TMUE1	Hrs	8		768		768	25%	192
1	03	02	04	02	31	<b>Power Supply QUM2</b>					24	15,260	1,979	16,408	18,387		3,884
1	03	02	04	02	31	RCV: Power Supply	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		11,800		12,688	12,688	20%	2,538
1	03	02	04	02	31	RCV: Transducers	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		1,320		1,419	1,419	20%	284
1	03	02	04	02	31	RCV: PS Controller	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		2,000		2,150	2,150	25%	538
1	03	02	04	02	31	RCV: Intra-rack Cables and Connectors	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		40		43	43	20%	9
1	03	02	04	02	31	RCV: Cirtc brkr, 3-pole, 30 A, 480V, Series Trp	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		100		108	108	20%	22
1	03	02	04	02	31	Bench test and perform safety inspection of PS	16-Mar-07	19-Mar-07	SL_PCT1	Hrs	4		248		248	25%	62
1	03	02	04	02	31	Bench test PS Controller	16-Mar-07	16-Mar-07	SL_PCT1	Hrs	4		248		248	25%	62
1	03	02	04	02	31	Pre-install Qual Test	20-Mar-07	22-Mar-07	SL_PCE1	Hrs	4		452		452	25%	113
1	03	02	04	02	31	Pre-install Qual Test	20-Mar-07	22-Mar-07	SL_PCCA1	Hrs	4		263		263	25%	66
1	03	02	04	02	31	Integrate cables	16-Mar-07	16-Mar-07	SL_TMUE1	Hrs	8		768		768	25%	192
1	03	02	04	02	32	<b>Power Supply QUM3</b>					24	15,260	1,979	16,408	18,387		3,884
1	03	02	04	02	32	RCV: Power Supply	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		11,800		12,688	12,688	20%	2,538
1	03	02	04	02	32	RCV: Transducers	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		1,320		1,419	1,419	20%	284
1	03	02	04	02	32	RCV: PS Controller	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		2,000		2,150	2,150	25%	538
1	03	02	04	02	32	RCV: Intra-rack Cables and Connectors	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		40		43	43	20%	9
1	03	02	04	02	32	RCV: Cirtc brkr, 3-pole, 30 A, 480V, Series Trp	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		100		108	108	20%	22
1	03	02	04	02	32	Bench test and perform safety inspection of PS	16-Mar-07	19-Mar-07	SL_PCT1	Hrs	4		248		248	25%	62
1	03	02	04	02	32	Bench test PS Controller	16-Mar-07	16-Mar-07	SL_PCT1	Hrs	4		248		248	25%	62
1	03	02	04	02	32	Pre-install Qual Test	20-Mar-07	22-Mar-07	SL_PCE1	Hrs	4		452		452	25%	113
1	03	02	04	02	32	Pre-install Qual Test	20-Mar-07	22-Mar-07	SL_PCCA1	Hrs	4		263		263	25%	66
1	03	02	04	02	32	Integrate cables	16-Mar-07	16-Mar-07	SL_TMUE1	Hrs	8		768		768	25%	192
1	03	02	04	02	33	<b>Power Supply QUM4</b>					24	15,260	1,979	16,408	18,387		3,884
1	03	02	04	02	33	RCV: Power Supply	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		11,800		12,688	12,688	20%	2,538
1	03	02	04	02	33	RCV: Transducers	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		1,320		1,419	1,419	20%	284
1	03	02	04	02	33	RCV: PS Controller	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		2,000		2,150	2,150	25%	538
1	03	02	04	02	33	RCV: Intra-rackCables and Connectors	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		40		43	43	20%	9
1	03	02	04	02	33	RCV: Cirtc brkr, 3-pole, 30 A, 480V, Series Trp	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		100		108	108	20%	22
1	03	02	04	02	33	Bench test and perform safety inspection of PS	16-Mar-07	19-Mar-07	SL_PCT1	Hrs	4		248		248	25%	62
1	03	02	04	02	33	Bench test PS Controller	16-Mar-07	16-Mar-07	SL_PCT1	Hrs	4		248		248	25%	62
1	03	02	04	02	33	Pre-install Qual Test	20-Mar-07	22-Mar-07	SL_PCE1	Hrs	4		452		452	25%	113
1	03	02	04	02	33	Pre-install Qual Test	20-Mar-07	22-Mar-07	SL_PCCA1	Hrs	4		263		263	25%	66
1	03	02	04	02	33	Integrate cables	16-Mar-07	16-Mar-07	SL_TMUE1	Hrs	8		768		768	25%	192
1	03	02	04	02	34	<b>Power Supply QDMP1-2</b>					24	15,260	1,979	16,408	18,387		3,884
1	03	02	04	02	34	RCV: Power Supply	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		11,800		12,688	12,688	20%	2,538
1	03	02	04	02	34	RCV: Transducers	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		1,320		1,419	1,419	20%	284
1	03	02	04	02	34	RCV: PS Controller	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		2,000		2,150	2,150	25%	538
1	03	02	04	02	34	RCV: Intra-rack Cables and Connectors	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		40		43	43	20%	9
1	03	02	04	02	34	RCV: Cirtc brkr, 3-pole, 30 A, 480V, Series Trp	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		100		108	108	20%	22
1	03	02	04	02	34	Bench test and perform safety inspection of PS	16-Mar-07	19-Mar-07	SL_PCT1	Hrs	4		248		248	25%	62
1	03	02	04	02	34	Bench test PS Controller	16-Mar-07	16-Mar-07	SL_PCT1	Hrs	4		248		248	25%	62
1	03	02	04	02	34	Pre-install Qual Test	20-Mar-07	22-Mar-07	SL_PCE1	Hrs	4		452		452	25%	113
1	03	02	04	02	34	Pre-install Qual Test	20-Mar-07	22-Mar-07	SL_PCCA1	Hrs	4		263		263	25%	66
1	03	02	04	02	34	Integrate cables	16-Mar-07	16-Mar-07	SL_TMUE1	Hrs	8		768		768	25%	192
1	03	02	04	02	35	<b>Power Supply QUE1</b>					24	15,260	1,979	16,408	18,387		3,884

WBS Level						LCLA DCE August-2006 Description	Early Start	Early Finish	Res Code	Units	Work Rem. Bud. Qty		Work Rem. Full Burd and Escltd Cost			Contingency %	Contingency \$
1	2	3	4	5	6						Hours	\$\$	Labor	M&S	Total		
1	03	02	04	02	35	RCV: Power Supply	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		11,800		12,688	12,688	20%	2,538
1	03	02	04	02	35	RCV: Transducers	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		1,320		1,419	1,419	20%	284
1	03	02	04	02	35	RCV: PS Controller	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		2,000		2,150	2,150	25%	538
1	03	02	04	02	35	RCV: Intra-rack Cables and Connectors	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		40		43	43	20%	9
1	03	02	04	02	35	RCV: Circt brkr, 3-pole, 30 A, 480V, Series Trp	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		100		108	108	20%	22
1	03	02	04	02	35	Bench test and perform safety inspection of PS	16-Mar-07	19-Mar-07	SL_PCT1	Hrs	4		248		248	25%	62
1	03	02	04	02	35	Bench test PS Controller	16-Mar-07	16-Mar-07	SL_PCT1	Hrs	4		248		248	25%	62
1	03	02	04	02	35	Pre-install Qual Test	20-Mar-07	22-Mar-07	SL_PCE1	Hrs	4		452		452	25%	113
1	03	02	04	02	35	Pre-install Qual Test	20-Mar-07	22-Mar-07	SL_PCCA1	Hrs	4		263		263	25%	66
1	03	02	04	02	35	Integrate cables	16-Mar-07	16-Mar-07	SL_TMUE1	Hrs	8		768		768	25%	192
1	03	02	04	02	36	<b>Power Supply QUE2</b>					24	15,260	1,979	16,408	18,387		3,884
1	03	02	04	02	36	RCV: Power Supply	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		11,800		12,688	12,688	20%	2,538
1	03	02	04	02	36	RCV: Transducers	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		1,320		1,419	1,419	20%	284
1	03	02	04	02	36	RCV: PS Controller	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		2,000		2,150	2,150	25%	538
1	03	02	04	02	36	RCV: Intra-rack Cables and Connectors	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		40		43	43	20%	9
1	03	02	04	02	36	RCV: Circt brkr, 3-pole, 30 A, 480V, Series Trp	15-Mar-07	15-Mar-07	SL_MSEG1	\$\$		100		108	108	20%	22
1	03	02	04	02	36	Bench test and perform safety inspection of PS	16-Mar-07	19-Mar-07	SL_PCT1	Hrs	4		248		248	25%	62
1	03	02	04	02	36	Bench test PS Controller	16-Mar-07	16-Mar-07	SL_PCT1	Hrs	4		248		248	25%	62
1	03	02	04	02	36	Pre-install Qual Test	20-Mar-07	22-Mar-07	SL_PCE1	Hrs	4		452		452	25%	113
1	03	02	04	02	36	Pre-install Qual Test	20-Mar-07	22-Mar-07	SL_PCCA1	Hrs	4		263		263	25%	66
1	03	02	04	02	36	Integrate cables	16-Mar-07	16-Mar-07	SL_TMUE1	Hrs	8		768		768	25%	192
1	03	02	04	02	37	<b>Rack Accessories - LI21</b>					-	-	-	-	-		-
1	03	02	04	02	37	RCV: Circuit Breaker, 100A 480V, 3-pole,25kAIC	16-Oct-06	16-Oct-06	SL_MSEG1	\$\$		-		-	-	10%	-
1	03	02	04	02	37	RCV: Circuit Breaker, 100A 480V, 3-pole,25kAIC	16-Oct-06	16-Oct-06	SL_MSEG1	\$\$		-		-	-	10%	-
1	03	02	04	02	37	RCV: Circuit Breaker, 100A 480V, 3-pole,25kAIC	16-Oct-06	16-Oct-06	SL_MSEG1	\$\$		-		-	-	10%	-
1	03	02	04	02	37	RCV: Circuit Breaker, 100A 480V, 3-pole,25kAIC	16-Oct-06	16-Oct-06	SL_MSEG1	\$\$		-		-	-	10%	-
1	03	02	04	02	37	RCV: Circuit Breaker, 100A 480V, 3-pole,25kAIC	16-Oct-06	16-Oct-06	SL_MSEG1	\$\$		-		-	-	10%	-
1	03	02	04	02	37	Assemble and test	17-Oct-06	17-Oct-06	SL_PCT1	Hrs	-		-		-	10%	-
1	03	02	04	02	38	<b>Rack Accessories - LI24</b>					3	640	181	671	852		179
1	03	02	04	02	38	RCV: Circuit Breaker, 100A 480V, 3-pole,25kAIC	13-Sep-06	13-Sep-06	SL_MSEG1	\$\$		640		671	671	20%	134
1	03	02	04	02	38	Assemble and test	14-Sep-06	14-Sep-06	SL_PCT1	Hrs	3		181		181	25%	45
1	03	02	04	02	39	<b>Rack Accessories - LI25</b>					3	640	181	671	852		179
1	03	02	04	02	39	RCV: Circuit Breaker, 100A 480V, 3-pole,25kAIC	13-Sep-06	13-Sep-06	SL_MSEG1	\$\$		640		671	671	20%	134
1	03	02	04	02	39	Assemble and test	14-Sep-06	14-Sep-06	SL_PCT1	Hrs	3		181		181	25%	45
1	03	02	04	02	40	<b>Rack Accessories - BSY</b>					3	640	181	671	852		179
1	03	02	04	02	40	RCV: Circuit Breaker, 100A 480V, 3-pole,25kAIC	13-Sep-06	13-Sep-06	SL_MSEG1	\$\$		640		671	671	20%	134
1	03	02	04	02	40	Assemble and test	14-Sep-06	14-Sep-06	SL_PCT1	Hrs	3		181		181	25%	45
1	03	02	04	02	41	<b>Rack Accessories - Dump</b>					3	640	181	671	852		179
1	03	02	04	02	41	RCV: Circuit Breaker, 100A 480V, 3-pole,25kAIC	13-Sep-06	13-Sep-06	SL_MSEG1	\$\$		640		671	671	20%	134
1	03	02	04	02	41	Assemble and test	14-Sep-06	14-Sep-06	SL_PCT1	Hrs	3		181		181	25%	45
1	03	02	04	03		<b>Beamline Power Supplies - (Trim Type)</b>					1,487	459,726	154,405	493,960	648,365		140,502
1	03	02	04	03	01	<b>MCOR_1</b>					-	-	-	-	-		-
1	03	02	04	03	01	RCV: MCOR Chassis	2-Aug-06	2-Aug-06	SL_MSEG1	\$\$		-		-	-	20%	-
1	03	02	04	03	01	RCV: MCOR Blower	2-Aug-06	2-Aug-06	SL_MSEG1	\$\$		-		-	-	20%	-
1	03	02	04	03	01	RCV: MCOR Crate Accessories	2-Aug-06	2-Aug-06	SL_MSEG1	\$\$		-		-	-	20%	-
1	03	02	04	03	01	RCV: MCOR Controller Module	2-Aug-06	2-Aug-06	SL_MSEG1	\$\$		-		-	-	20%	-
1	03	02	04	03	01	RCV: 12Amp Pwr & Prog Modules - QA11	2-Aug-06	2-Aug-06	SL_MSEG1	\$\$		-		-	-	20%	-
1	03	02	04	03	01	RCV: 12Amp Pwr & Prog Modules - QA12	2-Aug-06	2-Aug-06	SL_MSEG1	\$\$		-		-	-	20%	-
1	03	02	04	03	01	RCV: 12Amp Pwr & Prog Modules - QM14	2-Aug-06	2-Aug-06	SL_MSEG1	\$\$		-		-	-	20%	-
1	03	02	04	03	01	RCV: 12Amp Pwr & Prog Modules - QM15	2-Aug-06	2-Aug-06	SL_MSEG1	\$\$		-		-	-	20%	-
1	03	02	04	03	01	RCV: 12Amp Pwr & Prog Modules - XC11	2-Aug-06	2-Aug-06	SL_MSEG1	\$\$		-		-	-	20%	-
1	03	02	04	03	01	RCV: 12Amp Pwr & Prog Modules - XC21401	2-Aug-06	2-Aug-06	SL_MSEG1	\$\$		-		-	-	20%	-
1	03	02	04	03	01	RCV: 12Amp Pwr & Prog Modules - YC21502	2-Aug-06	2-Aug-06	SL_MSEG1	\$\$		-		-	-	20%	-
1	03	02	04	03	01	RCV: Analog to Digital Converter Module - 32 Ch	2-Aug-06	2-Aug-06	SL_MSEG1	\$\$		-		-	-	20%	-
1	03	02	04	03	01	RCV: Digital to Analog Converter Module - 16 Ch	2-Aug-06	2-Aug-06	SL_MSEG1	\$\$		-		-	-	20%	-
1	03	02	04	03	01	RCV: DI Module - 16 Chan	2-Aug-06	2-Aug-06	SL_MSEG1	\$\$		-		-	-	20%	-
1	03	02	04	03	01	RCV: IP Carrier Board	2-Aug-06	2-Aug-06	SL_MSEG1	\$\$		-		-	-	20%	-
1	03	02	04	03	01	RCV: IO Accessories	2-Aug-06	2-Aug-06	SL_MSEG1	\$\$		-		-	-	20%	-
1	03	02	04	03	01	RCV: ADC,DAC,DI cables and connectors	2-Aug-06	2-Aug-06	SL_MSEG1	\$\$		-		-	-	20%	-
1	03	02	04	03	01	Integrate Cables	3-Aug-06	21-Sep-06	SL_TMUE1	Hrs	-		-		-	20%	-
1	03	02	04	03	01	MCOR Bench Test and Assembly	22-Sep-06	22-Sep-06	SL_PCT1	Hrs	-		-		-	20%	-
1	03	02	04	03	01	Pre-install Qual Test	25-Sep-06	29-Sep-06	SL_PCE1	Hrs	-		-		-	20%	-
1	03	02	04	03	01	Pre-install Qual Test	25-Sep-06	29-Sep-06	SL_PCCA1	Hrs	-		-		-	20%	-

WBS Level						LCLA DCE August-2006 Description	Early Start	Early Finish	Res Code	Units	Work Rem. Bud. Qty		Work Rem. Full Burd and Escltd Cost			Contingency %	Contingency \$
1	2	3	4	5	6						Hours	\$\$	Labor	M&S	Total		
1	03	02	04	03	02	MCOR_2					-	-	-	-	-	-	
1	03	02	04	03	02	RCV: MCOR Chassis	2-Aug-06	2-Aug-06	SL_MSEG1	\$\$		-		-	-	20%	-
1	03	02	04	03	02	RCV: MCOR Blower	2-Aug-06	2-Aug-06	SL_MSEG1	\$\$		-		-	-	20%	-
1	03	02	04	03	02	RCV: MCOR Crate Accessories	2-Aug-06	2-Aug-06	SL_MSEG1	\$\$		-		-	-	20%	-
1	03	02	04	03	02	RCV: MCOR Controller Module	2-Aug-06	2-Aug-06	SL_MSEG1	\$\$		-		-	-	20%	-
1	03	02	04	03	02	RCV: 12Amp Pwr & Prog Modules - XCA11	2-Aug-06	2-Aug-06	SL_MSEG1	\$\$		-		-	-	20%	-
1	03	02	04	03	02	RCV: 12Amp Pwr & Prog Modules - XCA12	2-Aug-06	2-Aug-06	SL_MSEG1	\$\$		-		-	-	20%	-
1	03	02	04	03	02	RCV: 12Amp Pwr & Prog Modules - XCM14	2-Aug-06	2-Aug-06	SL_MSEG1	\$\$		-		-	-	20%	-
1	03	02	04	03	02	RCV: 12Amp Pwr & Prog Modules - YC11	2-Aug-06	2-Aug-06	SL_MSEG1	\$\$		-		-	-	20%	-
1	03	02	04	03	02	RCV: 12Amp Pwr & Prog Modules - XC21802	2-Aug-06	2-Aug-06	SL_MSEG1	\$\$		-		-	-	20%	-
1	03	02	04	03	02	RCV: 12Amp Pwr & Prog Modules - YC21900	2-Aug-06	2-Aug-06	SL_MSEG1	\$\$		-		-	-	20%	-
1	03	02	04	03	02	RCV: 12Amp Pwr & Prog Modules - YCA11	2-Aug-06	2-Aug-06	SL_MSEG1	\$\$		-		-	-	20%	-
1	03	02	04	03	02	RCV: Analog to Digital Converter Module - 32 Ch	2-Aug-06	2-Aug-06	SL_MSEG1	\$\$		-		-	-	20%	-
1	03	02	04	03	02	RCV: Digital to Analog Converter Module - 16 Ch	2-Aug-06	2-Aug-06	SL_MSEG1	\$\$		-		-	-	20%	-
1	03	02	04	03	02	RCV: DI Module - 16 Chan	2-Aug-06	2-Aug-06	SL_MSEG1	\$\$		-		-	-	20%	-
1	03	02	04	03	02	RCV: IP Carrier Board	2-Aug-06	2-Aug-06	SL_MSEG1	\$\$		-		-	-	20%	-
1	03	02	04	03	02	RCV: IO Accessories	2-Aug-06	2-Aug-06	SL_MSEG1	\$\$		-		-	-	20%	-
1	03	02	04	03	02	RCV: ADC,DAC,DI cables and connectors	2-Aug-06	2-Aug-06	SL_MSEG1	\$\$		-		-	-	20%	-
1	03	02	04	03	02	Integrate Cables	3-Aug-06	21-Sep-06	SL_TMUE1	Hrs		-		-	-	20%	-
1	03	02	04	03	02	MCOR Bench Test and Assembly	22-Sep-06	22-Sep-06	SL_TMUE1	Hrs		-		-	-	20%	-
1	03	02	04	03	02	Pre-install Qual Test	25-Sep-06	29-Sep-06	SL_PCE1	Hrs		-		-	-	20%	-
1	03	02	04	03	02	Pre-install Qual Test	25-Sep-06	29-Sep-06	SL_PCCA1	Hrs		-		-	-	20%	-
1	03	02	04	03	03	MCOR_3					-	-	-	-	-	-	
1	03	02	04	03	03	RCV: MCOR Chassis	2-Aug-06	2-Aug-06	SL_MSEG1	\$\$		-		-	-	20%	-
1	03	02	04	03	03	RCV: MCOR Blower	2-Aug-06	2-Aug-06	SL_MSEG1	\$\$		-		-	-	20%	-
1	03	02	04	03	03	RCV: MCOR Crate Accessories	2-Aug-06	2-Aug-06	SL_MSEG1	\$\$		-		-	-	20%	-
1	03	02	04	03	03	RCV: MCOR Controller Module	2-Aug-06	2-Aug-06	SL_MSEG1	\$\$		-		-	-	20%	-
1	03	02	04	03	03	RCV: 12Amp Pwr & Prog Modules - YCA12	2-Aug-06	2-Aug-06	SL_MSEG1	\$\$		-		-	-	20%	-
1	03	02	04	03	03	RCV: 12Amp Pwr & Prog Modules - YCM15	2-Aug-06	2-Aug-06	SL_MSEG1	\$\$		-		-	-	20%	-
1	03	02	04	03	03	RCV: 30Amp Pwr & Prog Modules - BX11 (Trim)	2-Aug-06	2-Aug-06	SL_MSEG1	\$\$		-		-	-	20%	-
1	03	02	04	03	03	RCV: 30Amp Pwr & Prog Modules - BX13 (Trim)	2-Aug-06	2-Aug-06	SL_MSEG1	\$\$		-		-	-	20%	-
1	03	02	04	03	03	RCV: 30Amp Pwr & Prog Modules - BX14 (Trim)	2-Aug-06	2-Aug-06	SL_MSEG1	\$\$		-		-	-	20%	-
1	03	02	04	03	03	RCV: 12Amp Pwr & Prog Modules - CQ11	2-Aug-06	2-Aug-06	SL_MSEG1	\$\$		-		-	-	20%	-
1	03	02	04	03	03	RCV: 12Amp Pwr & Prog Modules - CQ12	2-Aug-06	2-Aug-06	SL_MSEG1	\$\$		-		-	-	20%	-
1	03	02	04	03	03	RCV: Analog to Digital Converter Module - 32 Ch	2-Aug-06	2-Aug-06	SL_MSEG1	\$\$		-		-	-	20%	-
1	03	02	04	03	03	RCV: Digital to Analog Converter Module - 16 Ch	2-Aug-06	2-Aug-06	SL_MSEG1	\$\$		-		-	-	20%	-
1	03	02	04	03	03	RCV: DI Module - 16 Chan	2-Aug-06	2-Aug-06	SL_MSEG1	\$\$		-		-	-	20%	-
1	03	02	04	03	03	RCV: IP Carrier Board	2-Aug-06	2-Aug-06	SL_MSEG1	\$\$		-		-	-	20%	-
1	03	02	04	03	03	RCV: IO Accessories	2-Aug-06	2-Aug-06	SL_MSEG1	\$\$		-		-	-	20%	-
1	03	02	04	03	03	RCV: ADC,DAC,DI cables and connectors	2-Aug-06	2-Aug-06	SL_MSEG1	\$\$		-		-	-	20%	-
1	03	02	04	03	03	Integrate Cables	3-Aug-06	21-Sep-06	SL_TMUE1	Hrs		-		-	-	20%	-
1	03	02	04	03	03	MCOR Bench Test and Assembly	22-Sep-06	22-Sep-06	SL_TMUE1	Hrs		-		-	-	20%	-
1	03	02	04	03	03	Pre-install Qual Test	25-Sep-06	29-Sep-06	SL_PCE1	Hrs		-		-	-	20%	-
1	03	02	04	03	03	Pre-install Qual Test	25-Sep-06	29-Sep-06	SL_PCCA1	Hrs		-		-	-	20%	-
1	03	02	04	03	04	MCOR_4					-	-	-	-	-	-	
1	03	02	04	03	04	RCV: MCOR Chassis	2-Aug-06	2-Aug-06	SL_MSEG1	\$\$		-		-	-	20%	-
1	03	02	04	03	04	RCV: MCOR Blower	2-Aug-06	2-Aug-06	SL_MSEG1	\$\$		-		-	-	20%	-
1	03	02	04	03	04	RCV: MCOR Crate Accessories	2-Aug-06	2-Aug-06	SL_MSEG1	\$\$		-		-	-	20%	-
1	03	02	04	03	04	RCV: MCOR Controller Module	2-Aug-06	2-Aug-06	SL_MSEG1	\$\$		-		-	-	20%	-
1	03	02	04	03	04	RCV: 12Amp Pwr & Prog Modules - QM11	2-Aug-06	2-Aug-06	SL_MSEG1	\$\$		-		-	-	20%	-
1	03	02	04	03	04	RCV: 12Amp Pwr & Prog Modules - QM12	2-Aug-06	2-Aug-06	SL_MSEG1	\$\$		-		-	-	20%	-
1	03	02	04	03	04	RCV: 12Amp Pwr & Prog Modules - QM13	2-Aug-06	2-Aug-06	SL_MSEG1	\$\$		-		-	-	20%	-
1	03	02	04	03	04	RCV: 12Amp Pwr & Prog Modules - XCM11	2-Aug-06	2-Aug-06	SL_MSEG1	\$\$		-		-	-	20%	-
1	03	02	04	03	04	RCV: 12Amp Pwr & Prog Modules - XCM13	2-Aug-06	2-Aug-06	SL_MSEG1	\$\$		-		-	-	20%	-
1	03	02	04	03	04	RCV: 12Amp Pwr & Prog Modules - YCM12	2-Aug-06	2-Aug-06	SL_MSEG1	\$\$		-		-	-	20%	-
1	03	02	04	03	04	RCV: 12Amp Pwr & Prog Modules - YCM11	2-Aug-06	2-Aug-06	SL_MSEG1	\$\$		-		-	-	20%	-
1	03	02	04	03	04	RCV: Analog to Digital Converter Module - 32 Ch	2-Aug-06	2-Aug-06	SL_MSEG1	\$\$		-		-	-	20%	-
1	03	02	04	03	04	RCV: Digital to Analog Converter Module - 16 Ch	2-Aug-06	2-Aug-06	SL_MSEG1	\$\$		-		-	-	20%	-
1	03	02	04	03	04	RCV: DI Module - 16 Chan	2-Aug-06	2-Aug-06	SL_MSEG1	\$\$		-		-	-	20%	-
1	03	02	04	03	04	RCV: IP Carrier Board	2-Aug-06	2-Aug-06	SL_MSEG1	\$\$		-		-	-	20%	-
1	03	02	04	03	04	RCV: IO Accessories	2-Aug-06	2-Aug-06	SL_MSEG1	\$\$		-		-	-	20%	-
1	03	02	04	03	04	RCV: ADC,DAC,DI cables and connectors	2-Aug-06	2-Aug-06	SL_MSEG1	\$\$		-		-	-	20%	-
1	03	02	04	03	04	RCV: 2/C#8 Cables (7ea)	2-Aug-06	2-Aug-06	SL_MSEG1	\$\$		-		-	-	20%	-
1	03	02	04	03	04	RCV: Cable - Lugs, Splices, etc (7ea)	2-Aug-06	2-Aug-06	SL_MSEG1	\$\$		-		-	-	20%	-



WBS Level						LCLA DCE August-2006 Description	Early Start	Early Finish	Res Code	Units	Work Rem. Bud. Qty		Work Rem. Full Burd and Escltd Cost			Contingency %	Contingency \$
1	2	3	4	5	6						Hours	\$\$	Labor	M&S	Total		
1	03	02	04	03	04	Integrate Cables	3-Aug-06	21-Sep-06	SL_TMUE1	Hrs	-		-		-	25%	-
1	03	02	04	03	04	MCOR Bench Test and Assembly	22-Sep-06	22-Sep-06	SL_TMUE1	Hrs	-		-		-	25%	-
<b>1</b>	<b>03</b>	<b>02</b>	<b>04</b>	<b>03</b>	<b>05</b>	<b>MCOR_5</b>					<b>28</b>	<b>26,725</b>	<b>2,636</b>	<b>28,736</b>	<b>31,372</b>		<b>6,406</b>
1	03	02	04	03	05	RCV: MCOR Chassis	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		2,850		3,064	3,064	20%	613
1	03	02	04	03	05	RCV: MCOR Blower	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		500		538	538	20%	108
1	03	02	04	03	05	RCV: MCOR Crate Accessories	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		500		538	538	20%	108
1	03	02	04	03	05	RCV: MCOR Controller Module	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		800		860	860	20%	172
1	03	02	04	03	05	RCV: 30Amp Pwr & Prog Modules - BX21 (Trim)	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		1,925		2,070	2,070	20%	414
1	03	02	04	03	05	RCV: 30Amp Pwr & Prog Modules - BX23 (Trim)	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		1,925		2,070	2,070	20%	414
1	03	02	04	03	05	RCV: 30Amp Pwr & Prog Modules - BX24 (Trim)	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		1,925		2,070	2,070	20%	414
1	03	02	04	03	05	RCV: 12Amp Pwr & Prog Modules - CQ21	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		1,925		2,070	2,070	20%	414
1	03	02	04	03	05	RCV: 12Amp Pwr & Prog Modules - CQ22	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		1,925		2,070	2,070	20%	414
1	03	02	04	03	05	RCV: 12Amp Pwr & Prog Modules - QM22	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		1,925		2,070	2,070	20%	414
1	03	02	04	03	05	RCV: 12Amp Pwr & Prog Modules - YC24900	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		1,925		2,070	2,070	20%	414
1	03	02	04	03	05	RCV: Analog to Digital Converter Module - 32 Ch	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		4,000		4,301	4,301	20%	860
1	03	02	04	03	05	RCV: Digital to Analog Converter Module - 16 Ch	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		2,200		2,366	2,366	20%	473
1	03	02	04	03	05	RCV: DI Module - 16 Chan	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		1,000		1,075	1,075	20%	215
1	03	02	04	03	05	RCV: IP Carrier Board	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		800		860	860	20%	172
1	03	02	04	03	05	RCV: IO Accessories	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		300		323	323	20%	65
1	03	02	04	03	05	RCV: ADC,DAC,DI cables and connectors	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		300		323	323	20%	65
1	03	02	04	03	05	Integrate Cables	8-Mar-07	4-Apr-07	SL_TMUE1	Hrs	12		1,152		1,152	25%	288
1	03	02	04	03	05	MCOR Bench Test and Assembly	5-Apr-07	2-May-07	SL_TMUE1	Hrs	8		768		768	25%	192
1	03	02	04	03	05	Pre-install Qual Test	3-May-07	9-May-07	SL_PCE1	Hrs	4		452		452	25%	113
1	03	02	04	03	05	Pre-install Qual Test	3-May-07	9-May-07	SL_PCCA1	Hrs	4		263		263	25%	66
<b>1</b>	<b>03</b>	<b>02</b>	<b>04</b>	<b>03</b>	<b>06</b>	<b>MCOR_6</b>					<b>28</b>	<b>19,025</b>	<b>2,636</b>	<b>20,457</b>	<b>23,092</b>		<b>4,750</b>
1	03	02	04	03	06	RCV: MCOR Chassis	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		2,850		3,064	3,064	20%	613
1	03	02	04	03	06	RCV: MCOR Blower	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		500		538	538	20%	108
1	03	02	04	03	06	RCV: MCOR Crate Accessories	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		500		538	538	20%	108
1	03	02	04	03	06	RCV: MCOR Controller Module	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		800		860	860	20%	172
1	03	02	04	03	06	RCV: 12Amp Pwr & Prog Modules - XC25202	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		1,925		2,070	2,070	20%	414
1	03	02	04	03	06	RCV: 12Amp Pwr & Prog Modules - XC25602	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		1,925		2,070	2,070	20%	414
1	03	02	04	03	06	RCV: 12Amp Pwr & Prog Modules - YC25503	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		1,925		2,070	2,070	20%	414
1	03	02	04	03	06	RCV: Analog to Digital Converter Module - 32 Ch	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		4,000		4,301	4,301	20%	860
1	03	02	04	03	06	RCV: Digital to Analog Converter Module - 16 Ch	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		2,200		2,366	2,366	20%	473
1	03	02	04	03	06	RCV: DI Module - 16 Chan	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		1,000		1,075	1,075	20%	215
1	03	02	04	03	06	RCV: IP Carrier Board	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		800		860	860	20%	172
1	03	02	04	03	06	RCV: IO Accessories	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		300		323	323	20%	65
1	03	02	04	03	06	RCV: ADC,DAC,DI cables and connectors	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		300		323	323	20%	65
1	03	02	04	03	06	Integrate Cables	8-Mar-07	4-Apr-07	SL_TMUE1	Hrs	12		1,152		1,152	25%	288
1	03	02	04	03	06	MCOR Bench Test and Assembly	5-Apr-07	2-May-07	SL_TMUE1	Hrs	8		768		768	25%	192
1	03	02	04	03	06	Pre-install Qual Test	3-May-07	9-May-07	SL_PCE1	Hrs	4		452		452	25%	113
1	03	02	04	03	06	Pre-install Qual Test	3-May-07	9-May-07	SL_PCCA1	Hrs	4		263		263	25%	66
<b>1</b>	<b>03</b>	<b>02</b>	<b>04</b>	<b>03</b>	<b>07</b>	<b>MCOR_BSY1</b>					<b>28</b>	<b>20,950</b>	<b>2,636</b>	<b>22,526</b>	<b>25,162</b>		<b>5,164</b>
1	03	02	04	03	07	RCV: MCOR Chassis	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		2,850		3,064	3,064	20%	613
1	03	02	04	03	07	RCV: MCOR Blower	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		500		538	538	20%	108
1	03	02	04	03	07	RCV: MCOR Crate Accessories	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		500		538	538	20%	108
1	03	02	04	03	07	RCV: MCOR Controller Module	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		800		860	860	20%	172
1	03	02	04	03	07	RCV: 12Amp Pwr & Prog Modules - YC5	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		1,925		2,070	2,070	20%	414
1	03	02	04	03	07	RCV: 12Amp Pwr & Prog Modules - XC6	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		1,925		2,070	2,070	20%	414
1	03	02	04	03	07	RCV: 12Amp Pwr & Prog Modules - XCA0	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		1,925		2,070	2,070	20%	414
1	03	02	04	03	07	RCV: 12Amp Pwr & Prog Modules - YCA0	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		1,925		2,070	2,070	20%	414
1	03	02	04	03	07	RCV: Analog to Digital Converter Module - 32 Ch	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		4,000		4,301	4,301	20%	860
1	03	02	04	03	07	RCV: Digital to Analog Converter Module - 16 Ch	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		2,200		2,366	2,366	20%	473
1	03	02	04	03	07	RCV: DI Module - 16 Chan	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		1,000		1,075	1,075	20%	215
1	03	02	04	03	07	RCV: IP Carrier Board	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		800		860	860	20%	172
1	03	02	04	03	07	RCV: IO Accessories	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		300		323	323	20%	65
1	03	02	04	03	07	RCV: ADC,DAC,DI cables and connectors	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		300		323	323	20%	65
1	03	02	04	03	07	Integrate Cables	8-Mar-07	4-Apr-07	SL_TMUE1	Hrs	12		1,152		1,152	25%	288
1	03	02	04	03	07	MCOR Bench Test and Assembly	5-Apr-07	2-May-07	SL_TMUE1	Hrs	8		768		768	25%	192
1	03	02	04	03	07	Pre-install Qual Test	3-May-07	9-May-07	SL_PCE1	Hrs	4		452		452	25%	113
1	03	02	04	03	07	Pre-install Qual Test	3-May-07	9-May-07	SL_PCCA1	Hrs	4		263		263	25%	66
<b>1</b>	<b>03</b>	<b>02</b>	<b>04</b>	<b>03</b>	<b>08</b>	<b>MCOR_LTU1</b>					<b>28</b>	<b>22,875</b>	<b>2,636</b>	<b>24,596</b>	<b>27,232</b>		<b>5,578</b>
1	03	02	04	03	08	RCV: MCOR Chassis	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		2,850		3,064	3,064	20%	613
1	03	02	04	03	08	RCV: MCOR Blower	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		500		538	538	20%	108

WBS Level						LCLA DCE August-2006 Description	Early Start	Early Finish	Res Code	Units	Work Rem. Bud. Qty		Work Rem. Full Burd and Escltd Cost			Contingency %	Contingency \$
1	2	3	4	5	6						Hours	\$\$	Labor	M&S	Total		
1	03	02	04	03	08	RCV: MCOR Crate Accessories	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		500		538	538	20%	108
1	03	02	04	03	08	RCV: MCOR Controller Module	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		800		860	860	20%	172
1	03	02	04	03	08	RCV: 12Amp Pwr & Prog Modules - YCVM1	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		1,925		2,070	2,070	20%	414
1	03	02	04	03	08	RCV: 12Amp Pwr & Prog Modules - XCVM2	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		1,925		2,070	2,070	20%	414
1	03	02	04	03	08	RCV: 12Amp Pwr & Prog Modules - BY1-BY2	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		1,925		2,070	2,070	20%	414
1	03	02	04	03	08	RCV: 12Amp Pwr & Prog Modules - YCVB1	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		1,925		2,070	2,070	20%	414
1	03	02	04	03	08	RCV: 12Amp Pwr & Prog Modules - XCVB2	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		1,925		2,070	2,070	20%	414
1	03	02	04	03	08	RCV: Analog to Digital Converter Module - 32 Ch	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		4,000		4,301	4,301	20%	860
1	03	02	04	03	08	RCV: Digital to Analog Converter Module - 16 Ch	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		2,200		2,366	2,366	20%	473
1	03	02	04	03	08	RCV: DI Module - 16 Chan	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		1,000		1,075	1,075	20%	215
1	03	02	04	03	08	RCV: IP Carrier Board	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		800		860	860	20%	172
1	03	02	04	03	08	RCV: IO Accessories	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		300		323	323	20%	65
1	03	02	04	03	08	RCV: ADC,DAC,DI cables and connectors	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		300		323	323	20%	65
1	03	02	04	03	08	Integrate Cables	8-Mar-07	4-Apr-07	SL_TMUE1	Hrs	12		1,152		1,152	25%	288
1	03	02	04	03	08	MCOR Bench Test and Assembly	5-Apr-07	2-May-07	SL_TMUE1	Hrs	8		768		768	25%	192
1	03	02	04	03	08	Pre-install Qual Test	3-May-07	9-May-07	SL_PCE1	Hrs	4		452		452	25%	113
1	03	02	04	03	08	Pre-install Qual Test	3-May-07	9-May-07	SL_PCCA1	Hrs	4		263		263	25%	66
<b>1</b>	<b>03</b>	<b>02</b>	<b>04</b>	<b>03</b>	<b>09</b>	<b>MCOR_LTU2</b>					<b>28</b>	<b>20,950</b>	<b>2,636</b>	<b>22,526</b>	<b>25,162</b>		<b>5,164</b>
1	03	02	04	03	09	RCV: MCOR Chassis	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		2,850		3,064	3,064	20%	613
1	03	02	04	03	09	RCV: MCOR Blower	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		500		538	538	20%	108
1	03	02	04	03	09	RCV: MCOR Crate Accessories	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		500		538	538	20%	108
1	03	02	04	03	09	RCV: MCOR Controller Module	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		800		860	860	20%	172
1	03	02	04	03	09	RCV: 12Amp Pwr & Prog Modules - YCVB2	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		1,925		2,070	2,070	20%	414
1	03	02	04	03	09	RCV: 12Amp Pwr & Prog Modules - XCVM3	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		1,925		2,070	2,070	20%	414
1	03	02	04	03	09	RCV: 12Amp Pwr & Prog Modules - YCVM4	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		1,925		2,070	2,070	20%	414
1	03	02	04	03	09	RCV: 30Amp Pwr & Prog Modules - BX31 (Trim)	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		1,925		2,070	2,070	20%	414
1	03	02	04	03	09	RCV: Analog to Digital Converter Module - 32 Ch	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		4,000		4,301	4,301	20%	860
1	03	02	04	03	09	RCV: Digital to Analog Converter Module - 16 Ch	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		2,200		2,366	2,366	20%	473
1	03	02	04	03	09	RCV: DI Module - 16 Chan	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		1,000		1,075	1,075	20%	215
1	03	02	04	03	09	RCV: IP Carrier Board	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		800		860	860	20%	172
1	03	02	04	03	09	RCV: IO Accessories	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		300		323	323	20%	65
1	03	02	04	03	09	RCV: ADC,DAC,DI cables and connectors	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		300		323	323	20%	65
1	03	02	04	03	09	Integrate Cables	8-Mar-07	4-Apr-07	SL_TMUE1	Hrs	12		1,152		1,152	25%	288
1	03	02	04	03	09	MCOR Bench Test and Assembly	5-Apr-07	2-May-07	SL_TMUE1	Hrs	8		768		768	25%	192
1	03	02	04	03	09	Pre-install Qual Test	3-May-07	9-May-07	SL_PCE1	Hrs	4		452		452	25%	113
1	03	02	04	03	09	Pre-install Qual Test	3-May-07	9-May-07	SL_PCCA1	Hrs	4		263		263	25%	66
<b>1</b>	<b>03</b>	<b>02</b>	<b>04</b>	<b>03</b>	<b>10</b>	<b>MCOR_LTU3</b>					<b>28</b>	<b>19,025</b>	<b>2,636</b>	<b>20,457</b>	<b>23,092</b>		<b>4,750</b>
1	03	02	04	03	10	RCV: MCOR Chassis	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		2,850		3,064	3,064	20%	613
1	03	02	04	03	10	RCV: MCOR Blower	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		500		538	538	20%	108
1	03	02	04	03	10	RCV: MCOR Crate Accessories	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		500		538	538	20%	108
1	03	02	04	03	10	RCV: MCOR Controller Module	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		800		860	860	20%	172
1	03	02	04	03	10	RCV: 30Amp Pwr & Prog Modules - BX35 (Trim)	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		1,925		2,070	2,070	20%	414
1	03	02	04	03	10	RCV: 30Amp Pwr & Prog Modules - BYW2 (Trim)	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		1,925		2,070	2,070	20%	414
1	03	02	04	03	10	RCV: 12Amp Pwr & Prog Modules - XCGL1	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		1,925		2,070	2,070	20%	414
1	03	02	04	03	10	RCV: Analog to Digital Converter Module - 32 Ch	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		4,000		4,301	4,301	20%	860
1	03	02	04	03	10	RCV: Digital to Analog Converter Module - 16 Ch	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		2,200		2,366	2,366	20%	473
1	03	02	04	03	10	RCV: DI Module - 16 Chan	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		1,000		1,075	1,075	20%	215
1	03	02	04	03	10	RCV: IP Carrier Board	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		800		860	860	20%	172
1	03	02	04	03	10	RCV: IO Accessories	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		300		323	323	20%	65
1	03	02	04	03	10	RCV: ADC,DAC,DI cables and connectors	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		300		323	323	20%	65
1	03	02	04	03	10	Integrate Cables	8-Mar-07	4-Apr-07	SL_TMUE1	Hrs	12		1,152		1,152	25%	288
1	03	02	04	03	10	MCOR Bench Test and Assembly	5-Apr-07	2-May-07	SL_TMUE1	Hrs	8		768		768	25%	192
1	03	02	04	03	10	Pre-install Qual Test	3-May-07	9-May-07	SL_PCE1	Hrs	4		452		452	25%	113
1	03	02	04	03	10	Pre-install Qual Test	3-May-07	9-May-07	SL_PCCA1	Hrs	4		263		263	25%	66
<b>1</b>	<b>03</b>	<b>02</b>	<b>04</b>	<b>03</b>	<b>11</b>	<b>MCOR_LTU4</b>					<b>28</b>	<b>22,875</b>	<b>2,636</b>	<b>24,596</b>	<b>27,232</b>		<b>5,578</b>
1	03	02	04	03	11	RCV: MCOR Chassis	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		2,850		3,064	3,064	20%	613
1	03	02	04	03	11	RCV: MCOR Blower	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		500		538	538	20%	108
1	03	02	04	03	11	RCV: MCOR Crate Accessories	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		500		538	538	20%	108
1	03	02	04	03	11	RCV: MCOR Controller Module	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		800		860	860	20%	172
1	03	02	04	03	11	RCV: 12Amp Pwr & Prog Modules - YCDL1	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		1,925		2,070	2,070	20%	414
1	03	02	04	03	11	RCV: 12Amp Pwr & Prog Modules - XCQT12	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		1,925		2,070	2,070	20%	414
1	03	02	04	03	11	RCV: 12Amp Pwr & Prog Modules - YCQT12	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		1,925		2,070	2,070	20%	414
1	03	02	04	03	11	RCV: 12Amp Pwr & Prog Modules - YCDL2	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		1,925		2,070	2,070	20%	414
1	03	02	04	03	11	RCV: 12Amp Pwr & Prog Modules - YCDL2	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		1,925		2,070	2,070	20%	414

WBS Level						LCLA DCE August-2006 Description	Early Start	Early Finish	Res Code	Units	Work Rem. Bud. Qty		Work Rem. Full Burd and Escltd Cost			Contingency %	Contingency \$
1	2	3	4	5	6						Hours	\$\$	Labor	M&S	Total		
1	03	02	04	03	11	RCV: Analog to Digital Converter Module - 32 Ch	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		4,000		4,301	4,301	20%	860
1	03	02	04	03	11	RCV: Digital to Analog Converter Module - 16 Ch	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		2,200		2,366	2,366	20%	473
1	03	02	04	03	11	RCV: DI Module - 16 Chan	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		1,000		1,075	1,075	20%	215
1	03	02	04	03	11	RCV: IP Carrier Board	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		800		860	860	20%	172
1	03	02	04	03	11	RCV: IO Accessories	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		300		323	323	20%	65
1	03	02	04	03	11	RCV: ADC,DAC,DI cables and conectors	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		300		323	323	20%	65
1	03	02	04	03	11	Integrate Cables	8-Mar-07	4-Apr-07	SL_TMUE1	Hrs	12		1,152		1,152	25%	288
1	03	02	04	03	11	MCOR Bench Test and Assembly	5-Apr-07	2-May-07	SL_TMUE1	Hrs	8		768		768	25%	192
1	03	02	04	03	11	Pre-install Qual Test	3-May-07	9-May-07	SL_PCE1	Hrs	4		452		452	25%	113
1	03	02	04	03	11	Pre-install Qual Test	3-May-07	9-May-07	SL_PCCA1	Hrs	4		263		263	25%	66
<b>1</b>	<b>03</b>	<b>02</b>	<b>04</b>	<b>03</b>	<b>12</b>	<b>MCOR_LTU5</b>					<b>28</b>	<b>22,875</b>	<b>2,636</b>	<b>24,596</b>	<b>27,232</b>		<b>5,578</b>
1	03	02	04	03	12	RCV: MCOR Chassis	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		2,850		3,064	3,064	20%	613
1	03	02	04	03	12	RCV: MCOR Blower	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		500		538	538	20%	108
1	03	02	04	03	12	RCV: MCOR Crate Accessories	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		500		538	538	20%	108
1	03	02	04	03	12	RCV: MCOR Controller Module	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		800		860	860	20%	172
1	03	02	04	03	12	RCV: 12Amp Pwr & Prog Modules - XCQT22	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		1,925		2,070	2,070	20%	414
1	03	02	04	03	12	RCV: 12Amp Pwr & Prog Modules - YCQT22	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		1,925		2,070	2,070	20%	414
1	03	02	04	03	12	RCV: 12Amp Pwr & Prog Modules - XCCL3	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		1,925		2,070	2,070	20%	414
1	03	02	04	03	12	RCV: 12Amp Pwr & Prog Modules - YCDL3	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		1,925		2,070	2,070	20%	414
1	03	02	04	03	12	RCV: 12Amp Pwr & Prog Modules - XCCL4	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		1,925		2,070	2,070	20%	414
1	03	02	04	03	12	RCV: Analog to Digital Converter Module - 32 Ch	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		4,000		4,301	4,301	20%	860
1	03	02	04	03	12	RCV: Digital to Analog Converter Module - 16 Ch	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		2,200		2,366	2,366	20%	473
1	03	02	04	03	12	RCV: DI Module - 16 Chan	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		1,000		1,075	1,075	20%	215
1	03	02	04	03	12	RCV: IP Carrier Board	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		800		860	860	20%	172
1	03	02	04	03	12	RCV: IO Accessories	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		300		323	323	20%	65
1	03	02	04	03	12	RCV: ADC,DAC,DI cables and conectors	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		300		323	323	20%	65
1	03	02	04	03	12	Integrate Cables	8-Mar-07	4-Apr-07	SL_TMUE1	Hrs	12		1,152		1,152	25%	288
1	03	02	04	03	12	MCOR Bench Test and Assembly	5-Apr-07	2-May-07	SL_TMUE1	Hrs	8		768		768	25%	192
1	03	02	04	03	12	Pre-install Qual Test	3-May-07	9-May-07	SL_PCE1	Hrs	4		452		452	25%	113
1	03	02	04	03	12	Pre-install Qual Test	3-May-07	9-May-07	SL_PCCA1	Hrs	4		263		263	25%	66
<b>1</b>	<b>03</b>	<b>02</b>	<b>04</b>	<b>03</b>	<b>13</b>	<b>MCOR_LTU6</b>					<b>28</b>	<b>22,875</b>	<b>2,636</b>	<b>24,596</b>	<b>27,232</b>		<b>5,578</b>
1	03	02	04	03	13	RCV: MCOR Chassis	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		2,850		3,064	3,064	20%	613
1	03	02	04	03	13	RCV: MCOR Blower	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		500		538	538	20%	108
1	03	02	04	03	13	RCV: MCOR Crate Accessories	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		500		538	538	20%	108
1	03	02	04	03	13	RCV: MCOR Controller Module	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		800		860	860	20%	172
1	03	02	04	03	13	RCV: 12Amp Pwr & Prog Modules - YCDL4	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		1,925		2,070	2,070	20%	414
1	03	02	04	03	13	RCV: 12Amp Pwr & Prog Modules - XCQT42	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		1,925		2,070	2,070	20%	414
1	03	02	04	03	13	RCV: 12Amp Pwr & Prog Modules - YCQT42	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		1,925		2,070	2,070	20%	414
1	03	02	04	03	13	RCV: 12Amp Pwr & Prog Modules - YCEM1	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		1,925		2,070	2,070	20%	414
1	03	02	04	03	13	RCV: 12Amp Pwr & Prog Modules - XCEM2	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		1,925		2,070	2,070	20%	414
1	03	02	04	03	13	RCV: Analog to Digital Converter Module - 32 Ch	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		4,000		4,301	4,301	20%	860
1	03	02	04	03	13	RCV: Digital to Analog Converter Module - 16 Ch	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		2,200		2,366	2,366	20%	473
1	03	02	04	03	13	RCV: DI Module - 16 Chan	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		1,000		1,075	1,075	20%	215
1	03	02	04	03	13	RCV: IP Carrier Board	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		800		860	860	20%	172
1	03	02	04	03	13	RCV: IO Accessories	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		300		323	323	20%	65
1	03	02	04	03	13	RCV: ADC,DAC,DI cables and conectors	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		300		323	323	20%	65
1	03	02	04	03	13	Integrate Cables	8-Mar-07	4-Apr-07	SL_TMUE1	Hrs	12		1,152		1,152	25%	288
1	03	02	04	03	13	MCOR Bench Test and Assembly	5-Apr-07	2-May-07	SL_TMUE1	Hrs	8		768		768	25%	192
1	03	02	04	03	13	Pre-install Qual Test	3-May-07	9-May-07	SL_PCE1	Hrs	4		452		452	25%	113
1	03	02	04	03	13	Pre-install Qual Test	3-May-07	9-May-07	SL_PCCA1	Hrs	4		263		263	25%	66
<b>1</b>	<b>03</b>	<b>02</b>	<b>04</b>	<b>03</b>	<b>14</b>	<b>MCOR_LTU7</b>					<b>28</b>	<b>22,875</b>	<b>2,636</b>	<b>24,596</b>	<b>27,232</b>		<b>5,578</b>
1	03	02	04	03	14	RCV: MCOR Chassis	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		2,850		3,064	3,064	20%	613
1	03	02	04	03	14	RCV: MCOR Blower	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		500		538	538	20%	108
1	03	02	04	03	14	RCV: MCOR Crate Accessories	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		500		538	538	20%	108
1	03	02	04	03	14	RCV: MCOR Controller Module	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		800		860	860	20%	172
1	03	02	04	03	14	RCV: 12Amp Pwr & Prog Modules - YCEM3	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		1,925		2,070	2,070	20%	414
1	03	02	04	03	14	RCV: 12Amp Pwr & Prog Modules - XCEM4	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		1,925		2,070	2,070	20%	414
1	03	02	04	03	14	RCV: 12Amp Pwr & Prog Modules - QEMV3	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		1,925		2,070	2,070	20%	414
1	03	02	04	03	14	RCV: 12Amp Pwr & Prog Modules - XCE31	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		1,925		2,070	2,070	20%	414
1	03	02	04	03	14	RCV: 12Amp Pwr & Prog Modules - YC32	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		1,925		2,070	2,070	20%	414
1	03	02	04	03	14	RCV: Analog to Digital Converter Module - 32 Ch	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		4,000		4,301	4,301	20%	860
1	03	02	04	03	14	RCV: Digital to Analog Converter Module - 16 Ch	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		2,200		2,366	2,366	20%	473
1	03	02	04	03	14	RCV: DI Module - 16 Chan	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		1,000		1,075	1,075	20%	215
1	03	02	04	03	14	RCV: IP Carrier Board	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		800		860	860	20%	172

WBS Level						LCLA DCE August-2006 Description	Early Start	Early Finish	Res Code	Units	Work Rem. Bud. Qty		Work Rem. Full Burd and Escltd Cost			Contingency %	Contingency \$
1	2	3	4	5	6						Hours	\$\$	Labor	M&S	Total		
1	03	02	04	03	14	RCV: IO Accessories	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		300		323	323	20%	65
1	03	02	04	03	14	RCV: ADC,DAC,DI cables and connectors	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		300		323	323	20%	65
1	03	02	04	03	14	Integrate Cables	8-Mar-07	4-Apr-07	SL_TMUE1	Hrs	12		1,152		1,152	25%	288
1	03	02	04	03	14	MCOR Bench Test and Assembly	5-Apr-07	2-May-07	SL_TMUE1	Hrs	8		768		768	25%	192
1	03	02	04	03	14	Pre-install Qual Test	3-May-07	9-May-07	SL_PCE1	Hrs	4		452		452	25%	113
1	03	02	04	03	14	Pre-install Qual Test	3-May-07	9-May-07	SL_PCCA1	Hrs	4		263		263	25%	66
<b>1</b>	<b>03</b>	<b>02</b>	<b>04</b>	<b>03</b>	<b>15</b>	<b>MCOR_LTU8</b>					<b>28</b>	<b>22,875</b>	<b>2,636</b>	<b>24,596</b>	<b>27,232</b>		<b>5,578</b>
1	03	02	04	03	15	RCV: MCOR Chassis	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		2,850		3,064	3,064	20%	613
1	03	02	04	03	15	RCV: MCOR Blower	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		500		538	538	20%	108
1	03	02	04	03	15	RCV: MCOR Crate Accessories	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		500		538	538	20%	108
1	03	02	04	03	15	RCV: MCOR Controller Module	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		800		860	860	20%	172
1	03	02	04	03	15	RCV: 12Amp Pwr & Prog Modules - XCE33	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		1,925		2,070	2,070	20%	414
1	03	02	04	03	15	RCV: 12Amp Pwr & Prog Modules - YCE34	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		1,925		2,070	2,070	20%	414
1	03	02	04	03	15	RCV: 12Amp Pwr & Prog Modules - XCE35	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		1,925		2,070	2,070	20%	414
1	03	02	04	03	15	RCV: 12Amp Pwr & Prog Modules - YCE36	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		1,925		2,070	2,070	20%	414
1	03	02	04	03	15	RCV: 12Amp Pwr & Prog Modules - XCUM1	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		1,925		2,070	2,070	20%	414
1	03	02	04	03	15	RCV: Analog to Digital Converter Module - 32 Ch	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		4,000		4,301	4,301	20%	860
1	03	02	04	03	15	RCV: Digital to Analog Converter Module - 16 Ch	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		2,200		2,366	2,366	20%	473
1	03	02	04	03	15	RCV: DI Module - 16 Chan	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		1,000		1,075	1,075	20%	215
1	03	02	04	03	15	RCV: IP Carrier Board	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		800		860	860	20%	172
1	03	02	04	03	15	RCV: IO Accessories	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		300		323	323	20%	65
1	03	02	04	03	15	RCV: ADC,DAC,DI cables and connectors	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		300		323	323	20%	65
1	03	02	04	03	15	Integrate Cables	8-Mar-07	4-Apr-07	SL_TMUE1	Hrs	12		1,152		1,152	25%	288
1	03	02	04	03	15	MCOR Bench Test and Assembly	5-Apr-07	2-May-07	SL_TMUE1	Hrs	8		768		768	25%	192
1	03	02	04	03	15	Pre-install Qual Test	3-May-07	9-May-07	SL_PCE1	Hrs	4		452		452	25%	113
1	03	02	04	03	15	Pre-install Qual Test	3-May-07	9-May-07	SL_PCCA1	Hrs	4		263		263	25%	66
<b>1</b>	<b>03</b>	<b>02</b>	<b>04</b>	<b>03</b>	<b>16</b>	<b>MCOR_LTU9</b>					<b>28</b>	<b>19,025</b>	<b>2,636</b>	<b>20,457</b>	<b>23,092</b>		<b>4,750</b>
1	03	02	04	03	16	RCV: MCOR Chassis	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		2,850		3,064	3,064	20%	613
1	03	02	04	03	16	RCV: MCOR Blower	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		500		538	538	20%	108
1	03	02	04	03	16	RCV: MCOR Crate Accessories	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		500		538	538	20%	108
1	03	02	04	03	16	RCV: MCOR Controller Module	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		800		860	860	20%	172
1	03	02	04	03	16	RCV: 12Amp Pwr & Prog Modules - YCUM2	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		1,925		2,070	2,070	20%	414
1	03	02	04	03	16	RCV: 12Amp Pwr & Prog Modules - YCUM3	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		1,925		2,070	2,070	20%	414
1	03	02	04	03	16	RCV: 12Amp Pwr & Prog Modules - XCUM4	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		1,925		2,070	2,070	20%	414
1	03	02	04	03	16	RCV: Analog to Digital Converter Module - 32 Ch	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		4,000		4,301	4,301	20%	860
1	03	02	04	03	16	RCV: Digital to Analog Converter Module - 16 Ch	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		2,200		2,366	2,366	20%	473
1	03	02	04	03	16	RCV: DI Module - 16 Chan	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		1,000		1,075	1,075	20%	215
1	03	02	04	03	16	RCV: IP Carrier Board	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		800		860	860	20%	172
1	03	02	04	03	16	RCV: IO Accessories	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		300		323	323	20%	65
1	03	02	04	03	16	RCV: ADC,DAC,DI cables and connectors	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		300		323	323	20%	65
1	03	02	04	03	16	Integrate Cables	8-Mar-07	4-Apr-07	SL_TMUE1	Hrs	12		1,152		1,152	25%	288
1	03	02	04	03	16	MCOR Bench Test and Assembly	5-Apr-07	2-May-07	SL_TMUE1	Hrs	8		768		768	25%	192
1	03	02	04	03	16	Pre-install Qual Test	3-May-07	9-May-07	SL_PCE1	Hrs	4		452		452	25%	113
1	03	02	04	03	16	Pre-install Qual Test	3-May-07	9-May-07	SL_PCCA1	Hrs	4		263		263	25%	66
<b>1</b>	<b>03</b>	<b>02</b>	<b>04</b>	<b>03</b>	<b>17</b>	<b>MCOR_DUMP1</b>					<b>28</b>	<b>24,800</b>	<b>2,636</b>	<b>26,666</b>	<b>29,302</b>		<b>5,992</b>
1	03	02	04	03	17	RCV: MCOR Chassis	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		2,850		3,064	3,064	20%	613
1	03	02	04	03	17	RCV: MCOR Blower	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		500		538	538	20%	108
1	03	02	04	03	17	RCV: MCOR Crate Accessories	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		500		538	538	20%	108
1	03	02	04	03	17	RCV: MCOR Controller Module	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		800		860	860	20%	172
1	03	02	04	03	17	RCV: 12Amp Pwr & Prog Modules - YCUE1	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		1,925		2,070	2,070	20%	414
1	03	02	04	03	17	RCV: 12Amp Pwr & Prog Modules - XCUE1	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		1,925		2,070	2,070	20%	414
1	03	02	04	03	17	RCV: 12Amp Pwr & Prog Modules - XCD3	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		1,925		2,070	2,070	20%	414
1	03	02	04	03	17	RCV: 12Amp Pwr & Prog Modules - YCD3	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		1,925		2,070	2,070	20%	414
1	03	02	04	03	17	RCV: 12Amp Pwr & Prog Modules - YCDD	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		1,925		2,070	2,070	20%	414
1	03	02	04	03	17	RCV: 12Amp Pwr & Prog Modules - XCDD	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		1,925		2,070	2,070	20%	414
1	03	02	04	03	17	RCV: Analog to Digital Converter Module - 32 Ch	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		4,000		4,301	4,301	20%	860
1	03	02	04	03	17	RCV: Digital to Analog Converter Module - 16 Ch	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		2,200		2,366	2,366	20%	473
1	03	02	04	03	17	RCV: DI Module - 16 Chan	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		1,000		1,075	1,075	20%	215
1	03	02	04	03	17	RCV: IP Carrier Board	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		800		860	860	20%	172
1	03	02	04	03	17	RCV: IO Accessories	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		300		323	323	20%	65
1	03	02	04	03	17	RCV: ADC,DAC,DI cables and connectors	7-Mar-07	7-Mar-07	SL_MSEG1	\$\$		300		323	323	20%	65
1	03	02	04	03	17	Integrate Cables	8-Mar-07	4-Apr-07	SL_TMUE1	Hrs	12		1,152		1,152	25%	288
1	03	02	04	03	17	MCOR Bench Test and Assembly	5-Apr-07	2-May-07	SL_TMUE1	Hrs	8		768		768	25%	192
1	03	02	04	03	17	Pre-install Qual Test	3-May-07	9-May-07	SL_PCE1	Hrs	4		452		452	25%	113

WBS Level						LCLA DCE August-2006 Description	Early Start	Early Finish	Res Code	Units	Work Rem. Bud. Qty		Work Rem. Full Burd and Escltd Cost			Contingency %	Contingency \$	
1	2	3	4	5	6						Hours	\$\$	Labor	M&S	Total			
1	03	02	04	03	17	Pre-install Qual Test	3-May-07	9-May-07	SL_PCCA1	Hrs	4		263		263	25%	66	
1	03	02	04	03	18	MCOR Bulk PS - LI21_1					-	-	-	-	-	-	-	
1	03	02	04	03	18	RCV: MCOR Bulk PS - 10kw	30-Oct-06	30-Oct-06	SL_MSEG1	\$\$		-		-		-	20%	-
1	03	02	04	03	18	RCV: Cirtc brkr, 3-pole, 30 A, 480V, Series Trp	30-Oct-06	30-Oct-06	SL_MSEG1	\$\$		-		-		-	20%	-
1	03	02	04	03	18	Bench test and safety inspection	31-Oct-06	6-Nov-06	SL_PCT1	Hrs		-		-		-	25%	-
1	03	02	04	03	19	MCOR Bulk PS - LI21_2					-	-	-	-	-	-	-	
1	03	02	04	03	19	RCV: MCOR Bulk PS - 10kw	30-Oct-06	30-Oct-06	SL_MSEG1	\$\$		-		-		-	20%	-
1	03	02	04	03	19	RCV: Cirtc brkr, 3-pole, 30 A, 480V, Series Trp	30-Oct-06	30-Oct-06	SL_MSEG1	\$\$		-		-		-	20%	-
1	03	02	04	03	19	Bench test and safety inspection	31-Oct-06	6-Nov-06	SL_PCT1	Hrs		-		-		-	25%	-
1	03	02	04	03	20	MCOR Bulk PS - LI24					4	8,100	248	8,710	8,957		1,804	
1	03	02	04	03	20	RCV: MCOR Bulk PS - 10kw	30-Oct-06	30-Oct-06	SL_MSEG1	\$\$		8,000		8,602	8,602	20%	1,720	
1	03	02	04	03	20	RCV: Cirtc brkr, 3-pole, 30 A, 480V, Series Trp	30-Oct-06	30-Oct-06	SL_MSEG1	\$\$		100		108	108	20%	22	
1	03	02	04	03	20	Bench test and safety inspection	31-Oct-06	6-Nov-06	SL_PCT1	Hrs	4		248		248	25%	62	
1	03	02	04	03	21	MCOR Bulk PS - LI25					4	8,100	248	8,710	8,957		1,804	
1	03	02	04	03	21	RCV: MCOR Bulk PS - 10kw	30-Oct-06	30-Oct-06	SL_MSEG1	\$\$		8,000		8,602	8,602	20%	1,720	
1	03	02	04	03	21	RCV: Cirtc brkr, 3-pole, 30 A, 480V, Series Trp	30-Oct-06	30-Oct-06	SL_MSEG1	\$\$		100		108	108	20%	22	
1	03	02	04	03	21	Bench test and safety inspection	31-Oct-06	6-Nov-06	SL_PCT1	Hrs	4		248		248	25%	62	
1	03	02	04	03	22	MCOR Bulk PS - BSY					4	8,100	248	8,710	8,957		1,804	
1	03	02	04	03	22	RCV: MCOR Bulk PS - 10kw	30-Oct-06	30-Oct-06	SL_MSEG1	\$\$		8,000		8,602	8,602	20%	1,720	
1	03	02	04	03	22	RCV: Cirtc brkr, 3-pole, 30 A, 480V, Series Trp	30-Oct-06	30-Oct-06	SL_MSEG1	\$\$		100		108	108	20%	22	
1	03	02	04	03	22	Bench test and safety inspection	31-Oct-06	6-Nov-06	SL_PCT1	Hrs	4		248		248	25%	62	
1	03	02	04	03	23	MCOR Bulk PS - LTU_1					4	8,100	248	8,710	8,957		1,804	
1	03	02	04	03	23	RCV: MCOR Bulk PS - 10kw	30-Oct-06	30-Oct-06	SL_MSEG1	\$\$		8,000		8,602	8,602	20%	1,720	
1	03	02	04	03	23	RCV: Cirtc brkr, 3-pole, 30 A, 480V, Series Trp	30-Oct-06	30-Oct-06	SL_MSEG1	\$\$		100		108	108	20%	22	
1	03	02	04	03	23	Bench test and safety inspection	31-Oct-06	6-Nov-06	SL_PCT1	Hrs	4		248		248	25%	62	
1	03	02	04	03	24	MCOR Bulk PS - LTU_2					4	8,100	248	8,710	8,957		1,804	
1	03	02	04	03	24	RCV: MCOR Bulk PS - 10kw	30-Oct-06	30-Oct-06	SL_MSEG1	\$\$		8,000		8,602	8,602	20%	1,720	
1	03	02	04	03	24	RCV: Cirtc brkr, 3-pole, 30 A, 480V, Series Trp	30-Oct-06	30-Oct-06	SL_MSEG1	\$\$		100		108	108	20%	22	
1	03	02	04	03	24	Bench test and safety inspection	31-Oct-06	6-Nov-06	SL_PCT1	Hrs	4		248		248	25%	62	
1	03	02	04	03	25	MCOR Bulk PS - LTU_3					4	8,000	248	8,602	8,850		1,782	
1	03	02	04	03	25	RCV: MCOR Bulk PS - 10kw	30-Oct-06	30-Oct-06	SL_MSEG1	\$\$		8,000		8,602	8,602	20%	1,720	
1	03	02	04	03	25	Bench test and safety inspection	31-Oct-06	6-Nov-06	SL_PCT1	Hrs	4		248		248	25%	62	
1	03	02	04	03	26	MCOR Bulk PS - LTU_4					4	8,100	248	8,710	8,957		1,804	
1	03	02	04	03	26	RCV: MCOR Bulk PS - 10kw	30-Oct-06	30-Oct-06	SL_MSEG1	\$\$		8,000		8,602	8,602	20%	1,720	
1	03	02	04	03	26	RCV: Cirtc brkr, 3-pole, 30 A, 480V, Series Trp	30-Oct-06	30-Oct-06	SL_MSEG1	\$\$		100		108	108	20%	22	
1	03	02	04	03	26	Bench test and safety inspection	31-Oct-06	6-Nov-06	SL_PCT1	Hrs	4		248		248	25%	62	
1	03	02	04	03	27	MCOR PLC - LI21					136	13,182	14,550	13,815	28,364		2,836	
1	03	02	04	03	27	RCV: PLC Chasis	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		308		323	323	10%	32	
1	03	02	04	03	27	RCV: PLC Power Supply	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		554		581	581	10%	58	
1	03	02	04	03	27	RCV: PLC Chassis Accessories	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		150		157	157	10%	16	
1	03	02	04	03	27	RCV: PLC Control Interface Module	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		3,450		3,616	3,616	10%	362	
1	03	02	04	03	27	RCV: PLC EtherNet/IP Module	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		1,209		1,267	1,267	10%	127	
1	03	02	04	03	27	RCV: Analog to Digital Converter Modules 12-ch	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		2,673		2,801	2,801	10%	280	
1	03	02	04	03	27	RCV: Digital to Analog Converter Modules 6-ch	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		2,146		2,249	2,249	10%	225	
1	03	02	04	03	27	RCV: Digital Input Modules +24V (32-chan)	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		292		306	306	10%	31	
1	03	02	04	03	27	RCV: Digital Output Modules +24V 32-ch	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		415		435	435	10%	43	
1	03	02	04	03	27	RCV: Touch Panel Display	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		1,685		1,766	1,766	10%	177	
1	03	02	04	03	27	RCV: Intra-rack Cables and conectors	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		300		314	314	10%	31	
1	03	02	04	03	27	Develop Ladder logic for application	30-Aug-06	27-Sep-06	SL_PCE1	Hrs	40		4,407		4,407	10%	441	
1	03	02	04	03	27	Develop Touch Panel Displays	30-Aug-06	27-Sep-06	SL_PCE1	Hrs	16		1,763		1,763	10%	176	
1	03	02	04	03	27	Debug Ladder logic and displays	28-Sep-06	4-Oct-06	SL_PCE1	Hrs	40		4,464		4,464	10%	446	
1	03	02	04	03	27	Integrate Cables	5-Oct-06	1-Dec-06	SL_TMUE1	Hrs	12		1,152		1,152	10%	115	
1	03	02	04	03	27	Documentation	30-Aug-06	14-Mar-07	SL_PCE1	Hrs	16		1,801		1,801	10%	180	
1	03	02	04	03	27	Bench-test and assembly	4-Dec-06	8-Dec-06	SL_PCT1	Hrs	4		248		248	10%	25	
1	03	02	04	03	27	Pre-install Qual Test	11-Dec-06	15-Dec-06	SL_PCE1	Hrs	4		452		452	10%	45	
1	03	02	04	03	27	Pre-install Qual Test	11-Dec-06	15-Dec-06	SL_PCCA1	Hrs	4		263		263	10%	26	
1	03	02	04	03	28	MCOR PLC - LI24					136	13,182	14,775	14,174	28,949		7,482	
1	03	02	04	03	28	RCV: PLC Chasis	2-Apr-07	2-Apr-07	SL_MSEG1	\$\$		308		331	331	20%	66	
1	03	02	04	03	28	RCV: PLC Power Supply	2-Apr-07	2-Apr-07	SL_MSEG1	\$\$		554		596	596	20%	119	
1	03	02	04	03	28	RCV: PLC Chassis Accessories	2-Apr-07	2-Apr-07	SL_MSEG1	\$\$		150		161	161	20%	32	
1	03	02	04	03	28	RCV: PLC Control Interface Module	2-Apr-07	2-Apr-07	SL_MSEG1	\$\$		3,450		3,710	3,710	20%	742	
1	03	02	04	03	28	RCV: PLC EtherNet/IP Module	2-Apr-07	2-Apr-07	SL_MSEG1	\$\$		1,209		1,300	1,300	20%	260	
1	03	02	04	03	28	RCV: Analog to Digital Converter Modules 12-ch	2-Apr-07	2-Apr-07	SL_MSEG1	\$\$		2,673		2,874	2,874	20%	575	
1	03	02	04	03	28	RCV: Digital to Analog Converter Modules 6-ch	2-Apr-07	2-Apr-07	SL_MSEG1	\$\$		2,146		2,307	2,307	20%	461	

WBS Level						LCLA DCE August-2006 Description	Early Start	Early Finish	Res Code	Units	Work Rem. Bud. Qty		Work Rem. Full Burd and Escltd Cost			Contingency %	Contingency \$
1	2	3	4	5	6						Hours	\$\$	Labor	M&S	Total		
1	03	02	04	03	28	RCV: Digital Input Modules +24V (32-chan)	2-Apr-07	2-Apr-07	SL_MSEG1	\$\$		292		314	314	20%	63
1	03	02	04	03	28	RCV: Digital Output Modules +24V 32-ch	2-Apr-07	2-Apr-07	SL_MSEG1	\$\$		415		446	446	20%	89
1	03	02	04	03	28	RCV: Touch Panel Display	2-Apr-07	2-Apr-07	SL_MSEG1	\$\$		1,685		1,812	1,812	20%	362
1	03	02	04	03	28	RCV: Intra-rack Cables and connectors	2-Apr-07	2-Apr-07	SL_MSEG1	\$\$		300		323	323	25%	81
1	03	02	04	03	28	Develop Ladder logic for application	3-Apr-07	30-Apr-07	SL_PCE1	Hrs	40		4,521		4,521	35%	1,582
1	03	02	04	03	28	Develop Touch Panel Displays	3-Apr-07	30-Apr-07	SL_PCE1	Hrs	16		1,809		1,809	35%	633
1	03	02	04	03	28	Debug Ladder logic and displays	1-May-07	7-May-07	SL_PCE1	Hrs	40		4,521		4,521	35%	1,582
1	03	02	04	03	28	Integrate Cables	8-May-07	3-Jul-07	SL_TMUE1	Hrs	12		1,152		1,152	20%	230
1	03	02	04	03	28	Documentation	3-Apr-07	27-Sep-07	SL_PCE1	Hrs	16		1,809		1,809	20%	362
1	03	02	04	03	28	Bench-test and assembly	5-Jul-07	11-Jul-07	SL_PCT1	Hrs	4		248		248	25%	62
1	03	02	04	03	28	Pre-install Qual Test	12-Jul-07	18-Jul-07	SL_PCE1	Hrs	4		452		452	25%	113
1	03	02	04	03	28	Pre-install Qual Test	12-Jul-07	18-Jul-07	SL_PCCA1	Hrs	4		263		263	25%	66
<b>1</b>	<b>03</b>	<b>02</b>	<b>04</b>	<b>03</b>	<b>29</b>	<b>MCOR PLC - LI25</b>					<b>136</b>	<b>13,182</b>	<b>14,775</b>	<b>14,174</b>	<b>28,949</b>		<b>7,482</b>
1	03	02	04	03	29	RCV: PLC Chasis	2-Apr-07	2-Apr-07	SL_MSEG1	\$\$		308		331	331	20%	66
1	03	02	04	03	29	RCV: PLC Power Supply	2-Apr-07	2-Apr-07	SL_MSEG1	\$\$		554		596	596	20%	119
1	03	02	04	03	29	RCV: PLC Chassis Accessories	2-Apr-07	2-Apr-07	SL_MSEG1	\$\$		150		161	161	20%	32
1	03	02	04	03	29	RCV: PLC Control Interface Module	2-Apr-07	2-Apr-07	SL_MSEG1	\$\$		3,450		3,710	3,710	20%	742
1	03	02	04	03	29	RCV: PLC EtherNet/IP Module	2-Apr-07	2-Apr-07	SL_MSEG1	\$\$		1,209		1,300	1,300	20%	260
1	03	02	04	03	29	RCV: Analog to Digital Converter Modules 12-ch	2-Apr-07	2-Apr-07	SL_MSEG1	\$\$		2,673		2,874	2,874	20%	575
1	03	02	04	03	29	RCV: Digital to Analog Converter Modules 6-ch	2-Apr-07	2-Apr-07	SL_MSEG1	\$\$		2,146		2,307	2,307	20%	461
1	03	02	04	03	29	RCV: Digital Input Modules +24V (32-chan)	2-Apr-07	2-Apr-07	SL_MSEG1	\$\$		292		314	314	20%	63
1	03	02	04	03	29	RCV: Digital Output Modules +24V 32-ch	2-Apr-07	2-Apr-07	SL_MSEG1	\$\$		415		446	446	20%	89
1	03	02	04	03	29	RCV: Touch Panel Display	2-Apr-07	2-Apr-07	SL_MSEG1	\$\$		1,685		1,812	1,812	20%	362
1	03	02	04	03	29	RCV: Intra-rack Cables and connectors	2-Apr-07	2-Apr-07	SL_MSEG1	\$\$		300		323	323	25%	81
1	03	02	04	03	29	Develop Ladder logic for application	3-Apr-07	30-Apr-07	SL_PCE1	Hrs	40		4,521		4,521	35%	1,582
1	03	02	04	03	29	Develop Touch Panel Displays	3-Apr-07	30-Apr-07	SL_PCE1	Hrs	16		1,809		1,809	35%	633
1	03	02	04	03	29	Debug Ladder logic and displays	1-May-07	7-May-07	SL_PCE1	Hrs	40		4,521		4,521	35%	1,582
1	03	02	04	03	29	Integrate Cables	8-May-07	3-Jul-07	SL_TMUE1	Hrs	12		1,152		1,152	20%	230
1	03	02	04	03	29	Documentation	3-Apr-07	27-Sep-07	SL_PCE1	Hrs	16		1,809		1,809	20%	362
1	03	02	04	03	29	Bench-test and assembly	5-Jul-07	11-Jul-07	SL_PCT1	Hrs	4		248		248	25%	62
1	03	02	04	03	29	Pre-install Qual Test	12-Jul-07	18-Jul-07	SL_PCE1	Hrs	4		452		452	25%	113
1	03	02	04	03	29	Pre-install Qual Test	12-Jul-07	18-Jul-07	SL_PCCA1	Hrs	4		263		263	25%	66
<b>1</b>	<b>03</b>	<b>02</b>	<b>04</b>	<b>03</b>	<b>30</b>	<b>MCOR PLC - BSY</b>					<b>136</b>	<b>13,182</b>	<b>14,775</b>	<b>14,174</b>	<b>28,949</b>		<b>7,482</b>
1	03	02	04	03	30	RCV: PLC Chasis	2-Apr-07	2-Apr-07	SL_MSEG1	\$\$		308		331	331	20%	66
1	03	02	04	03	30	RCV: PLC Power Supply	2-Apr-07	2-Apr-07	SL_MSEG1	\$\$		554		596	596	20%	119
1	03	02	04	03	30	RCV: PLC Chassis Accessories	2-Apr-07	2-Apr-07	SL_MSEG1	\$\$		150		161	161	20%	32
1	03	02	04	03	30	RCV: PLC Control Interface Module	2-Apr-07	2-Apr-07	SL_MSEG1	\$\$		3,450		3,710	3,710	20%	742
1	03	02	04	03	30	RCV: PLC EtherNet/IP Module	2-Apr-07	2-Apr-07	SL_MSEG1	\$\$		1,209		1,300	1,300	20%	260
1	03	02	04	03	30	RCV: Analog to Digital Converter Modules 12-ch	2-Apr-07	2-Apr-07	SL_MSEG1	\$\$		2,673		2,874	2,874	20%	575
1	03	02	04	03	30	RCV: Digital to Analog Converter Modules 6-ch	2-Apr-07	2-Apr-07	SL_MSEG1	\$\$		2,146		2,307	2,307	20%	461
1	03	02	04	03	30	RCV: Digital Input Modules +24V (32-chan)	2-Apr-07	2-Apr-07	SL_MSEG1	\$\$		292		314	314	20%	63
1	03	02	04	03	30	RCV: Digital Output Modules +24V 32-ch	2-Apr-07	2-Apr-07	SL_MSEG1	\$\$		415		446	446	20%	89
1	03	02	04	03	30	RCV: Touch Panel Display	2-Apr-07	2-Apr-07	SL_MSEG1	\$\$		1,685		1,812	1,812	20%	362
1	03	02	04	03	30	RCV: Intra-rack Cables and connectors	2-Apr-07	2-Apr-07	SL_MSEG1	\$\$		300		323	323	25%	81
1	03	02	04	03	30	Develop Ladder logic for application	3-Apr-07	30-Apr-07	SL_PCE1	Hrs	40		4,521		4,521	35%	1,582
1	03	02	04	03	30	Develop Touch Panel Displays	3-Apr-07	30-Apr-07	SL_PCE1	Hrs	16		1,809		1,809	35%	633
1	03	02	04	03	30	Debug Ladder logic and displays	1-May-07	7-May-07	SL_PCE1	Hrs	40		4,521		4,521	35%	1,582
1	03	02	04	03	30	Integrate Cables	8-May-07	3-Jul-07	SL_TMUE1	Hrs	12		1,152		1,152	20%	230
1	03	02	04	03	30	Documentation	3-Apr-07	27-Sep-07	SL_PCE1	Hrs	16		1,809		1,809	20%	362
1	03	02	04	03	30	Bench-test and assembly	5-Jul-07	11-Jul-07	SL_PCT1	Hrs	4		248		248	25%	62
1	03	02	04	03	30	Pre-install Qual Test	12-Jul-07	18-Jul-07	SL_PCE1	Hrs	4		452		452	25%	113
1	03	02	04	03	30	Pre-install Qual Test	12-Jul-07	18-Jul-07	SL_PCCA1	Hrs	4		263		263	25%	66
<b>1</b>	<b>03</b>	<b>02</b>	<b>04</b>	<b>03</b>	<b>31</b>	<b>MCOR PLC - LRU_1 (BLD 2.1)</b>					<b>136</b>	<b>13,182</b>	<b>14,775</b>	<b>14,174</b>	<b>28,949</b>		<b>7,482</b>
1	03	02	04	03	31	RCV: PLC Chasis	2-Apr-07	2-Apr-07	SL_MSEG1	\$\$		308		331	331	20%	66
1	03	02	04	03	31	RCV: PLC Power Supply	2-Apr-07	2-Apr-07	SL_MSEG1	\$\$		554		596	596	20%	119
1	03	02	04	03	31	RCV: PLC Chassis Accessories	2-Apr-07	2-Apr-07	SL_MSEG1	\$\$		150		161	161	20%	32
1	03	02	04	03	31	RCV: PLC Control Interface Module	2-Apr-07	2-Apr-07	SL_MSEG1	\$\$		3,450		3,710	3,710	20%	742
1	03	02	04	03	31	RCV: PLC EtherNet/IP Module	2-Apr-07	2-Apr-07	SL_MSEG1	\$\$		1,209		1,300	1,300	20%	260
1	03	02	04	03	31	RCV: Analog to Digital Converter Modules 12-ch	2-Apr-07	2-Apr-07	SL_MSEG1	\$\$		2,673		2,874	2,874	20%	575
1	03	02	04	03	31	RCV: Digital to Analog Converter Modules 6-ch	2-Apr-07	2-Apr-07	SL_MSEG1	\$\$		2,146		2,307	2,307	20%	461
1	03	02	04	03	31	RCV: Digital Input Modules +24V (32-chan)	2-Apr-07	2-Apr-07	SL_MSEG1	\$\$		292		314	314	20%	63
1	03	02	04	03	31	RCV: Digital Output Modules +24V 32-ch	2-Apr-07	2-Apr-07	SL_MSEG1	\$\$		415		446	446	20%	89
1	03	02	04	03	31	RCV: Touch Panel Display	2-Apr-07	2-Apr-07	SL_MSEG1	\$\$		1,685		1,812	1,812	20%	362
1	03	02	04	03	31	RCV: Intra-rack Cables and connectors	2-Apr-07	2-Apr-07	SL_MSEG1	\$\$		300		323	323	25%	81

WBS Level						LCLA DCE August-2006 Description	Early Start	Early Finish	Res Code	Units	Work Rem. Bud. Qty		Work Rem. Full Burd and Escltd Cost			Contingency %	Contingency \$
1	2	3	4	5	6						Hours	\$\$	Labor	M&S	Total		
1	03	02	04	03	31	Develop Ladder logic for application	3-Apr-07	30-Apr-07	SL_PCE1	Hrs	40		4,521		4,521	35%	1,582
1	03	02	04	03	31	Develop Touch Panel Displays	3-Apr-07	30-Apr-07	SL_PCE1	Hrs	16		1,809		1,809	35%	633
1	03	02	04	03	31	Debug Ladder logic and displays	1-May-07	7-May-07	SL_PCE1	Hrs	40		4,521		4,521	35%	1,582
1	03	02	04	03	31	Integrate Cables	8-May-07	3-Jul-07	SL_TMUE1	Hrs	12		1,152		1,152	20%	230
1	03	02	04	03	31	Documentation	3-Apr-07	27-Sep-07	SL_PCE1	Hrs	16		1,809		1,809	20%	362
1	03	02	04	03	31	Bench-test and assembly	5-Jul-07	11-Jul-07	SL_PCT1	Hrs	4		248		248	25%	62
1	03	02	04	03	31	Pre-install Qual Test	12-Jul-07	18-Jul-07	SL_PCE1	Hrs	4		452		452	25%	113
1	03	02	04	03	31	Pre-install Qual Test	12-Jul-07	18-Jul-07	SL_PCCA1	Hrs	4		263		263	25%	66
<b>1</b>	<b>03</b>	<b>02</b>	<b>04</b>	<b>03</b>	<b>32</b>	<b>MCOR PLC - LTU_2 (BLD 2.2)</b>					<b>136</b>	<b>13,182</b>	<b>14,775</b>	<b>14,174</b>	<b>28,949</b>		<b>7,482</b>
1	03	02	04	03	32	RCV: PLC Chasis	2-Apr-07	2-Apr-07	SL_MSEG1	\$\$		308		331	331	20%	66
1	03	02	04	03	32	RCV: PLC Power Supply	2-Apr-07	2-Apr-07	SL_MSEG1	\$\$		554		596	596	20%	119
1	03	02	04	03	32	RCV: PLC Chassis Accessories	2-Apr-07	2-Apr-07	SL_MSEG1	\$\$		150		161	161	20%	32
1	03	02	04	03	32	RCV: PLC Control Interface Module	2-Apr-07	2-Apr-07	SL_MSEG1	\$\$		3,450		3,710	3,710	20%	742
1	03	02	04	03	32	RCV: PLC EtherNet/IP Module	2-Apr-07	2-Apr-07	SL_MSEG1	\$\$		1,209		1,300	1,300	20%	260
1	03	02	04	03	32	RCV: Analog to Digital Converter Modules 12-ch	2-Apr-07	2-Apr-07	SL_MSEG1	\$\$		2,673		2,874	2,874	20%	575
1	03	02	04	03	32	RCV: Digital to Analog Converter Modules 6-ch	2-Apr-07	2-Apr-07	SL_MSEG1	\$\$		2,146		2,307	2,307	20%	461
1	03	02	04	03	32	RCV: Digital Input Modules +24V (32-chan)	2-Apr-07	2-Apr-07	SL_MSEG1	\$\$		292		314	314	20%	63
1	03	02	04	03	32	RCV: Digital Output Modules +24V 32-ch	2-Apr-07	2-Apr-07	SL_MSEG1	\$\$		415		446	446	20%	89
1	03	02	04	03	32	RCV: Touch Panel Display	2-Apr-07	2-Apr-07	SL_MSEG1	\$\$		1,685		1,812	1,812	20%	362
1	03	02	04	03	32	RCV: Intra-rack Cables and conectors	2-Apr-07	2-Apr-07	SL_MSEG1	\$\$		300		323	323	25%	81
1	03	02	04	03	32	Develop Ladder logic for application	3-Apr-07	30-Apr-07	SL_PCE1	Hrs	40		4,521		4,521	35%	1,582
1	03	02	04	03	32	Develop Touch Panel Displays	3-Apr-07	30-Apr-07	SL_PCE1	Hrs	16		1,809		1,809	35%	633
1	03	02	04	03	32	Debug Ladder logic and displays	1-May-07	7-May-07	SL_PCE1	Hrs	40		4,521		4,521	35%	1,582
1	03	02	04	03	32	Integrate Cables	8-May-07	3-Jul-07	SL_TMUE1	Hrs	12		1,152		1,152	20%	230
1	03	02	04	03	32	Documentation	3-Apr-07	27-Sep-07	SL_PCE1	Hrs	16		1,809		1,809	20%	362
1	03	02	04	03	32	Bench-test and assembly	5-Jul-07	11-Jul-07	SL_PCT1	Hrs	4		248		248	25%	62
1	03	02	04	03	32	Pre-install Qual Test	12-Jul-07	18-Jul-07	SL_PCE1	Hrs	4		452		452	25%	113
1	03	02	04	03	32	Pre-install Qual Test	12-Jul-07	18-Jul-07	SL_PCCA1	Hrs	4		263		263	25%	66
<b>1</b>	<b>03</b>	<b>02</b>	<b>04</b>	<b>03</b>	<b>33</b>	<b>MCOR PLC - LTU_3 (BLD 2.3)</b>					<b>136</b>	<b>13,182</b>	<b>14,775</b>	<b>14,174</b>	<b>28,949</b>		<b>7,482</b>
1	03	02	04	03	33	RCV: PLC Chasis	2-Apr-07	2-Apr-07	SL_MSEG1	\$\$		308		331	331	20%	66
1	03	02	04	03	33	RCV: PLC Power Supply	2-Apr-07	2-Apr-07	SL_MSEG1	\$\$		554		596	596	20%	119
1	03	02	04	03	33	RCV: PLC Chassis Accessories	2-Apr-07	2-Apr-07	SL_MSEG1	\$\$		150		161	161	20%	32
1	03	02	04	03	33	RCV: PLC Control Interface Module	2-Apr-07	2-Apr-07	SL_MSEG1	\$\$		3,450		3,710	3,710	20%	742
1	03	02	04	03	33	RCV: PLC EtherNet/IP Module	2-Apr-07	2-Apr-07	SL_MSEG1	\$\$		1,209		1,300	1,300	20%	260
1	03	02	04	03	33	RCV: Analog to Digital Converter Modules 12-ch	2-Apr-07	2-Apr-07	SL_MSEG1	\$\$		2,673		2,874	2,874	20%	575
1	03	02	04	03	33	RCV: Digital to Analog Converter Modules 6-ch	2-Apr-07	2-Apr-07	SL_MSEG1	\$\$		2,146		2,307	2,307	20%	461
1	03	02	04	03	33	RCV: Digital Input Modules +24V (32-chan)	2-Apr-07	2-Apr-07	SL_MSEG1	\$\$		292		314	314	20%	63
1	03	02	04	03	33	RCV: Digital Output Modules +24V 32-ch	2-Apr-07	2-Apr-07	SL_MSEG1	\$\$		415		446	446	20%	89
1	03	02	04	03	33	RCV: Touch Panel Display	2-Apr-07	2-Apr-07	SL_MSEG1	\$\$		1,685		1,812	1,812	20%	362
1	03	02	04	03	33	RCV: Intra-rack Cables and conectors	2-Apr-07	2-Apr-07	SL_MSEG1	\$\$		300		323	323	25%	81
1	03	02	04	03	33	Develop Ladder logic for application	3-Apr-07	30-Apr-07	SL_PCE1	Hrs	40		4,521		4,521	35%	1,582
1	03	02	04	03	33	Develop Touch Panel Displays	3-Apr-07	30-Apr-07	SL_PCE1	Hrs	16		1,809		1,809	35%	633
1	03	02	04	03	33	Debug Ladder logic and displays	1-May-07	7-May-07	SL_PCE1	Hrs	40		4,521		4,521	35%	1,582
1	03	02	04	03	33	Integrate Cables	8-May-07	3-Jul-07	SL_TMUE1	Hrs	12		1,152		1,152	20%	230
1	03	02	04	03	33	Documentation	3-Apr-07	27-Sep-07	SL_PCE1	Hrs	16		1,809		1,809	20%	362
1	03	02	04	03	33	Bench-test and assembly	5-Jul-07	11-Jul-07	SL_PCT1	Hrs	4		248		248	25%	62
1	03	02	04	03	33	Pre-install Qual Test	12-Jul-07	18-Jul-07	SL_PCE1	Hrs	4		452		452	25%	113
1	03	02	04	03	33	Pre-install Qual Test	12-Jul-07	18-Jul-07	SL_PCCA1	Hrs	4		263		263	25%	66
<b>1</b>	<b>03</b>	<b>02</b>	<b>04</b>	<b>03</b>	<b>34</b>	<b>MCOR PLC - Dump</b>					<b>136</b>	<b>13,182</b>	<b>14,775</b>	<b>14,174</b>	<b>28,949</b>		<b>7,482</b>
1	03	02	04	03	34	RCV: PLC Chasis	2-Apr-07	2-Apr-07	SL_MSEG1	\$\$		308		331	331	20%	66
1	03	02	04	03	34	RCV: PLC Power Supply	2-Apr-07	2-Apr-07	SL_MSEG1	\$\$		554		596	596	20%	119
1	03	02	04	03	34	RCV: PLC Chassis Accessories	2-Apr-07	2-Apr-07	SL_MSEG1	\$\$		150		161	161	20%	32
1	03	02	04	03	34	RCV: PLC Control Interface Module	2-Apr-07	2-Apr-07	SL_MSEG1	\$\$		3,450		3,710	3,710	20%	742
1	03	02	04	03	34	RCV: PLC EtherNet/IP Module	2-Apr-07	2-Apr-07	SL_MSEG1	\$\$		1,209		1,300	1,300	20%	260
1	03	02	04	03	34	RCV: Analog to Digital Converter Modules 12-ch	2-Apr-07	2-Apr-07	SL_MSEG1	\$\$		2,673		2,874	2,874	20%	575
1	03	02	04	03	34	RCV: Digital to Analog Converter Modules 6-ch	2-Apr-07	2-Apr-07	SL_MSEG1	\$\$		2,146		2,307	2,307	20%	461
1	03	02	04	03	34	RCV: Digital Input Modules +24V (32-chan)	2-Apr-07	2-Apr-07	SL_MSEG1	\$\$		292		314	314	20%	63
1	03	02	04	03	34	RCV: Digital Output Modules +24V 32-ch	2-Apr-07	2-Apr-07	SL_MSEG1	\$\$		415		446	446	20%	89
1	03	02	04	03	34	RCV: Touch Panel Display	2-Apr-07	2-Apr-07	SL_MSEG1	\$\$		1,685		1,812	1,812	20%	362
1	03	02	04	03	34	RCV: Intra-rack Cables and conectors	2-Apr-07	2-Apr-07	SL_MSEG1	\$\$		300		323	323	25%	81
1	03	02	04	03	34	Develop Ladder logic for application	3-Apr-07	30-Apr-07	SL_PCE1	Hrs	40		4,521		4,521	35%	1,582
1	03	02	04	03	34	Develop Touch Panel Displays	3-Apr-07	30-Apr-07	SL_PCE1	Hrs	16		1,809		1,809	35%	633
1	03	02	04	03	34	Debug Ladder logic and displays	1-May-07	7-May-07	SL_PCE1	Hrs	40		4,521		4,521	35%	1,582
1	03	02	04	03	34	Integrate Cables	8-May-07	3-Jul-07	SL_TMUE1	Hrs	12		1,152		1,152	20%	230

WBS Level						LCLA DCE August-2006 Description	Early Start	Early Finish	Res Code	Units	Work Rem. Bud. Qty		Work Rem. Full Burd and Escltd Cost			Contingency %	Contingency \$
1	2	3	4	5	6						Hours	\$\$	Labor	M&S	Total		
1	03	02	04	03	34	Documentation	3-Apr-07	27-Sep-07	SL_PCE1	Hrs	16		1,809		1,809	20%	362
1	03	02	04	03	34	Bench-test and assembly	5-Jul-07	11-Jul-07	SL_PCT1	Hrs	4		248		248	25%	62
1	03	02	04	03	34	Pre-install Qual Test	12-Jul-07	18-Jul-07	SL_PCE1	Hrs	4		452		452	25%	113
1	03	02	04	03	34	Pre-install Qual Test	12-Jul-07	18-Jul-07	SL_PCCA1	Hrs	4		263		263	25%	66
1	03	02	04	03	35	<b>MCOR Bulk Dump</b>					4	8,000	248	8,602	8,850		1,782
1	03	02	04	03	35	RCV: MCOR Bulk PS - 10kw	30-Oct-06	30-Oct-06	SL_MSEG1	\$\$		8,000		8,602	8,602	20%	1,720
1	03	02	04	03	35	Bench test and safety inspection	31-Oct-06	6-Nov-06	SL_PCT1	Hrs	4		248		248	25%	62
1	03	02	04	03	36	<b>Rack Accessories - LTU_1 (bld 2.1)</b>					1	640	62	688	750		153
1	03	02	04	03	36	RCV: Circuit Breaker, 100A 480V, 3-pole,25kAIC	16-Mar-07	16-Mar-07	SL_MSEG1	\$\$		640		688	688	20%	138
1	03	02	04	03	36	Assemble and test	19-Mar-07	19-Mar-07	SL_PCT1	Hrs	1		62		62	25%	15
1	03	02	04	03	37	<b>Rack Accessories - LTU_2 (bld 2.2)</b>					1	640	62	688	750		153
1	03	02	04	03	37	RCV: Circuit Breaker, 100A 480V, 3-pole,25kAIC	16-Mar-07	16-Mar-07	SL_MSEG1	\$\$		640		688	688	20%	138
1	03	02	04	03	37	Assemble and test	19-Mar-07	19-Mar-07	SL_PCT1	Hrs	1		62		62	25%	15
1	03	02	04	03	38	<b>Rack Accessories - LTU_3 (bld 2.3)</b>					1	640	62	688	750		153
1	03	02	04	03	38	RCV: Circuit Breaker, 100A 480V, 3-pole,25kAIC	16-Mar-07	16-Mar-07	SL_MSEG1	\$\$		640		688	688	20%	138
1	03	02	04	03	38	Assemble and test	19-Mar-07	19-Mar-07	SL_PCT1	Hrs	1		62		62	25%	15
1	03	02	04	04		<b>Controls &amp; Power Supply</b>					7,234	1,204,675	497,464	1,291,712	1,789,176		447,294
1	03	02	04	04		Write Software to Integrate	1-Aug-06	31-Aug-06	SL_CP1	Hrs	735		59,037		59,037	25%	14,759
1	03	02	04	04		Write Documentation	1-Sep-06	15-Sep-06	SL_CP1	Hrs	37		2,972		2,972	25%	743
1	03	02	04	04		Perform Point to Point Checkout	18-Sep-06	12-Dec-06	SL_CP1	Hrs	368		30,210		30,210	25%	7,552
1	03	02	04	04		Integrate Hardware and Software	13-Dec-06	10-Jan-07	SL_CP1	Hrs	43		3,544		3,544	25%	886
1	03	02	04	04		Integrate Hardware and Software	13-Dec-06	10-Jan-07	SL_CE1	Hrs	37		4,182		4,182	25%	1,046
1	03	02	04	04		L1-BC1 Cable Plant Design	1-Aug-06	21-Aug-06	SL_ME1	Hrs	1		97		97	25%	24
1	03	02	04	04		L1-BC1 Cable Plant Design	1-Aug-06	21-Aug-06	SL_CE1	Hrs	25		2,754		2,754	25%	689
1	03	02	04	04		Vendor Fab L1-BC1 Cable Plant Hardware	30-Aug-06	22-Nov-06	SL_MSEG1	\$\$		209,000		222,557	222,557	25%	55,639
1	03	02	04	04		Intall & Integrate L1-BC1 Cable Plant	22-Aug-06	14-Dec-06	SL_PCEF1	Hrs	379		23,245		23,245	25%	5,811
1	03	02	04	04		Intall & Integrate L1-BC1 Cable Plant	22-Aug-06	14-Dec-06	SL_CT	Hrs	11		708		708	25%	177
1	03	02	04	04		Intall & Integrate L1-BC1 Cable Plant	22-Aug-06	14-Dec-06	SL_CCA1	Hrs	187		12,200		12,200	25%	3,050
1	03	02	04	04		L1-BC1 Racks Design	1-Aug-06	21-Aug-06	SL_ME1	Hrs	1		97		97	25%	24
1	03	02	04	04		L1-BC1 Racks Design	1-Aug-06	21-Aug-06	SL_CE1	Hrs	25		2,754		2,754	25%	689
1	03	02	04	04		Prep L1-BC1 Bid Package	22-Aug-06	28-Aug-06	SL_PCE1	Hrs	12		1,322		1,322	25%	331
1	03	02	04	04		Vendor Fab LC1-BC1 Racks	30-Aug-06	13-Sep-06	SA_MSEG1	\$\$		52,950		55,492	55,492	25%	13,873
1	03	02	04	04		Intall & Integrate L1-BC1 Racks	14-Sep-06	27-Sep-06	SL_PCEF1	Hrs	379		22,859		22,859	25%	5,715
1	03	02	04	04		Intall & Integrate L1-BC1 Racks	14-Sep-06	27-Sep-06	SL_CT	Hrs	11		697		697	25%	174
1	03	02	04	04		Intall & Integrate L1-BC1 Racks	14-Sep-06	27-Sep-06	SL_CCA1	Hrs	187		11,998		11,998	25%	2,999
1	03	02	04	04		L2-BC2 Cable Plant Design	2-Oct-06	10-Nov-06	SL_ME1	Hrs	3		300		300	25%	75
1	03	02	04	04		L2-BC2 Cable Plant Design	2-Oct-06	10-Nov-06	SL_CE1	Hrs	64		7,234		7,234	25%	1,809
1	03	02	04	04		Prep L2-BC2 Cable Plant Bid Package	13-Nov-06	17-Nov-06	SL_PCE1	Hrs	32		3,617		3,617	25%	904
1	03	02	04	04		Vendor Fab L2-BC2 Cable Plant Hardware	21-Nov-06	5-Mar-07	SA_MSEG1	\$\$		180,000		193,545	193,545	25%	48,386
1	03	02	04	04		Intall & Integrate L2-BC2 Cable Plant	6-Mar-07	26-Jun-07	SL_PCEF1	Hrs	948		58,664		58,664	25%	14,666
1	03	02	04	04		Intall & Integrate L2-BC2 Cable Plant	6-Mar-07	26-Jun-07	SL_CT	Hrs	28		1,819		1,819	25%	455
1	03	02	04	04		Intall & Integrate L2-BC2 Cable Plant	6-Mar-07	26-Jun-07	SL_CCA1	Hrs	467		30,742		30,742	25%	7,685
1	03	02	04	04		L2-BC2 Racks Design	2-Oct-06	13-Oct-06	SL_CE1	Hrs	64		7,234		7,234	25%	1,809
1	03	02	04	04		Prep LC2-BC2 Bid Package	16-Oct-06	28-Nov-06	SL_PCE1	Hrs	32		3,617		3,617	25%	904
1	03	02	04	04		Vendor Fab LC2-BC2 Racks	30-Nov-06	12-Mar-07	SA_MSEG1	\$\$		134,725		144,863	144,863	25%	36,216
1	03	02	04	04		Intall & Integrate L2-BC2 Racks	13-Mar-07	3-Jul-07	SL_PCEF1	Hrs	948		58,664		58,664	25%	14,666
1	03	02	04	04		Intall & Integrate L2-BC2 Racks	13-Mar-07	3-Jul-07	SL_CT1	Hrs	28		1,733		1,733	25%	433
1	03	02	04	04		Intall & Integrate L2-BC2 Racks	13-Mar-07	3-Jul-07	SL_CCA1	Hrs	467		30,742		30,742	25%	7,685
1	03	02	04	04		LTU Cable Plant Design	3-Jan-07	14-Feb-07	SL_ME1	Hrs	1		100		100	25%	25
1	03	02	04	04		LTU Cable Plant Design	3-Jan-07	14-Feb-07	SL_CE1	Hrs	19		2,148		2,148	25%	537
1	03	02	04	04		Prep LTLU Bid Package	15-Feb-07	22-Feb-07	SL_PCE1	Hrs	10		1,130		1,130	25%	283
1	03	02	04	04		Vendor Fab LTU Cable Plant Hardware	26-Feb-07	18-May-07	SA_MSEG1	\$\$		450,000		483,862	483,862	25%	120,965
1	03	02	04	04		Intall & Integrate LTU Cable Plant	21-May-07	21-Feb-08	SL_CT1	Hrs	473		29,664		29,664	25%	7,416
1	03	02	04	04		Intall & Integrate LTU Cable Plant	21-May-07	21-Feb-08	SL_CCA1	Hrs	284		18,947		18,947	25%	4,737
1	03	02	04	04		LTU Racks Design	2-Jan-07	13-Feb-07	SL_ME1	Hrs	1		100		100	25%	25
1	03	02	04	04		LTU Racks Design	2-Jan-07	13-Feb-07	SL_CE1	Hrs	19		2,148		2,148	25%	537
1	03	02	04	04		Prep LTU Bid Package	14-Feb-07	21-Feb-07	SL_PCE1	Hrs	10		1,130		1,130	25%	283
1	03	02	04	04		Vendor Fab LTU/Undulator Racks	22-May-07	15-Aug-07	SA_MSEG1	\$\$		89,000		95,697	95,697	25%	23,924
1	03	02	04	04		Intall & Integrate LTU Racks	16-Aug-07	10-Dec-07	SL_PCEF1	Hrs	285		17,913		17,913	25%	4,478
1	03	02	04	04		Intall & Integrate LTU Racks	16-Aug-07	10-Dec-07	SL_CT1	Hrs	9		566		566	25%	141
1	03	02	04	04		Intall & Integrate LTU Racks	16-Aug-07	10-Dec-07	SL_CCA1	Hrs	140		9,361		9,361	25%	2,340
1	03	02	04	04		Undulator Racks Design	2-Apr-07	11-May-07	SL_ME1	Hrs	1		100		100	25%	25
1	03	02	04	04		Undulator Racks Design	2-Apr-07	11-May-07	SL_CE1	Hrs	19		2,148		2,148	25%	537
1	03	02	04	04		Prep Undulator Bid Package	14-May-07	18-May-07	SL_PCE1	Hrs	10		1,130		1,130	25%	283



WBS Level						LCLA DCE August-2006 Description	Early Start	Early Finish	Res Code	Units	Work Rem. Bud. Qty		Work Rem. Full Burd and Escltd Cost			Contingency %	Contingency \$
1	2	3	4	5	6						Hours	\$\$	Labor	M&S	Total		
1	03	02	04	04		Vendor Fab Undulator Racks	22-May-07	15-Aug-07	SA_MSEG1	\$\$		89,000		95,697	95,697	25%	23,924
1	03	02	04	04		Intall & Integrate Undulator Racks	16-Aug-07	10-Dec-07	SL_PCEF1	Hrs	285		17,913		17,913	25%	4,478
1	03	02	04	04		Intall & Integrate Undulator Racks	16-Aug-07	10-Dec-07	SL_CT1	Hrs	9		566		566	25%	141
1	03	02	04	04		Intall & Integrate Undulator Racks	16-Aug-07	10-Dec-07	SL_CCA1	Hrs	140		9,361		9,361	25%	2,340
1	03	02	05			<b>Controls - LLRF</b>						<b>618,300</b>		<b>664,826</b>	<b>664,826</b>		<b>195,598</b>
1	03	02	05			RCV: 1 Modulator Upgrade	25-May-07	25-May-07	SL_MSEG1	\$\$		80,000		86,020	86,020	25%	21,505
1	03	02	05			RCV: 5 Solid State Sub-Booster w Amplifiers	25-May-07	25-May-07	SL_MSEG1	\$\$		120,000		129,030	129,030	20%	25,806
1	03	02	05			RCV: 1 Bunch Length Interface	30-Mar-07	30-Mar-07	SL_MSEG1	\$\$		20,000		21,505	21,505	35%	7,527
1	03	02	05			RCV: 1 L2 L3 RF distribution	2-Mar-07	2-Mar-07	SL_MSEG1	\$\$		120,000		129,030	129,030	35%	45,160
1	03	02	05			RCV: 1 RF Link to End Station	2-Mar-07	2-Mar-07	SL_MSEG1	\$\$		100,000		107,525	107,525	45%	48,386
1	03	02	05			RCV: 3 Beam Phase Measurement w/ cavities	27-Apr-07	27-Apr-07	SL_MSEG1	\$\$		45,000		48,386	48,386	25%	12,097
1	03	02	05			RCV: 2 PADs with RF head w/ Xband RF Heads	27-Apr-07	27-Apr-07	SL_MSEG1	\$\$		20,000		21,505	21,505	35%	7,527
1	03	02	05			RCV: 1 PACs with RF head w/ Xband RF heads	27-Apr-07	27-Apr-07	SL_MSEG1	\$\$		10,000		10,752	10,752	35%	3,763
1	03	02	05			RCV: 1 TWT Amplifier	27-Apr-07	27-Apr-07	SL_MSEG1	\$\$		40,000		43,010	43,010	10%	4,301
1	03	02	05			RCV: 1 Frequency Shifter	27-Apr-07	27-Apr-07	SL_MSEG1	\$\$		7,500		8,064	8,064	25%	2,016
1	03	02	05			RCV: 1 Coupler Chasis	27-Apr-07	27-Apr-07	SL_MSEG1	\$\$		3,000		3,226	3,226	25%	806
1	03	02	05			RCV: 1 Sec 24 Control	27-Apr-07	27-Apr-07	SL_MSEG1	\$\$		15,000		16,129	16,129	35%	5,645
1	03	02	05			RCV: 1 Sec 24 Tcav	27-Apr-07	27-Apr-07	SL_MSEG1	\$\$		15,000		16,129	16,129	25%	4,032
1	03	02	05			RCV: 1 Sector 29/30 Control	27-Apr-07	27-Apr-07	SL_MSEG1	\$\$		10,000		10,752	10,752	35%	3,763
1	03	02	05			RCV: 1 PPS Vacuum Interlock	27-Apr-07	27-Apr-07	SL_MSEG1	\$\$		9,500		10,215	10,215	25%	2,554
1	03	02	05			RCV: 1 EVR	27-Apr-07	27-Apr-07	SL_MSEG1	\$\$		2,900		3,118	3,118	20%	624
1	03	02	05			RCV: 1 Binary I/O	27-Apr-07	27-Apr-07	SL_MSEG1	\$\$		400		430	430	20%	86
1	03	02	06			<b>Controls - E-Beam Diagnostic</b>					<b>8,136</b>	<b>813,536</b>	<b>718,208</b>	<b>872,220</b>	<b>1,590,428</b>		<b>364,214</b>
1	03	02	06	01		<b>Controls - Wire Scanners</b>					<b>1,364</b>	<b>85,320</b>	<b>116,691</b>	<b>91,740</b>	<b>208,431</b>		<b>41,686</b>
1	03	02	06	01		L01-BC1 Hardware Fab	1-Aug-06	29-Aug-06	SL_CT1	Hrs	56		3,378		3,378	20%	676
1	03	02	06	01		L01-BC1 Hardware Fab	1-Aug-06	29-Aug-06	SL_CE1	Hrs	28		3,085		3,085	20%	617
1	03	02	06	01		L01-BC1 Integration and Test	30-Aug-06	16-Jan-07	SL_CT1	Hrs	120		7,382		7,382	20%	1,476
1	03	02	06	01		L01-BC1 Integration and Test	30-Aug-06	16-Jan-07	SL_CE1	Hrs	120		13,485		13,485	20%	2,697
1	03	02	06	01		RCV: 10 PMTs	25-May-07	25-May-07	SL_MSEG1	\$\$		8,000		8,602	8,602	20%	1,720
1	03	02	06	01		RCV: 2 Charge Integ ADCs	25-May-07	25-May-07	SL_MSEG1	\$\$		11,000		11,828	11,828	20%	2,366
1	03	02	06	01		RCV: 8 Motor Contrlr/Drives/Pwr Supplies	30-Mar-07	30-Mar-07	SL_MSEG1	\$\$		26,400		28,387	28,387	20%	5,677
1	03	02	06	01		RCV: 2 LVDTs	2-Mar-07	2-Mar-07	SL_MSEG1	\$\$		8,080		8,688	8,688	20%	1,738
1	03	02	06	01		RCV: 2 EVRs	2-Mar-07	2-Mar-07	SL_MSEG1	\$\$		5,800		6,236	6,236	20%	1,247
1	03	02	06	01		LTU Rack Layout and Wiring	1-Jun-07	31-Aug-07	SL_CE1	Hrs	160		18,085		18,085	20%	3,617
1	03	02	06	01		LTU Rack Layout and Wiring	1-Jun-07	31-Aug-07	SL_CCA1	Hrs	320		21,065		21,065	20%	4,213
1	03	02	06	01		RCV: 5 PMTs	25-Sep-07	25-Sep-07	SL_MSEG1	\$\$		4,000		4,301	4,301	20%	860
1	03	02	06	01		RCV: 1 Charge Integ ADC	25-Sep-07	25-Sep-07	SL_MSEG1	\$\$		5,500		5,914	5,914	20%	1,183
1	03	02	06	01		RCV: 4 Motor Contrlr/Drives/Pwr Supplies	30-Jul-07	30-Jul-07	SL_MSEG1	\$\$		9,600		10,322	10,322	20%	2,064
1	03	02	06	01		RCV: 1 LVDT	29-Jun-07	29-Jun-07	SL_MSEG1	\$\$		4,040		4,344	4,344	20%	869
1	03	02	06	01		RCV: 1 EVR	29-Jun-07	29-Jun-07	SL_MSEG1	\$\$		2,900		3,118	3,118	20%	624
1	03	02	06	01		LTU Hardware Fab	26-Sep-07	2-Jan-08	SL_CT1	Hrs	160		10,145		10,145	20%	2,029
1	03	02	06	01		LTU Hardware Fab	26-Sep-07	2-Jan-08	SL_CE1	Hrs	160		18,531		18,531	20%	3,706
1	03	02	06	01		LTU ntegration and Test	3-Jan-08	29-Feb-08	SL_CT1	Hrs	120		7,619		7,619	20%	1,524
1	03	02	06	01		LTU ntegration and Test	3-Jan-08	29-Feb-08	SL_CE1	Hrs	120		13,916		13,916	20%	2,783
1	03	02	06	02		<b>Controls - BPMs</b>					<b>3,887</b>	<b>389,536</b>	<b>348,270</b>	<b>418,324</b>	<b>766,594</b>		<b>191,649</b>
1	03	02	06	02		L01-BC1 Control Software	1-Aug-06	28-Aug-06	SL_CP1	Hrs	40		3,213		3,213	25%	803
1	03	02	06	02		RCV: 7 BPM Front End Electronics	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		9,365		9,815	9,815	25%	2,454
1	03	02	06	02		RCV: 4 Echotek	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		9,365		9,815	9,815	25%	2,454
1	03	02	06	02		RCV: 1 EVRs	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		-		-	-	10%	-
1	03	02	06	02		RCV: 1 Interrack Cables	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		167		175	175	25%	44
1	03	02	06	02		RCV: 1 Binary I/Os	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		334		350	350	25%	88
1	03	02	06	02		L01-BC1 Hardware Fab	30-Aug-06	27-Sep-06	SL_CT1	Hrs	49		2,931		2,931	25%	733
1	03	02	06	02		L01-BC1 Hardware Fab	30-Aug-06	27-Sep-06	SL_CE1	Hrs	72		7,932		7,932	25%	1,983
1	03	02	06	02		L01-BC1 Integration and Test	28-Sep-06	15-Dec-06	SL_CT1	Hrs	321		19,845		19,845	25%	4,961
1	03	02	06	02		L01-BC1 Integration and Test	28-Sep-06	15-Dec-06	SL_CP1	Hrs	107		8,809		8,809	25%	2,202
1	03	02	06	02		L01-BC1 Integration and Test	28-Sep-06	15-Dec-06	SL_CE1	Hrs	321		36,248		36,248	25%	9,062
1	03	02	06	02		L02-L03 Control Software	1-Feb-07	31-Jul-07	SL_CP1	Hrs	161		13,268		13,268	25%	3,317
1	03	02	06	02		RCV: 87 BPM Front End Electronics	25-May-07	25-May-07	SL_MSEG1	\$\$		116,389		125,147	125,147	25%	31,287
1	03	02	06	02		RCV: 44 Echotek	25-May-07	25-May-07	SL_MSEG1	\$\$		116,389		125,147	125,147	25%	31,287
1	03	02	06	02		RCV: 9 EVRs	30-Mar-07	30-Mar-07	SL_MSEG1	\$\$		17,458		18,772	18,772	25%	4,693
1	03	02	06	02		RCV: 9 Interrack Cables	2-Mar-07	2-Mar-07	SL_MSEG1	\$\$		1,338		1,439	1,439	25%	360
1	03	02	06	02		RCV: 9 Binary I/Os	2-Mar-07	2-Mar-07	SL_MSEG1	\$\$		2,408		2,589	2,589	25%	647
1	03	02	06	02		L02-L03 Hardware Fab	29-May-07	30-Aug-07	SL_CT1	Hrs	321		19,864		19,864	25%	4,966
1	03	02	06	02		L02-L03 Hardware Fab	29-May-07	30-Aug-07	SL_CE1	Hrs	435		49,169		49,169	25%	12,292

WBS Level						LCLA DCE August-2006 Description	Early Start	Early Finish	Res Code	Units	Work Rem. Bud. Qty		Work Rem. Full Burd and Escltd Cost			Contingency %	Contingency \$	
1	2	3	4	5	6						Hours	\$\$	Labor	M&S	Total			
1	03	02	06	02		L02-L03 ntegration and Test	31-Aug-07	30-Nov-07	SL_CT1	Hrs	214		13,470		13,470	25%	3,367	
1	03	02	06	02		L02-L03 ntegration and Test	31-Aug-07	30-Nov-07	SL_CP1	Hrs	107		8,969		8,969	25%	2,242	
1	03	02	06	02		L02-L03 ntegration and Test	31-Aug-07	30-Nov-07	SL_CE1	Hrs	274		31,502		31,502	25%	7,875	
1	03	02	06	02		LTU Control Software	1-Jun-07	2-Jan-08	SL_CP1	Hrs	187		15,584		15,584	25%	3,896	
1	03	02	06	02		RCV: 42 BPM Front End Electronics	25-Sep-07	25-Sep-07	SL_MSEG1	\$\$		56,188		60,416		60,416	25%	15,104
1	03	02	06	02		RCV: 21 Echotek	25-Sep-07	25-Sep-07	SL_MSEG1	\$\$		56,188		60,416		60,416	25%	15,104
1	03	02	06	02		RCV: 5 EVRs	30-Jul-07	30-Jul-07	SL_MSEG1	\$\$		1,940		2,086		2,086	25%	521
1	03	02	06	02		RCV: 5 Interrack Cables	29-Jun-07	29-Jun-07	SL_MSEG1	\$\$		669		719		719	25%	180
1	03	02	06	02		RCV: 5 Binary I/Os	29-Jun-07	29-Jun-07	SL_MSEG1	\$\$		1,338		1,439		1,439	25%	360
1	03	02	06	02		LTU Hardware Fab	26-Sep-07	2-Jan-08	SL_CT1	Hrs	375		23,778		23,778	25%	5,945	
1	03	02	06	02		LTU Hardware Fab	26-Sep-07	2-Jan-08	SL_CE1	Hrs	468		54,204		54,204	25%	13,551	
1	03	02	06	02		LTU ntegration and Test	3-Jan-08	29-Feb-08	SL_CT1	Hrs	161		10,222		10,222	25%	2,555	
1	03	02	06	02		LTU ntegration and Test	3-Jan-08	29-Feb-08	SL_CP1	Hrs	80		6,764		6,764	25%	1,691	
1	03	02	06	02		LTU ntegration and Test	3-Jan-08	29-Feb-08	SL_CE1	Hrs	194		22,498		22,498	25%	5,625	
1	03	02	06	03		<b>Controls - Toroids</b>					<b>432</b>	<b>51,400</b>	<b>37,971</b>	<b>55,268</b>	<b>93,238</b>		<b>23,310</b>	
1	03	02	06	03		L01-BC1 Rack Layout and Wiring	2-Nov-06	16-Nov-06	SL_CE1	Hrs	16		1,809		1,809	25%	452	
1	03	02	06	03		L01-BC1 Rack Layout and Wiring	2-Nov-06	16-Nov-06	SL_CCA1	Hrs	16		1,053		1,053	25%	263	
1	03	02	06	03		L01-BC1 Hardware Fab	2-Nov-06	1-Dec-06	SL_CT1	Hrs	16		990		990	25%	248	
1	03	02	06	03		L01-BC1 Hardware Fab	2-Nov-06	1-Dec-06	SL_CE1	Hrs	16		1,809		1,809	25%	452	
1	03	02	06	03		L01-BC1 Integration and Test	3-Jan-07	9-Jan-07	SL_CT1	Hrs	40		2,475		2,475	25%	619	
1	03	02	06	03		L01-BC1 Integration and Test	3-Jan-07	9-Jan-07	SL_CE1	Hrs	40		4,521		4,521	25%	1,130	
1	03	02	06	03		L02-L03 Rack Layout and Wiring	1-Feb-07	29-Mar-07	SL_CE1	Hrs	16		1,809		1,809	25%	452	
1	03	02	06	03		L02-L03 Rack Layout and Wiring	1-Feb-07	29-Mar-07	SL_CCA1	Hrs	16		1,053		1,053	25%	263	
1	03	02	06	03		RCV: 2 EVRs	2-Mar-07	2-Mar-07	SL_MSEG1	\$\$		8,000		8,602		8,602	25%	2,150
1	03	02	06	03		RCV: 1 Crate/CPU/PMC Spa n	2-Mar-07	2-Mar-07	SL_MSEG1	\$\$		8,000		8,602		8,602	25%	2,150
1	03	02	06	03		RCV: 1 I/O	2-Mar-07	2-Mar-07	SL_MSEG1	\$\$		6,700		7,204		7,204	25%	1,801
1	03	02	06	03		RCV: L02-L03 Interrack Cables	2-Mar-07	2-Mar-07	SL_MSEG1	\$\$		1,000		1,075		1,075	25%	269
1	03	02	06	03		L02-L03 Hardware Fab	5-Mar-07	27-Apr-07	SL_CT1	Hrs	16		990		990	25%	248	
1	03	02	06	03		L02-L03 Hardware Fab	5-Mar-07	27-Apr-07	SL_CE1	Hrs	16		1,809		1,809	25%	452	
1	03	02	06	03		L02-L03 Integration and Test	30-Apr-07	11-May-07	SL_CT1	Hrs	40		2,475		2,475	25%	619	
1	03	02	06	03		L02-L03 Integration and Test	30-Apr-07	11-May-07	SL_CE1	Hrs	40		4,521		4,521	25%	1,130	
1	03	02	06	03		LTU Rack Layout and Wiring	1-Jun-07	27-Jul-07	SL_CE1	Hrs	16		1,809		1,809	25%	452	
1	03	02	06	03		LTU Rack Layout and Wiring	1-Jun-07	27-Jul-07	SL_CCA1	Hrs	16		1,053		1,053	25%	263	
1	03	02	06	03		RCV: 3 EVRs	29-Jun-07	29-Jun-07	SL_MSEG1	\$\$		12,000		12,903		12,903	25%	3,226
1	03	02	06	03		RCV: 1 Crate/CPU/PMC Spa n	29-Jun-07	29-Jun-07	SL_MSEG1	\$\$		8,000		8,602		8,602	25%	2,150
1	03	02	06	03		RCV: 1 I/O	29-Jun-07	29-Jun-07	SL_MSEG1	\$\$		6,700		7,204		7,204	25%	1,801
1	03	02	06	03		RCV: LTU Interrack Cables	29-Jun-07	29-Jun-07	SL_MSEG1	\$\$		1,000		1,075		1,075	25%	269
1	03	02	06	03		LTU Hardware Fab	2-Jul-07	27-Aug-07	SL_CT1	Hrs	16		990		990	25%	248	
1	03	02	06	03		LTU Hardware Fab	2-Jul-07	27-Aug-07	SL_CE1	Hrs	16		1,809		1,809	25%	452	
1	03	02	06	03		LTU Integration and Test	28-Aug-07	11-Sep-07	SL_CT1	Hrs	40		2,475		2,475	25%	619	
1	03	02	06	03		LTU Integration and Test	28-Aug-07	11-Sep-07	SL_CE1	Hrs	40		4,521		4,521	25%	1,130	
1	03	02	06	04		<b>Controls - Stoppers</b>					<b>234</b>	<b>19,500</b>	<b>20,478</b>	<b>20,708</b>	<b>41,186</b>		<b>9,341</b>	
1	03	02	06	04		L01-BC1 Rack Layout and Wiring	1-Aug-06	28-Aug-06	SL_CE1	Hrs	13		1,410		1,410	25%	353	
1	03	02	06	04		L01-BC1 Rack Layout and Wiring	1-Aug-06	28-Aug-06	SL_CCA1	Hrs	13		821		821	25%	205	
1	03	02	06	04		RCV: Crate/CPU/PMC Spac	15-Sep-06	15-Sep-06	SL_MSEG1	\$\$		7,000		7,336		7,336	20%	1,467
1	03	02	06	04		RCV: L01-BC1 I/Os	15-Sep-06	15-Sep-06	SL_MSEG1	\$\$		2,000		2,096		2,096	20%	419
1	03	02	06	04		RCV: Interrack Cables	15-Sep-06	15-Sep-06	SL_MSEG1	\$\$		500		524		524	25%	131
1	03	02	06	04		L01-BC1 Hardware Fab	18-Sep-06	29-Sep-06	SL_CT1	Hrs	16		965		965	25%	241	
1	03	02	06	04		L01-BC1 Hardware Fab	18-Sep-06	29-Sep-06	SL_CE1	Hrs	16		1,763		1,763	25%	441	
1	03	02	06	04		L01-BC1 Integration and Test	2-Oct-06	6-Oct-06	SL_CT1	Hrs	8		495		495	25%	124	
1	03	02	06	04		L01-BC1 Integration and Test	2-Oct-06	6-Oct-06	SL_CE1	Hrs	8		904		904	25%	226	
1	03	02	06	04		L02-L03 Rack Layout and Wiring	1-Feb-07	1-Mar-07	SL_CE1	Hrs	16		1,809		1,809	25%	452	
1	03	02	06	04		L02-L03 Rack Layout and Wiring	1-Feb-07	1-Mar-07	SL_CCA1	Hrs	16		1,053		1,053	25%	263	
1	03	02	06	04		RCV: L02-L03 Crate/CPU/PMC Spac	2-Mar-07	2-Mar-07	SL_MSEG1	\$\$		7,000		7,527		7,527	20%	1,505
1	03	02	06	04		RCV: L02-L03 I/Os	2-Mar-07	2-Mar-07	SL_MSEG1	\$\$		2,000		2,150		2,150	20%	430
1	03	02	06	04		RCV: L02-L03 Interrack Cables	2-Mar-07	2-Mar-07	SL_MSEG1	\$\$		500		538		538	25%	134
1	03	02	06	04		L02-L03 Hardware Fab	5-Mar-07	16-Mar-07	SL_CT1	Hrs	16		990		990	25%	248	
1	03	02	06	04		L02-L03 Hardware Fab	5-Mar-07	16-Mar-07	SL_CE1	Hrs	16		1,809		1,809	25%	452	
1	03	02	06	04		L02-L03 Integration and Test	19-Mar-07	23-Mar-07	SL_CT1	Hrs	8		495		495	25%	124	
1	03	02	06	04		L02-L03 Integration and Test	19-Mar-07	23-Mar-07	SL_CE1	Hrs	8		904		904	25%	226	
1	03	02	06	04		LTU Rack Layout and Wiring	1-Jun-07	28-Jun-07	SL_CE1	Hrs	16		1,809		1,809	25%	452	
1	03	02	06	04		LTU Rack Layout and Wiring	1-Jun-07	28-Jun-07	SL_CCA1	Hrs	16		1,053		1,053	25%	263	
1	03	02	06	04		RCV: LTU Interrack Cables	29-Jun-07	29-Jun-07	SL_MSEG1	\$\$		500		538		538	25%	134
1	03	02	06	04		LTU Hardware Fab	2-Jul-07	16-Jul-07	SL_CT1	Hrs	16		990		990	25%	248	

WBS Level						LCLA DCE August-2006 Description	Early Start	Early Finish	Res Code	Units	Work Rem. Bud. Qty		Work Rem. Full Burd and Escltd Cost			Contingency %	Contingency \$
1	2	3	4	5	6						Hours	\$\$	Labor	M&S	Total		
1	03	02	06	04		LTU Hardware Fab	2-Jul-07	16-Jul-07	SL_CE1	Hrs	16		1,809		1,809	25%	452
1	03	02	06	04		LTU Integration and Test	17-Jul-07	23-Jul-07	SL_CT1	Hrs	8		495		495	25%	124
1	03	02	06	04		LTU Integration and Test	17-Jul-07	23-Jul-07	SL_CE1	Hrs	8		904		904	25%	226
1	03	02	06	05		<b>Controls - Profile Monitors</b>					<b>331</b>	<b>117,663</b>	<b>29,182</b>	<b>125,094</b>	<b>154,276</b>		<b>32,387</b>
1	03	02	06	05		L01-BC1 Rack Layout and Wiring	1-Aug-06	30-Aug-06	SL_CE1	Hrs	13		1,388		1,388	25%	347
1	03	02	06	05		L01-BC1 Rack Layout and Wiring	1-Aug-06	30-Aug-06	SL_CCA1	Hrs	13		808		808	25%	202
1	03	02	06	05		RCV: 9 L01-BC1 Profile Monitor Cameras	17-Oct-06	17-Oct-06	SL_MSEG1	\$\$		24,570		26,419	26,419	20%	5,284
1	03	02	06	05		RCV: 9 PMC Interfaced Cables	15-Sep-06	15-Sep-06	SL_MSEG1	\$\$		21,294		22,316	22,316	20%	4,463
1	03	02	06	05		RCV: 1 I/O (Includes AM01)	15-Sep-06	15-Sep-06	SL_MSEG1	\$\$		12,740		13,352	13,352	20%	2,670
1	03	02	06	05		RCV: 1 Motion Control	15-Sep-06	15-Sep-06	SL_MSEG1	\$\$		5,915		6,199	6,199	20%	1,240
1	03	02	06	05		RCV: 5 Motors	18-Aug-06	18-Aug-06	SL_MSEG1	\$\$		5,460		5,722	5,722	20%	1,144
1	03	02	06	05		RCV: L01-BC1 Interrack Cables	15-Sep-06	15-Sep-06	SL_MSEG1	\$\$		455		477	477	25%	119
1	03	02	06	05		RCV: IOCs CPU/EVR/Span	18-Aug-06	18-Aug-06	SL_MSEG1	\$\$		-		-	-	20%	-
1	03	02	06	05		RCV: Crate (AM01)	18-Sep-06	18-Sep-06	SL_MSEG1	\$\$		6,370		6,676	6,676	20%	1,335
1	03	02	06	05		L01-BC1 Hardware Fab	18-Oct-06	15-Nov-06	SL_CT1	Hrs	9		557		557	25%	139
1	03	02	06	05		L01-BC1 Hardware Fab	18-Oct-06	15-Nov-06	SL_CE1	Hrs	9		1,017		1,017	25%	254
1	03	02	06	05		L01-BC1 Integration and Test	16-Nov-06	22-Nov-06	SL_CT1	Hrs	36		2,228		2,228	25%	557
1	03	02	06	05		L01-BC1 Integration and Test	16-Nov-06	22-Nov-06	SL_CE1	Hrs	36		4,069		4,069	25%	1,017
1	03	02	06	05		L02-L03 Rack Layout and Wiring	1-Feb-07	30-Apr-07	SL_CE1	Hrs	18		2,035		2,035	25%	509
1	03	02	06	05		L02-L03 Rack Layout and Wiring	1-Feb-07	30-Apr-07	SL_CCA1	Hrs	18		1,185		1,185	25%	296
1	03	02	06	05		RCV: 2 L02-L03 Profile Monitor Cameras	3-Apr-07	3-Apr-07	SL_MSEG1	\$\$		6,825		7,339	7,339	20%	1,468
1	03	02	06	05		RCV: 2 PMC Interfaced Cables	2-Mar-07	2-Mar-07	SL_MSEG1	\$\$		7,098		7,632	7,632	20%	1,526
1	03	02	06	05		RCV: 1 Smart Lens	2-Mar-07	2-Mar-07	SL_MSEG1	\$\$		546		587	587	20%	117
1	03	02	06	05		RCV: 4 Interrack Cables	2-Mar-07	2-Mar-07	SL_MSEG1	\$\$		455		489	489	25%	122
1	03	02	06	05		RCV: IOCs CPU/EVR/Span	2-Mar-07	2-Mar-07	SL_MSEG1	\$\$		10,192		10,959	10,959	20%	2,192
1	03	02	06	05		L02-L03 Hardware Fab	4-Apr-07	31-Jul-07	SL_CT1	Hrs	9		557		557	25%	139
1	03	02	06	05		L02-L03 Hardware Fab	4-Apr-07	31-Jul-07	SL_CE1	Hrs	9		1,017		1,017	25%	254
1	03	02	06	05		L02-L03 Integration and Test	1-Aug-07	7-Aug-07	SL_CT1	Hrs	36		2,228		2,228	25%	557
1	03	02	06	05		L02-L03 Integration and Test	1-Aug-07	7-Aug-07	SL_CE1	Hrs	36		4,069		4,069	25%	1,017
1	03	02	06	05		LTU Rack Layout and Wiring	1-Jun-07	31-Aug-07	SL_CE1	Hrs	18		2,035		2,035	25%	509
1	03	02	06	05		LTU Rack Layout and Wiring	1-Jun-07	31-Aug-07	SL_CCA1	Hrs	18		1,185		1,185	25%	296
1	03	02	06	05		RCV: 2 LTU Profile Monitor Cameras	29-Jun-07	29-Jun-07	SL_MSEG1	\$\$		5,460		5,871	5,871	20%	1,174
1	03	02	06	05		RCV: 2 PMC Interfaced Cables	29-Jun-07	29-Jun-07	SL_MSEG1	\$\$		4,732		5,088	5,088	20%	1,018
1	03	02	06	05		RCV: 4 Interrack Cables	29-Jun-07	29-Jun-07	SL_MSEG1	\$\$		455		489	489	25%	122
1	03	02	06	05		RCV: IOCs CPU/EVR/Span	29-Jun-07	29-Jun-07	SL_MSEG1	\$\$		5,096		5,479	5,479	20%	1,096
1	03	02	06	05		LTU Hardware Fab	2-Jul-07	28-Sep-07	SL_CT1	Hrs	9		557		557	25%	139
1	03	02	06	05		LTU Hardware Fab	2-Jul-07	28-Sep-07	SL_CE1	Hrs	9		1,017		1,017	25%	254
1	03	02	06	05		LTU Integration and Test	1-Nov-07	7-Nov-07	SL_CT1	Hrs	18		1,143		1,143	25%	286
1	03	02	06	05		LTU Integration and Test	1-Nov-07	7-Nov-07	SL_CE1	Hrs	18		2,087		2,087	25%	522
1	03	02	06	06		<b>Controls - E/O Diagnostics</b>											
1	03	02	06	07		<b>Controls - Bunch Length Monitors</b>					<b>515</b>	<b>27,600</b>	<b>43,867</b>	<b>29,677</b>	<b>73,544</b>		<b>15,773</b>
1	03	02	06	07		L01-BC1 BLM Rack Layout and Wiring	1-Aug-06	28-Aug-06	SL_CE1	Hrs	10		1,058		1,058	25%	264
1	03	02	06	07		L01-BC1 BLM Rack Layout and Wiring	1-Aug-06	28-Aug-06	SL_CCA1	Hrs	10		616		616	25%	154
1	03	02	06	07		L01-BC1 BLM Control Software	19-Sep-06	16-Oct-06	SL_CP1	Hrs	40		3,259		3,259	25%	815
1	03	02	06	07		RCV: L01-BC1 BLM Crate/CPU/EVR	2-Oct-06	2-Oct-06	SL_MSEG1	\$\$		9,000		9,677	9,677	10%	968
1	03	02	06	07		RCV: L01-BC1 BLM I/Os	2-Oct-06	2-Oct-06	SL_MSEG1	\$\$		2,000		2,150	2,150	10%	215
1	03	02	06	07		RCV: L01-BC1 BLM Charge ADC	2-Oct-06	2-Oct-06	SL_MSEG1	\$\$		3,300		3,548	3,548	20%	710
1	03	02	06	07		RCV: L01-BC1 BLM Interrack Cables	2-Oct-06	2-Oct-06	SL_MSEG1	\$\$		500		538	538	25%	134
1	03	02	06	07		L01-BC1 BLM Hardware Fab	3-Oct-06	16-Oct-06	SL_CT1	Hrs	16		990		990	25%	248
1	03	02	06	07		L01-BC1 BLM Hardware Fab	3-Oct-06	16-Oct-06	SL_CE1	Hrs	16		1,809		1,809	25%	452
1	03	02	06	07		L01-BC1 BLM Integration and Test	17-Oct-06	23-Oct-06	SL_CT1	Hrs	40		2,475		2,475	25%	619
1	03	02	06	07		L01-BC1 BLM Integration and Test	17-Oct-06	23-Oct-06	SL_CP1	Hrs	80		6,593		6,593	25%	1,648
1	03	02	06	07		L01-BC1 BLM Integration and Test	17-Oct-06	23-Oct-06	SL_CE1	Hrs	40		4,521		4,521	25%	1,130
1	03	02	06	07		L02-L03 BLM Rack Layout and Wiring	1-Feb-07	1-Mar-07	SL_CE1	Hrs	16		1,809		1,809	25%	452
1	03	02	06	07		L02-L03 BLM Rack Layout and Wiring	1-Feb-07	1-Mar-07	SL_CCA1	Hrs	16		1,053		1,053	25%	263
1	03	02	06	07		L02-L03 BLM Control Software	1-Feb-07	1-Mar-07	SL_CP1	Hrs	40		3,296		3,296	25%	824
1	03	02	06	07		RCV: L02-L03 BLM Crate/CPU/EVR	2-Mar-07	2-Mar-07	SL_MSEG1	\$\$		7,000		7,527	7,527	20%	1,505
1	03	02	06	07		RCV: L02-L03 BLM I/Os	2-Mar-07	2-Mar-07	SL_MSEG1	\$\$		2,000		2,150	2,150	20%	430
1	03	02	06	07		RCV: L02-L03 BLM Charge ADC	2-Mar-07	2-Mar-07	SL_MSEG1	\$\$		3,300		3,548	3,548	20%	710
1	03	02	06	07		RCV: L02-L03 Interrack Cables	2-Mar-07	2-Mar-07	SL_MSEG1	\$\$		500		538	538	25%	134
1	03	02	06	07		L02-L03 BLM Hardware Fab	5-Mar-07	16-Mar-07	SL_CT1	Hrs	16		990		990	25%	248
1	03	02	06	07		L02-L03 BLM Hardware Fab	5-Mar-07	16-Mar-07	SL_CE1	Hrs	16		1,809		1,809	25%	452
1	03	02	06	07		L02-L03 BLM Integration and Test	19-Mar-07	23-Mar-07	SL_CT1	Hrs	40		2,475		2,475	25%	619
1	03	02	06	07		L02-L03 BLM Integration and Test	19-Mar-07	23-Mar-07	SL_CP1	Hrs	80		6,593		6,593	25%	1,648

WBS Level						LCLA DCE August-2006 Description	Early Start	Early Finish	Res Code	Units	Work Rem. Bud. Qty		Work Rem. Full Burd and Escltd Cost			Contingency %	Contingency \$
1	2	3	4	5	6						Hours	\$\$	Labor	M&S	Total		
1	03	02	06	07	6	L02-L03 BLM Integration and Test	19-Mar-07	23-Mar-07	SL_CE1	Hrs	40		4,521		4,521	25%	1,130
1	03	02	06	08		Controls - Beam Loss Monitors											
1	03	02	06	09		Controls - Single Beam Dump					227	12,500	19,891	13,372	33,263		7,727
1	03	02	06	09		L01-BC1 Rack Layout and Wiring	1-Aug-06	28-Aug-06	SL_CE1	Hrs	11		1,234		1,234	25%	308
1	03	02	06	09		L01-BC1 Rack Layout and Wiring	1-Aug-06	28-Aug-06	SL_CCA1	Hrs	11		719		719	25%	180
1	03	02	06	09		RCV: Crate/CPU/PMC Spac	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		-		-	-	20%	-
1	03	02	06	09		RCV: L01-BC1 I/Os	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		2,000		2,096	2,096	20%	419
1	03	02	06	09		RCV: Interrack Cables	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		500		524	524	25%	131
1	03	02	06	09		L01-BC1 Hardware Fab	30-Aug-06	13-Sep-06	SL_CT1	Hrs	14		869		869	25%	217
1	03	02	06	09		L01-BC1 Hardware Fab	30-Aug-06	13-Sep-06	SL_CE1	Hrs	14		1,586		1,586	25%	397
1	03	02	06	09		L01-BC1 Integration and Test	14-Sep-06	20-Sep-06	SL_CT1	Hrs	8		483		483	25%	121
1	03	02	06	09		L01-BC1 Integration and Test	14-Sep-06	20-Sep-06	SL_CE1	Hrs	8		881		881	25%	220
1	03	02	06	09		L02-L03 Rack Layout and Wiring	1-Feb-07	1-Mar-07	SL_CE1	Hrs	16		1,809		1,809	25%	452
1	03	02	06	09		L02-L03 Rack Layout and Wiring	1-Feb-07	1-Mar-07	SL_CCA1	Hrs	16		1,053		1,053	25%	263
1	03	02	06	09		RCV: L02-L03 Crate/CPU/PMC Spac	2-Mar-07	2-Mar-07	SL_MSEG1	\$\$		7,000		7,527	7,527	20%	1,505
1	03	02	06	09		RCV: L02-L03 I/Os	2-Mar-07	2-Mar-07	SL_MSEG1	\$\$		2,000		2,150	2,150	20%	430
1	03	02	06	09		RCV: L02-L03 Interrack Cables	2-Mar-07	2-Mar-07	SL_MSEG1	\$\$		500		538	538	25%	134
1	03	02	06	09		L02-L03 Hardware Fab	5-Mar-07	16-Mar-07	SL_CT1	Hrs	16		990		990	25%	248
1	03	02	06	09		L02-L03 Hardware Fab	5-Mar-07	16-Mar-07	SL_CE1	Hrs	16		1,809		1,809	25%	452
1	03	02	06	09		L02-L03 Integration and Test	19-Mar-07	23-Mar-07	SL_CT1	Hrs	8		495		495	25%	124
1	03	02	06	09		L02-L03 Integration and Test	19-Mar-07	23-Mar-07	SL_CE1	Hrs	8		904		904	25%	226
1	03	02	06	09		LTU Rack Layout and Wiring	1-Jun-07	28-Jun-07	SL_CE1	Hrs	16		1,809		1,809	25%	452
1	03	02	06	09		LTU Rack Layout and Wiring	1-Jun-07	28-Jun-07	SL_CCA1	Hrs	16		1,053		1,053	25%	263
1	03	02	06	09		RCV: LTU Interrack Cables	29-Jun-07	29-Jun-07	SL_MSEG1	\$\$		500		538	538	25%	134
1	03	02	06	09		LTU Hardware Fab	2-Jul-07	16-Jul-07	SL_CT1	Hrs	16		990		990	25%	248
1	03	02	06	09		LTU Hardware Fab	2-Jul-07	16-Jul-07	SL_CE1	Hrs	16		1,809		1,809	25%	452
1	03	02	06	09		LTU Integration and Test	17-Jul-07	23-Jul-07	SL_CT1	Hrs	8		495		495	25%	124
1	03	02	06	09		LTU Integration and Test	17-Jul-07	23-Jul-07	SL_CE1	Hrs	8		904		904	25%	226
1	03	02	06	10		Controls - E Beam Dump					240	19,500	21,000	20,708	41,709		9,472
1	03	02	06	10		L01-BC1 Rack Layout and Wiring	1-Aug-06	28-Aug-06	SL_CE1	Hrs	16		1,763		1,763	25%	441
1	03	02	06	10		L01-BC1 Rack Layout and Wiring	1-Aug-06	28-Aug-06	SL_CCA1	Hrs	16		1,027		1,027	25%	257
1	03	02	06	10		RCV: Crate/CPU/PMC Spac	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		7,000		7,336	7,336	20%	1,467
1	03	02	06	10		RCV: L01-BC1 I/Os	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		2,000		2,096	2,096	20%	419
1	03	02	06	10		RCV: Interrack Cables	29-Aug-06	29-Aug-06	SL_MSEG1	\$\$		500		524	524	25%	131
1	03	02	06	10		L01-BC1 Hardware Fab	30-Aug-06	13-Sep-06	SL_CT1	Hrs	16		965		965	25%	241
1	03	02	06	10		L01-BC1 Hardware Fab	30-Aug-06	13-Sep-06	SL_CE1	Hrs	16		1,763		1,763	25%	441
1	03	02	06	10		L01-BC1 Integration and Test	14-Sep-06	20-Sep-06	SL_CT1	Hrs	8		483		483	25%	121
1	03	02	06	10		L01-BC1 Integration and Test	14-Sep-06	20-Sep-06	SL_CE1	Hrs	8		881		881	25%	220
1	03	02	06	10		L02-L03 Rack Layout and Wiring	1-Feb-07	1-Mar-07	SL_CE1	Hrs	16		1,809		1,809	25%	452
1	03	02	06	10		L02-L03 Rack Layout and Wiring	1-Feb-07	1-Mar-07	SL_CCA1	Hrs	16		1,053		1,053	25%	263
1	03	02	06	10		RCV: L02-L03 Crate/CPU/PMC Spac	2-Mar-07	2-Mar-07	SL_MSEG1	\$\$		7,000		7,527	7,527	20%	1,505
1	03	02	06	10		RCV: L02-L03 I/Os	2-Mar-07	2-Mar-07	SL_MSEG1	\$\$		2,000		2,150	2,150	20%	430
1	03	02	06	10		RCV: L02-L03 Interrack Cables	2-Mar-07	2-Mar-07	SL_MSEG1	\$\$		500		538	538	25%	134
1	03	02	06	10		L02-L03 Hardware Fab	5-Mar-07	16-Mar-07	SL_CT1	Hrs	16		990		990	25%	248
1	03	02	06	10		L02-L03 Hardware Fab	5-Mar-07	16-Mar-07	SL_CE1	Hrs	16		1,809		1,809	25%	452
1	03	02	06	10		L02-L03 Integration and Test	19-Mar-07	23-Mar-07	SL_CT1	Hrs	8		495		495	25%	124
1	03	02	06	10		L02-L03 Integration and Test	19-Mar-07	23-Mar-07	SL_CE1	Hrs	8		904		904	25%	226
1	03	02	06	10		LTU Rack Layout and Wiring	1-Jun-07	28-Jun-07	SL_CE1	Hrs	16		1,809		1,809	25%	452
1	03	02	06	10		LTU Rack Layout and Wiring	1-Jun-07	28-Jun-07	SL_CCA1	Hrs	16		1,053		1,053	25%	263
1	03	02	06	10		RCV: LTU Interrack Cables	29-Jun-07	29-Jun-07	SL_MSEG1	\$\$		500		538	538	25%	134
1	03	02	06	10		LTU Hardware Fab	2-Jul-07	16-Jul-07	SL_CT1	Hrs	16		990		990	25%	248
1	03	02	06	10		LTU Hardware Fab	2-Jul-07	16-Jul-07	SL_CE1	Hrs	16		1,809		1,809	25%	452
1	03	02	06	10		LTU Integration and Test	17-Jul-07	23-Jul-07	SL_CT1	Hrs	8		495		495	25%	124
1	03	02	06	10		LTU Integration and Test	17-Jul-07	23-Jul-07	SL_CE1	Hrs	8		904		904	25%	226
1	03	02	06	11		Controls - Protection Collimator					361	19,957	33,904	21,459	55,363		8,304
1	03	02	06	11		Receive System Requirements	1-Aug-06	7-Aug-06	SL_CE1	Hrs	8		881		881	15%	132
1	03	02	06	11		Design Moveable Protection Collimator	8-Aug-06	24-Oct-06	SL_CE1	Hrs	185		20,539		20,539	15%	3,081
1	03	02	06	11		Design Moveable Protection Collimator	8-Aug-06	24-Oct-06	SL_CCA1	Hrs	88		5,690		5,690	15%	853
1	03	02	06	11		Movable Collimator Hardware	25-Oct-06	21-Nov-06	SL_MSEG1	\$\$		19,957		21,459	21,459	15%	3,219
1	03	02	06	11		Build Collimator H/W	25-Oct-06	22-Nov-06	SL_CT1	Hrs	32		1,980		1,980	15%	297
1	03	02	06	11		Write Documentation - Prot Collimator	9-Jan-07	16-Jan-07	SL_CP1	Hrs	20		1,648		1,648	15%	247
1	03	02	06	11		Write Documentation - Prot Collimator	9-Jan-07	16-Jan-07	SL_CE1	Hrs	20		2,261		2,261	15%	339
1	03	02	06	11		Integrate and Test	17-Jan-07	22-Feb-07	SL_CE1	Hrs	8		904		904	15%	136
1	03	02	06	12		Controls - Movable Collimator					546	70,560	46,955	75,869	122,824		24,565





WBS Level						LCLA DCE August-2006 Description	Early Start	Early Finish	Res Code	Units	Work Rem. Bud. Qty		Work Rem. Full Burd and Escltd Cost			Contingency %	Contingency \$	
1	2	3	4	5	6					Hours	\$\$	Labor	M&S	Total				
1	04	02	01	05	6	REC: LDB Ion Pump Cables (11)	3-Aug-06	28-Sep-06	SA_MSSC1	\$\$			6,225	6,225	20%	1,245		
1	04	02	01	05		REC: LDB Power Supplies (11)	7-Aug-06	2-Oct-06	SA_MSSC1	\$\$			-	-	20%	-		
1	04	02	02			<b>Motion</b>						<b>1,646</b>	<b>741,850</b>	<b>163,306</b>	<b>760,954</b>	<b>924,260</b>		<b>260,791</b>
1	04	02	02	01		<b>Undulator Cam Movers</b>						<b>1,274</b>	<b>572,850</b>	<b>130,521</b>	<b>587,586</b>	<b>718,107</b>		<b>196,620</b>
1	04	02	02	01	01	<b>Motor Interface</b>						<b>120</b>	<b>258,600</b>	<b>10,519</b>	<b>265,165</b>	<b>275,684</b>		<b>55,137</b>
1	04	02	02	01	01	Prepare Bid Package for Motor	1-Sep-06	7-Sep-06	AN_CE1	Hrs	24		2,585		20%	517		
1	04	02	02	01	01	Evaluate Proposal for Motor	25-Sep-06	29-Sep-06	AN_CE1	Hrs	16		1,723		20%	345		
1	04	02	02	01	01	REC: production motor	3-Oct-06	29-Nov-06	AN_CE1	Hrs	8		884		20%	177		
1	04	02	02	01	01	REC: production motor	3-Oct-06	29-Nov-06	AA_MSEG1	\$\$		247,500		253,935	20%	50,787		
1	04	02	02	01	01	Test motor	30-Nov-06	13-Dec-06	AN_CT1	Hrs	40		2,595		20%	519		
1	04	02	02	01	01	Ship cam mover motor to SLAC	14-Dec-06	5-Jan-07	AN_MSEG1	\$\$		5,000		5,130	20%	1,026		
1	04	02	02	01	01	Oversee Materials for Tunnel Radiation Test	1-Aug-06	29-Sep-06	AN_MSEG1	\$\$		2,350		2,350	20%	470		
1	04	02	02	01	01	Oversee Materials for Tunnel Radiation Test	1-Aug-06	29-Sep-06	AN_MFAT1	Hrs	16		1,010		20%	202		
1	04	02	02	01	01	Oversee Materials for Tunnel Radiation Test	1-Aug-06	29-Sep-06	AN_EE1	Hrs	16		1,721		20%	344		
1	04	02	02	01	01	Purchase Five Test Motors	1-Aug-06	1-Sep-06	AN_MSEG1	\$\$		3,750		3,750	20%	750		
1	04	02	02	01	02	<b>Encoder Interface</b>						<b>88</b>	<b>79,250</b>	<b>7,787</b>	<b>81,311</b>	<b>89,098</b>		<b>17,820</b>
1	04	02	02	01	02	Prepare Bid Package for position readback	1-Sep-06	7-Sep-06	AN_CE1	Hrs	24		2,585		20%	517		
1	04	02	02	01	02	Evaluate Proposal for position readback	25-Sep-06	29-Sep-06	AN_CE1	Hrs	16		1,723		20%	345		
1	04	02	02	01	02	REC: production position readback	3-Oct-06	29-Nov-06	AN_CE1	Hrs	8		884		20%	177		
1	04	02	02	01	02	REC: production position readback	3-Oct-06	29-Nov-06	AA_MSEG1	\$\$		74,250		76,181	20%	15,236		
1	04	02	02	01	02	Test position readback	30-Nov-06	13-Dec-06	AN_CT1	Hrs	40		2,595		20%	519		
1	04	02	02	01	02	Ship cam mover position readback to SLAC	14-Dec-06	5-Jan-07	AN_MSEG1	\$\$		5,000		5,130	20%	1,026		
1	04	02	02	01	03	<b>Motor Driver</b>												
1	04	02	02	01	04	<b>Cabling</b>						<b>128</b>	<b>55,000</b>	<b>12,215</b>	<b>56,430</b>	<b>68,645</b>		<b>24,026</b>
1	04	02	02	01	04	Specify production cables	15-Sep-06	28-Sep-06	AN_CE1	Hrs	32		3,446		35%	1,206		
1	04	02	02	01	04	Write test procedure for cabling	29-Sep-06	2-Oct-06	AN_CE1	Hrs	8		869		35%	304		
1	04	02	02	01	04	Prepare Bid Package for production cables	3-Oct-06	9-Oct-06	AN_CE1	Hrs	24		2,652		35%	928		
1	04	02	02	01	04	Evaluate Proposal for production cables	25-Oct-06	31-Oct-06	AN_CE1	Hrs	16		1,768		35%	619		
1	04	02	02	01	04	REC: production cables	2-Nov-06	6-Mar-07	AN_CE1	Hrs	8		884		35%	309		
1	04	02	02	01	04	REC: production cables	2-Nov-06	6-Mar-07	AA_MSEG1	\$\$		50,000		51,300	35%	17,955		
1	04	02	02	01	04	Test production cables	4-Dec-06	3-Apr-07	AN_CT1	Hrs	40		2,595		35%	908		
1	04	02	02	01	04	Ship cam mover cabling to SLAC	18-Dec-06	17-Apr-07	AN_MSEG1	\$\$		5,000		5,130	35%	1,796		
1	04	02	02	01	05	<b>Integrate components</b>						<b>938</b>	<b>180,000</b>	<b>100,001</b>	<b>184,680</b>	<b>284,681</b>		<b>99,638</b>
1	04	02	02	01	05	Design control software	16-Oct-06	10-Nov-06	AN_CP1	Hrs	40		4,420		35%	1,547		
1	04	02	02	01	05	Write testing Software Requirements Spec.	13-Nov-06	12-Dec-06	AN_CP1	Hrs	16		1,768		35%	619		
1	04	02	02	01	05	Procure commercial software	13-Dec-06	13-Dec-06	AN_MSEG1	\$\$		5,000		5,130	35%	1,796		
1	04	02	02	01	05	Write control software	14-Dec-06	19-Jan-07	AN_CP1	Hrs	438		48,400		35%	16,940		
1	04	02	02	01	05	Test control software	22-Jan-07	2-Feb-07	AN_CE1	Hrs	40		4,420		35%	1,547		
1	04	02	02	01	05	Prepare for cam mover design review	16-Oct-06	20-Oct-06	AN_CE1	Hrs	24		2,652		35%	928		
1	04	02	02	01	05	Conduct cam mover motion design review	31-Oct-06	13-Nov-06	AN_CP1	Hrs	80		8,840		35%	3,094		
1	04	02	02	01	05	Procure integration components for prototype	14-Nov-06	15-Nov-06	AN_MSEG1	\$\$		5,000		5,130	35%	1,796		
1	04	02	02	01	05	Receive integration components for prototype	16-Nov-06	9-Jan-07	AN_CT1	Hrs	8		519		35%	182		
1	04	02	02	01	05	Write integrated test procedure	10-Jan-07	16-Jan-07	AN_CE1	Hrs	12		1,326		35%	464		
1	04	02	02	01	05	Perform prototype testing	17-Jan-07	23-Jan-07	AN_CT1	Hrs	16		1,038		35%	363		
1	04	02	02	01	05	Perform prototype testing	17-Jan-07	23-Jan-07	AN_CP1	Hrs	40		4,420		35%	1,547		
1	04	02	02	01	05	Write validation procedure	24-Jan-07	30-Jan-07	AN_CE1	Hrs	12		1,326		35%	464		
1	04	02	02	01	05	Design installation layout and plan	31-Jan-07	27-Feb-07	AN_CE1	Hrs	40		4,420		35%	1,547		
1	04	02	02	01	05	REC: production integration components	20-Mar-07	30-Apr-07	AN_CT1	Hrs	16		1,038		35%	363		
1	04	02	02	01	05	REC: production integration components	20-Mar-07	30-Apr-07	AA_MSEG1	\$\$		165,000		169,290	35%	59,252		
1	04	02	02	01	05	QA test production integration components	1-May-07	14-May-07	AN_CT1	Hrs	40		2,595		35%	908		
1	04	02	02	01	05	QA test production integration components	1-May-07	14-May-07	AN_CP1	Hrs	116		12,818		35%	4,486		
1	04	02	02	01	05	Ship cam mover components to SLAC	15-May-07	29-May-07	AN_MSEG1	\$\$		5,000		5,130	35%	1,796		
1	04	02	02	02		<b>Motion Test Stand</b>												
1	04	02	02	06		<b>Scanning Wire Motion</b>												
1	04	02	02	06	01	<b>Motor Interface</b>												
1	04	02	02	06	02	<b>Encoder Interface</b>												
1	04	02	02	06	03	<b>Motor Driver</b>												
1	04	02	02	06	04	<b>Cabling</b>												
1	04	02	02	06	05	<b>Integrate components</b>												
1	04	02	02	07		<b>Translation Stage Motion</b>						<b>372</b>	<b>169,000</b>	<b>32,785</b>	<b>173,368</b>	<b>206,153</b>		<b>64,171</b>
1	04	02	02	07	01	<b>Motor Interface</b>						<b>88</b>	<b>104,000</b>	<b>7,787</b>	<b>106,704</b>	<b>114,491</b>		<b>34,347</b>
1	04	02	02	07	01	Prepare Bid Package for motor	1-Sep-06	7-Sep-06	AN_CE1	Hrs	24		2,585		30%	775		
1	04	02	02	07	01	Evaluate Proposal for motor	25-Sep-06	29-Sep-06	AN_CE1	Hrs	16		1,723		30%	517		
1	04	02	02	07	01	REC: production motor	3-Oct-06	30-Oct-06	AN_CE1	Hrs	8		884		30%	265		

WBS Level						LCLA DCE August-2006 Description	Early Start	Early Finish	Res Code	Units	Work Rem. Bud. Qty		Work Rem. Full Burd and Escltd Cost			Contingency %	Contingency \$
1	2	3	4	5	6						Hours	\$\$	Labor	M&S	Total		
1	04	02	02	07	01	REC: production motor	3-Oct-06	30-Oct-06	AA_MSEG1	\$\$		99,000		101,574	101,574	30%	30,472
1	04	02	02	07	01	Test motor	31-Oct-06	13-Nov-06	AN_CT1	Hrs	40		2,595		2,595	30%	779
1	04	02	02	07	01	Ship translation stage motion motor to SLAC	14-Nov-06	29-Nov-06	AN_MSEG1	\$\$		5,000		5,130	5,130	30%	1,539
1	04	02	02	07	03	<b>Motor Driver</b>											
1	04	02	02	07	04	<b>Cabling</b>					176	50,000	15,742	51,274	67,016		23,456
1	04	02	02	07	04	Design motor drive cables	1-Aug-06	7-Aug-06	AN_CE1	Hrs	-		-		-	35%	-
1	04	02	02	07	04	Specify cables	8-Aug-06	11-Aug-06	AN_CE1	Hrs	-		-		-	35%	-
1	04	02	02	07	04	Specify connectors	8-Aug-06	10-Aug-06	AN_CE1	Hrs	-		-		-	35%	-
1	04	02	02	07	04	Procure prototype parts	14-Aug-06	19-Sep-06	AN_MSEG1	\$\$		1,000		1,000	1,000	35%	350
1	04	02	02	07	04	Receive prototype parts	20-Sep-06	22-Sep-06	AN_CE1	Hrs	8		862		862	35%	302
1	04	02	02	07	04	Assemble prototype cables	25-Sep-06	2-Oct-06	AN_CT1	Hrs	24		1,523		1,523	35%	533
1	04	02	02	07	04	Test prototype cables	3-Oct-06	10-Oct-06	AN_CT1	Hrs	16		1,038		1,038	35%	363
1	04	02	02	07	04	Specify production cables	11-Oct-06	24-Oct-06	AN_CE1	Hrs	32		3,536		3,536	35%	1,238
1	04	02	02	07	04	Write test proced-trans stage motion cabling	25-Oct-06	27-Oct-06	AN_CE1	Hrs	8		884		884	35%	309
1	04	02	02	07	04	Prepare Bid Package for production cables	30-Oct-06	3-Nov-06	AN_CE1	Hrs	24		2,652		2,652	35%	928
1	04	02	02	07	04	Evaluate Proposal for production cables	21-Nov-06	29-Nov-06	AN_CE1	Hrs	16		1,768		1,768	35%	619
1	04	02	02	07	04	REC: production cables	1-Dec-06	22-Jan-07	AN_CE1	Hrs	8		884		884	35%	309
1	04	02	02	07	04	REC: production cables	1-Dec-06	22-Jan-07	AA_MSEG1	\$\$		44,000		45,144	45,144	35%	15,800
1	04	02	02	07	04	Test production cables	23-Jan-07	5-Feb-07	AN_CT1	Hrs	40		2,595		2,595	35%	908
1	04	02	02	07	04	Ship transl. stage motion cabling to SLAC	6-Feb-07	19-Feb-07	AN_MSEG1	\$\$		5,000		5,130	5,130	35%	1,796
1	04	02	02	07	05	<b>Integrate components</b>					108	15,000	9,256	15,390	24,646		6,368
1	04	02	02	07	05	Receive integration components for prototype	1-Aug-06	4-Aug-06	AN_CT1	Hrs	-		-		-	30%	-
1	04	02	02	07	05	Write validation procedure	1-Sep-06	8-Sep-06	AN_CE1	Hrs	12		1,292		1,292	30%	388
1	04	02	02	07	05	Design installation layout and plan	11-Sep-06	6-Oct-06	AN_CE1	Hrs	40		4,330		4,330	30%	1,299
1	04	02	02	07	05	Procure production integration components	9-Oct-06	10-Oct-06	AN_MSEG1	\$\$		10,000		10,260	10,260	20%	2,052
1	04	02	02	07	05	Receive production integration components	11-Oct-06	21-Nov-06	AN_CT1	Hrs	16		1,038		1,038	30%	311
1	04	02	02	07	05	Test production integration components	22-Nov-06	7-Dec-06	AN_CT1	Hrs	40		2,595		2,595	30%	779
1	04	02	02	07	05	Ship trans. stage components to SLAC	8-Dec-06	21-Dec-06	AN_MSEG1	\$\$		5,000		5,130	5,130	30%	1,539
1	04	02	03	01	02	<b>Signal Analysis</b>					939	575,973	87,350	603,427	690,777		229,303
1	04	02	03	01	01	<b>RFBPM</b>					753	510,973	70,787	536,737	607,524		200,164
1	04	02	03	01	02	<b>Signal Acquisition</b>					78	165,000	7,583	182,029	189,612		56,884
1	04	02	03	01	02	Prototype testing	1-Aug-06	12-Sep-06	AN_CT1	Hrs	3		182		182	30%	55
1	04	02	03	01	02	Prototype testing	1-Aug-06	12-Sep-06	AN_CP1	Hrs	3		310		310	30%	93
1	04	02	03	01	02	Write test procedure for A/D interface	13-Sep-06	18-Sep-06	SL_CE1	Hrs	12		1,322		1,322	30%	397
1	04	02	03	01	02	Prepare Bid Package for A/D interface	19-Sep-06	22-Sep-06	SL_CE1	Hrs	16		1,763		1,763	30%	529
1	04	02	03	01	02	Evaluate Proposal for A/D interface	10-Oct-06	16-Oct-06	SL_CE1	Hrs	16		1,809		1,809	30%	543
1	04	02	03	01	02	REC: production A/D interface	3-Oct-07	1-Nov-07	SL_CE1	Hrs	8		928		928	30%	278
1	04	02	03	01	02	REC: production A/D interface	3-Oct-07	1-Nov-07	SA_MSEG1	\$\$		165,000		182,029	182,029	30%	54,609
1	04	02	03	01	02	Test A/D interface	2-Nov-07	15-Nov-07	SL_CT1	Hrs	20		1,270		1,270	30%	381
1	04	02	03	01	03	<b>Timing interface</b>											
1	04	02	03	01	04	<b>Cabling</b>					224	40,000	18,859	40,910	59,769		17,931
1	04	02	03	01	04	Specify cables	13-Sep-06	19-Sep-06	AN_CE1	Hrs	16		1,723		1,723	30%	517
1	04	02	03	01	04	Procure prototype parts	20-Sep-06	20-Sep-06	AN_MSEG1	\$\$		5,000		5,000	5,000	30%	1,500
1	04	02	03	01	04	Receive prototype parts	21-Sep-06	18-Oct-06	AN_CE1	Hrs	8		876		876	30%	263
1	04	02	03	01	04	Assemble prototype cables	19-Oct-06	1-Nov-06	AN_CT1	Hrs	24		1,557		1,557	30%	467
1	04	02	03	01	04	Test prototype cables	2-Nov-06	15-Nov-06	AN_CT1	Hrs	24		1,557		1,557	30%	467
1	04	02	03	01	04	Specify production cables	16-Nov-06	1-Dec-06	AN_CE1	Hrs	24		2,652		2,652	30%	796
1	04	02	03	01	04	Write test procedure for production cables	4-Dec-06	8-Dec-06	AN_CE1	Hrs	16		1,768		1,768	30%	530
1	04	02	03	01	04	Prepare Bid Package for production cables	11-Dec-06	14-Dec-06	AN_CE1	Hrs	16		1,768		1,768	30%	530
1	04	02	03	01	04	Evaluate Proposal for production cables	10-Jan-07	16-Jan-07	AN_CE1	Hrs	16		1,768		1,768	30%	530
1	04	02	03	01	04	REC: production RFBPM cabling	18-Jan-07	14-Feb-07	AA_MSEG1	\$\$		30,000		30,780	30,780	30%	9,234
1	04	02	03	01	04	Test RFBPM cabling	15-Feb-07	28-Feb-07	AN_CT1	Hrs	80		5,190		5,190	30%	1,557
1	04	02	03	01	04	Ship RFBPM cabling to SLAC	1-Mar-07	14-Mar-07	AN_MSEG1	\$\$		5,000		5,130	5,130	30%	1,539
1	04	02	03	01	05	<b>Integrate components</b>					452	305,973	44,345	313,798	358,143		125,350
1	04	02	03	01	05	Write control Software Requirements Spec.	1-Aug-06	28-Aug-06	AN_CE1	Hrs	-		-		-	35%	-
1	04	02	03	01	05	Write testing Software Requirements Spec.	1-Aug-06	28-Aug-06	AN_CE1	Hrs	-		-		-	35%	-
1	04	02	03	01	05	Design testing software	29-Aug-06	12-Sep-06	AN_CP1	Hrs	16		1,672		1,672	35%	585
1	04	02	03	01	05	Specify commercial software required	13-Sep-06	19-Sep-06	AN_CP1	Hrs	8		862		862	35%	302
1	04	02	03	01	05	Procure commercial software	20-Sep-06	20-Sep-06	AN_MSEG1	\$\$		5,000		5,000	5,000	35%	1,750
1	04	02	03	01	05	Receive commercial software	21-Sep-06	18-Oct-06	AN_CP1	Hrs	8		876		876	35%	307
1	04	02	03	01	05	Write control software	19-Oct-06	1-Dec-06	AN_CP1	Hrs	80		8,840		8,840	35%	3,094
1	04	02	03	01	05	Test control software	4-Dec-06	15-Dec-06	AN_CE1	Hrs	40		4,420		4,420	35%	1,547
1	04	02	03	01	05	Design prototype test setup	18-Dec-06	2-Jan-07	AN_CE1	Hrs	40		4,420		4,420	35%	1,547
1	04	02	03	01	05	Procure integration components for prototype	3-Jan-07	3-Jan-07	AN_MSEG1	\$\$		5,000		5,130	5,130	35%	1,796



WBS Level						LCLA DCE August-2006 Description	Early Start	Early Finish	Res Code	Units	Work Rem. Bud. Qty		Work Rem. Full Burd and Escltd Cost			Contingency %	Contingency \$
1	2	3	4	5	6						Hours	\$\$	Labor	M&S	Total		
1	04	02	03	01	05	Receive integration components for prototype	4-Jan-07	31-Jan-07	AN_CT1	Hrs	8		519		519	35%	182
1	04	02	03	01	05	Assemble prototype	1-Feb-07	28-Feb-07	AN_CT1	Hrs	40		2,595		2,595	35%	908
1	04	02	03	01	05	Write integrated test procedure	1-Mar-07	2-Mar-07	AN_CE1	Hrs	8		884		884	35%	309
1	04	02	03	01	05	Assemble test setup	5-Mar-07	6-Mar-07	AN_CT1	Hrs	8		519		519	35%	182
1	04	02	03	01	05	Perform prototype testing	7-Mar-07	8-Mar-07	AN_CT1	Hrs	8		519		519	35%	182
1	04	02	03	01	05	Perform prototype testing	7-Mar-07	8-Mar-07	AN_CP1	Hrs	8		884		884	35%	309
1	04	02	03	01	05	Write validation procedure	9-Mar-07	15-Mar-07	AN_CE1	Hrs	12		1,326		1,326	35%	464
1	04	02	03	01	05	Design installation layout and plan	16-Mar-07	12-Apr-07	AN_CE1	Hrs	40		4,420		4,420	35%	1,547
1	04	02	03	01	05	Prep Bid Pkg-production integration components	13-Apr-07	18-Apr-07	AN_CE1	Hrs	16		1,768		1,768	35%	619
1	04	02	03	01	05	Evaluate Prop for production integration comp	4-May-07	10-May-07	AN_CE1	Hrs	16		1,768		1,768	35%	619
1	04	02	03	01	05	REC: production integration components	14-May-07	11-Jun-07	AN_CT1	Hrs	16		1,038		1,038	35%	363
1	04	02	03	01	05	REC: production integration components	14-May-07	11-Jun-07	AA_MSEG1	\$\$		290,973		298,538	298,538	35%	104,488
1	04	02	03	01	05	Test production integration components	12-Jun-07	25-Jun-07	AN_CT1	Hrs	40		2,595		2,595	35%	908
1	04	02	03	01	05	Test production integration components	12-Jun-07	25-Jun-07	AN_CP1	Hrs	40		4,420		4,420	35%	1,547
1	04	02	03	01	05	Ship RFBPM integrated components to SLAC	26-Jun-07	10-Jul-07	AN_MSEG1	\$\$		5,000		5,130	5,130	35%	1,796
1	04	02	03	02		Charge Monitor					40		4,420		4,420		1,547
1	04	02	03	02	03	Integrate components					40		4,420		4,420		1,547
1	04	02	03	02	03	Design installation layout and plan	16-Oct-06	10-Nov-06	AN_CE1	Hrs	40		4,420		4,420	35%	1,547
1	04	02	03	03		Beam Finder Wire					146	65,000	12,143	66,690	78,833		27,592
1	04	02	03	03	01	BFW Actuator Control					146	65,000	12,143	66,690	78,833		27,592
1	04	02	03	03	01	Design BFW actuator control	1-Aug-06	14-Aug-06	AN_CE1	Hrs	-		-		-	35%	-
1	04	02	03	03	01	Procure prototype BFW actuator hardware	15-Aug-06	12-Sep-06	AN_MSEQ1	\$\$					-	35%	-
1	04	02	03	03	01	Procure prototype BFW actuator hardware	15-Aug-06	12-Sep-06	AN_CE1	Hrs	-		-		-	35%	-
1	04	02	03	03	01	Build BFW actuator control chassis	13-Sep-06	26-Sep-06	AN_CT1	Hrs	30		1,897		1,897	35%	664
1	04	02	03	03	01	Test and debug BFW actuator control	27-Sep-06	10-Oct-06	AN_CE1	Hrs	20		2,193		2,193	35%	767
1	04	02	03	03	01	Design installation layout and plan	11-Oct-06	7-Nov-06	AN_CE1	Hrs	40		4,420		4,420	35%	1,547
1	04	02	03	03	01	Procure BFW production components	8-Nov-06	9-Nov-06	AN_MSEG1	\$\$		60,000		61,560	61,560	35%	21,546
1	04	02	03	03	01	Receive BFW production components	10-Nov-06	3-Jan-07	AN_CT1	Hrs	16		1,038		1,038	35%	363
1	04	02	03	03	01	Test BFW production components	4-Jan-07	17-Jan-07	AN_CT1	Hrs	40		2,595		2,595	35%	908
1	04	02	03	03	01	Ship BFW components to SLAC	18-Jan-07	31-Jan-07	AN_MSEG1	\$\$		5,000		5,130	5,130	35%	1,796
1	04	02	03	03	06	Integrate components											
1	04	02	04			Video											
1	04	02	04	01		OTR Monitor											
1	04	02	04	01	01	Camera											
1	04	02	04	01	02	Camera trigger interface											
1	04	02	04	01	03	Digitizer											
1	04	02	04	01	04	Timing interface											
1	04	02	04	01	05	Cabling											
1	04	02	04	01	06	Integrate components											
1	04	02	04	03		Observation station video											
1	04	02	04	03	01	Camera											
1	04	02	04	03	02	Camera trigger interface											
1	04	02	04	03	03	Multiplexor											
1	04	02	04	03	04	Cabling											
1	04	02	04	03	05	Integrate components											
1	04	02	04	03	06	Imaging Test Stand											
1	04	02	05			Data Acquisition and Control					192	71,000	19,026	72,846	91,872		18,374
1	04	02	05	01		Strongback Temperature monitoring					192	71,000	19,026	72,846	91,872		18,374
1	04	02	05	01	01	Integrate components					192	71,000	19,026	72,846	91,872		18,374
1	04	02	05	01	01	Design control software	1-Dec-06	14-Dec-06	AN_CP1	Hrs	20		2,210		2,210	20%	442
1	04	02	05	01	01	Test control software	1-Dec-06	7-Dec-06	AN_CE1	Hrs	16		1,768		1,768	20%	354
1	04	02	05	01	01	Write validation procedure	8-Dec-06	14-Dec-06	AN_CE1	Hrs	12		1,326		1,326	20%	265
1	04	02	05	01	01	Design installation layout and plan	15-Dec-06	22-Jan-07	AN_CE1	Hrs	40		4,420		4,420	20%	884
1	04	02	05	01	01	Prepare Bid Package for product integrated com	23-Jan-07	29-Jan-07	AN_CE1	Hrs	16		1,768		1,768	20%	354
1	04	02	05	01	01	Vendor Prepare Prop for product integrated com	31-Jan-07	6-Feb-07	AN_CE1	Hrs	16		1,768		1,768	20%	354
1	04	02	05	01	01	Evaluate Proposal for product integrated comp	7-Feb-07	13-Feb-07	AN_CE1	Hrs	16		1,768		1,768	20%	354
1	04	02	05	01	01	REC: production integration components	15-Feb-07	14-Mar-07	AN_CT1	Hrs	8		519		519	20%	104
1	04	02	05	01	01	REC: production integration components	15-Feb-07	14-Mar-07	AA_MSEG1	\$\$		66,000		67,716	67,716	20%	13,543
1	04	02	05	01	01	Test production integration components	15-Mar-07	28-Mar-07	AN_CT1	Hrs	40		2,595		2,595	20%	519
1	04	02	05	01	01	Test production integration components	15-Mar-07	28-Mar-07	AN_CP1	Hrs	8		884		884	20%	177
1	04	02	05	01	01	Ship strongback temp monitoring comp to SLAC	29-Mar-07	11-Apr-07	AN_MSEG1	\$\$		5,000		5,130	5,130	20%	1,026
1	04	02	06			Vacuum					-	-	-	-	-		-
1	04	02	06	01		Ion Pump Controller					-	-	-	-	-		-
1	04	02	06	01	01	Integrate components					-	-	-	-	-		-

WBS Level						LCLA DCE August-2006 Description	Early Start	Early Finish	Res Code	Units	Work Rem. Bud. Qty		Work Rem. Full Burd and Escltd Cost			Contingency %	Contingency \$
1	2	3	4	5	6						Hours	\$\$	Labor	M&S	Total		
1	04	02	06	01	01	Design installation layout and plan	1-Aug-06	28-Aug-06	AN_CE1	Hrs	-	-	-	-	20%	-	
1	04	02	06	02		<b>RGA</b>											
1	04	02	06	02	01	<b>Integrate components</b>											
1	04	02	07			<b>Machine Protection</b>					156	-	17,091	-	17,091	3,418	
1	04	02	07	01		<b>Undulator Beam Loss Monitor Controls</b>					156	-	17,091	-	17,091	3,418	
1	04	02	07	01		Controls Effort BLM	1-Aug-06	29-Jan-07	AN_CE1	Hrs	156		17,091		17,091	20%	3,418
1	04	02	07	01	01	<b>Hardware design</b>											
1	04	02	07	01	02	<b>Interface components</b>											
1	04	02	07	02		<b>Cerenkov Detector</b>											
1	04	02	07	02	01	<b>Signal interface</b>											
1	04	02	07	03		<b>Gamma Ray Detector</b>											
1	04	02	07	03	01	<b>Signal interface</b>											
1	04	02	08			<b>Power Supply Controls</b>					346	218,000	33,283	234,404	267,687	53,537	
1	04	02	08			Evaluate Proposal - Quadropole Power Supplies	10-Jan-07	31-Jan-07	SL_PHS1	Hrs	4		293		293	20%	59
1	04	02	08			Evaluate Proposal - Quadropole Power Supplies	10-Jan-07	31-Jan-07	SL_EE1	Hrs	16		1,492		1,492	20%	298
1	04	02	08			Evaluate Proposal - Quadropole Power Supplies	10-Jan-07	31-Jan-07	SL_CE1	Hrs	16		1,809		1,809	20%	362
1	04	02	08			Vendor Fab/Assy - Quad Power Supplies	2-Feb-07	1-Aug-07	SA_MSSC1	\$\$		150,000		161,287	161,287	20%	32,257
1	04	02	08			Write SOW for quad and corrector power supplies	1-Aug-06	28-Sep-06	AN_ME1	Hrs	38		4,071		4,071	20%	814
1	04	02	08			Write SOW for quad and corrector power supplies	1-Aug-06	28-Sep-06	AN_EE1	Hrs	18		1,939		1,939	20%	388
1	04	02	08			Prepare RFP for quad & corrector power supplies	29-Sep-06	29-Nov-06	SL_CE1	Hrs	32		3,614		3,614	20%	723
1	04	02	08			Help Oversee Quad/Corr PS Bid Process etc.	1-Aug-06	11-Dec-06	SL_PHS1	Hrs	56		4,048		4,048	20%	810
1	04	02	08			Prepare Bid Package - Quad Cables	14-Sep-06	27-Sep-06	SL_ME1	Hrs	60		5,840		5,840	20%	1,168
1	04	02	08			Evaluate Proposal - Quad Cables	12-Dec-06	2-Jan-07	SL_ME1	Hrs	8		799		799	20%	160
1	04	02	08			Vendor Fab/Assy - Quad Cables	4-Jan-07	3-May-07	SA_MSSC1	\$\$		68,000		73,117	73,117	20%	14,623
1	04	02	08			Write SOW for Quad Cables	15-Aug-06	13-Sep-06	SL_ME1	Hrs	59		5,782		5,782	20%	1,156
1	04	02	08			Write SOW for Quad Cables	15-Aug-06	13-Sep-06	SL_EE1	Hrs	40		3,598		3,598	20%	720
1	04	02	08			Generate Power Supply Cable & Rack Layout	1-Aug-06	14-Aug-06	AN_EE1	Hrs	-		-		-	20%	-
1	04	02	08			Prepare for Quadropole System FDR ETC	1-Aug-06	29-Aug-06	AN_PHS1	Hrs	-		-		-	20%	-
1	04	02	08			Prepare for Quadropole System FDR ETC	1-Aug-06	29-Aug-06	AN_ME1	Hrs	-		-		-	20%	-
1	04	02	08			Prepare for Quadropole System FDR ETC	1-Aug-06	29-Aug-06	AN_EE1	Hrs	-		-		-	20%	-
1	05					<b>X-RAY TRANSPORT &amp; DIAGNOSTICS SYSTEMS</b>					1,733	850,000	318,577	928,530	1,247,107	249,421	
1	05	02				<b>Controls</b>					1,733	850,000	318,577	928,530	1,247,107	249,421	
1	05	02	01			<b>Controls - EPICS</b>					1,733	850,000	318,577	928,530	1,247,107	249,421	
1	05	02	01			Controls Mgt - FY-06	1-Aug-06	27-Oct-06	LL_CP1	Hrs	252		48,153		48,153	20%	9,631
1	05	02	01			EPICs Controls Design I - FY-06	1-Aug-06	29-Sep-06	LL_EE	Hrs	14		2,615		2,615	20%	523
1	05	02	01			EPICs Controls Design I - FY-06	1-Aug-06	29-Sep-06	LL_CP1	Hrs	20		3,792		3,792	20%	758
1	05	02	01			EPICs Controls Design II - FY-06	2-Oct-06	16-Mar-07	LL_EE1	Hrs	600		108,711		108,711	20%	21,742
1	05	02	01			Global - EPICS - FY-07	19-Mar-07	17-Mar-08	LL_CE1	Hrs	847		155,306		155,306	20%	31,061
1	05	02	01			Vendor Fab/Ship - EPICS Tools	3-Apr-07	30-Apr-07	LA_MSXX1	\$\$		350,000		359,100	359,100	20%	71,820
1	05	02	01			Vendor Fab/Ship - EPICS Tools	3-Apr-07	30-Apr-07	LA_MSEG1	\$\$		500,000		569,430	569,430	20%	113,886
1	05	02	02			<b>Motor Controls</b>											
1	05	02	03			<b>Controls - Vacuum</b>											
1	06					<b>X-RAY END STATION SYSTEMS</b>					29,825	2,840,726	2,630,788	3,107,961	5,738,749	1,470,973	
1	06	02				<b>XES Controls</b>					29,825	2,840,726	2,630,788	3,107,961	5,738,749	1,470,973	
1	06	02	01			<b>Controls Management</b>					-	450,000	-	516,021	516,021	129,005	
1	06	02	01			Travel - FY07	2-Oct-06	1-Oct-07	SL_MSTR1	\$\$		20,000		24,624	24,624	25%	6,156
1	06	02	01			Travel - FY08	2-Oct-07	30-Sep-08	SL_MSTR1	\$\$		40,000		50,528	50,528	25%	12,632
1	06	02	01			Travel - FY09	1-Oct-08	31-Mar-09	SL_MSTR1	\$\$		40,000		51,842	51,842	25%	12,961
1	06	02	01			Misc. Test Equipment - FY07	2-Oct-06	1-Oct-07	SL_MSEG1	\$\$		50,000		53,762	53,762	25%	13,441
1	06	02	01			Misc. Test Equipment - FY08	2-Oct-07	30-Sep-08	SL_MSEG1	\$\$		150,000		165,481	165,481	25%	41,370
1	06	02	01			Misc. Test Equipment - FY09	1-Oct-08	31-Mar-09	SL_MSEG1	\$\$		150,000		169,783	169,783	25%	42,446
1	06	02	02			<b>Network - Closed to BCWP</b>											
1	06	02	03			<b>PC Support - AP - Closed to BCWP</b>											
1	06	02	04			<b>Beamline Controls - AP - Closed to BCWP</b>											
1	06	02	05			<b>X-Ray PPS - Closed to BCWP</b>											
1	06	02	05	01		<b>FEE X-Ray PPS - Closed to BCWP</b>											
1	06	02	06			<b>X-Ray MPS - Closed to BCWP</b>											
1	06	02	06	01		<b>FEE X-Ray MPS - Closed to BCWP</b>											
1	06	02	07			<b>AMOS Experiment Controls X1</b>					8,932	876,400	771,094	943,863	1,714,957	428,739	
1	06	02	07	01		<b>AMOS Experiment Controls X1</b>					2,320	-	200,022	-	200,022	50,005	
1	06	02	07	01		Develop AMOS Controls ICDs	1-Aug-06	2-Nov-06	SL_CP1	Hrs	120		9,725		9,725	25%	2,431
1	06	02	07	01		Controls AMOS Conceptual Design	1-Aug-06	21-Sep-06	SL_CP1	Hrs	360		28,916		28,916	25%	7,229
1	06	02	07	01		Conceptual Design Review (CDR)	22-Sep-06	2-Nov-06	SL_CP1	Hrs	120		9,834		9,834	25%	2,459
1	06	02	07	01		Controls AMOS Preliminary Design	3-Nov-06	31-Jan-07	SL_CP1	Hrs	320		26,372		26,372	25%	6,593



WBS Level						LCLA DCE August-2006 Description	Early Start	Early Finish	Res Code	Units	Work Rem. Bud. Qty		Work Rem. Full Burd and Escltd Cost			Contingency %	Contingency \$
1	2	3	4	5	6						Hours	\$\$	Labor	M&S	Total		
1	06	02	07	06		RCV: Primary Pump	28-Aug-07	28-Aug-07	SL_MSEG1	\$\$		14,800		15,914	15,914	25%	3,978
1	06	02	07	06		RCV: Guaging	28-Aug-07	28-Aug-07	SL_MSEG1	\$\$		10,000		10,752	10,752	25%	2,688
1	06	02	07	06		RCV: Valves	28-Aug-07	28-Aug-07	SL_MSEG1	\$\$		16,000		17,204	17,204	25%	4,301
1	06	02	07	06		RCV: Stepper Motor Drives	28-Aug-07	28-Aug-07	SL_MSEG1	\$\$		8,000		8,602	8,602	25%	2,150
1	06	02	07	06		RCV: Differential Ion Pump	28-Aug-07	28-Aug-07	SL_MSEG1	\$\$		1,500		1,613	1,613	25%	403
1	06	02	07	06		RCV: Ion Pump Controllers	28-Aug-07	28-Aug-07	SL_MSEG1	\$\$		6,000		6,451	6,451	25%	1,613
1	06	02	07	06		RCV: Beam Position Monitor	28-Aug-07	28-Aug-07	SL_MSEG1	\$\$		10,000		10,752	10,752	25%	2,688
1	06	02	07	06		RCV: OPA Laser	28-Aug-07	28-Aug-07	SL_MSEG1	\$\$		8,400		9,032	9,032	25%	2,258
1	06	02	07	06		RCV: Motor Controllers	28-Aug-07	28-Aug-07	SL_MSEG1	\$\$		32,000		34,408	34,408	25%	8,602
1	06	02	07	06		Refocus Optics H/W Build	29-Aug-07	30-Nov-07	SL_CT1	Hrs	261		16,422		16,422	25%	4,106
1	06	02	07	06		Refocus Optics H/W Build	29-Aug-07	30-Nov-07	SL_CE1	Hrs	261		29,996		29,996	25%	7,499
<b>1</b>	<b>06</b>	<b>02</b>	<b>07</b>	<b>07</b>		<b>Diagnostics</b>					<b>1,653</b>	<b>227,100</b>	<b>141,786</b>	<b>244,189</b>	<b>385,975</b>		<b>96,494</b>
1	06	02	07	07		Diagnostics Software	2-Feb-07	15-Aug-07	SL_CP1	Hrs	551		45,409		45,409	25%	11,352
1	06	02	07	07		RCV:Crate/CPU/EVR	30-Apr-07	30-Apr-07	SL_MSEG1	\$\$		27,000		29,032	29,032	25%	7,258
1	06	02	07	07		RCV:I/O	30-Apr-07	30-Apr-07	SL_MSEG1	\$\$		6,000		6,451	6,451	25%	1,613
1	06	02	07	07		RCV:turbo pump	30-Apr-07	30-Apr-07	SL_MSEG1	\$\$		3,700		3,978	3,978	25%	995
1	06	02	07	07		RCV:primary pump	30-Apr-07	30-Apr-07	SL_MSEG1	\$\$		8,000		8,602	8,602	25%	2,150
1	06	02	07	07		RCV:gauging	30-Apr-07	30-Apr-07	SL_MSEG1	\$\$		2,500		2,688	2,688	25%	672
1	06	02	07	07		RCV:valves	30-Apr-07	30-Apr-07	SL_MSEG1	\$\$		48,000		51,612	51,612	25%	12,903
1	06	02	07	07		RCV:pressure controller	30-Apr-07	30-Apr-07	SL_MSEG1	\$\$		5,000		5,376	5,376	25%	1,344
1	06	02	07	07		RCV:stepper motor drives	30-Apr-07	30-Apr-07	SL_MSEG1	\$\$		36,000		38,709	38,709	25%	9,677
1	06	02	07	07		RCV:gas handling system	30-Apr-07	30-Apr-07	SL_MSEG1	\$\$		1,500		1,613	1,613	25%	403
1	06	02	07	07		RCV:line pump	30-Apr-07	30-Apr-07	SL_MSEG1	\$\$		3,700		3,978	3,978	25%	995
1	06	02	07	07		RCV:detector	30-Apr-07	30-Apr-07	SL_MSEG1	\$\$		3,000		3,226	3,226	25%	806
1	06	02	07	07		RCV:turbo pump	30-Apr-07	30-Apr-07	SL_MSEG1	\$\$		1,200		1,290	1,290	25%	323
1	06	02	07	07		RCV:pre-amps	30-Apr-07	30-Apr-07	SL_MSEG1	\$\$		20,000		21,505	21,505	25%	5,376
1	06	02	07	07		RCV:transient recorder	30-Apr-07	30-Apr-07	SL_MSEG1	\$\$		15,000		16,129	16,129	25%	4,032
1	06	02	07	07		RCV:power supply controllers	30-Apr-07	30-Apr-07	SL_MSEG1	\$\$		4,000		4,301	4,301	25%	1,075
1	06	02	07	07		RCV:video camera controller	30-Apr-07	30-Apr-07	SL_MSEG1	\$\$		6,000		6,451	6,451	25%	1,613
1	06	02	07	07		RCV:beam stop electronics	30-Apr-07	30-Apr-07	SL_MSEG1	\$\$		12,000		12,903	12,903	25%	3,226
1	06	02	07	07		RCV:alignment manipulators	30-Apr-07	30-Apr-07	SL_MSEG1	\$\$		4,500		4,839	4,839	25%	1,210
1	06	02	07	07		RCV:power supplies	30-Apr-07	30-Apr-07	SL_MSEG1	\$\$		20,000		21,505	21,505	25%	5,376
1	06	02	07	07		Diagnostics H/W Build	1-May-07	15-Aug-07	SL_CT1	Hrs	551		34,097		34,097	25%	8,524
1	06	02	07	07		Diagnostics H/W Build	1-May-07	15-Aug-07	SL_CE1	Hrs	551		62,280		62,280	25%	15,570
<b>1</b>	<b>06</b>	<b>02</b>	<b>08</b>			<b>AMOS Experiment Controls X2</b>					<b>3,724</b>	<b>77,300</b>	<b>322,370</b>	<b>85,278</b>	<b>407,647</b>		<b>109,325</b>
<b>1</b>	<b>06</b>	<b>02</b>	<b>08</b>	<b>01</b>		<b>AMOS Experiment Controls X2</b>					<b>2,320</b>	<b>-</b>	<b>200,022</b>	<b>-</b>	<b>200,022</b>		<b>50,005</b>
1	06	02	08	01		Develop AMOS Controls ICDs	1-Aug-06	2-Nov-06	SL_CP1	Hrs	120		9,725		9,725	25%	2,431
1	06	02	08	01		Controls AMOS Conceptual Design	1-Aug-06	21-Sep-06	SL_CP1	Hrs	360		28,916		28,916	25%	7,229
1	06	02	08	01		Conceptual Design Review (CDR)	22-Sep-06	2-Nov-06	SL_CP1	Hrs	120		9,834		9,834	25%	2,459
1	06	02	08	01		Controls AMOS Preliminary Design	3-Nov-06	31-Jan-07	SL_CP1	Hrs	320		26,372		26,372	25%	6,593
1	06	02	08	01		Preliminary Desgin Review (PDR)	1-Feb-07	1-Mar-07	SL_CP1	Hrs	40		3,296		3,296	25%	824
1	06	02	08	01		Controls AMOS Final Design	2-Mar-07	7-Aug-07	SL_CP1	Hrs	960		79,115		79,115	25%	19,779
1	06	02	08	01		Final Desgin Review (FDR)	8-Aug-07	1-Oct-07	SL_CP1	Hrs	80		6,593		6,593	25%	1,648
1	06	02	08	01		Controls AMOS Prototype Development	1-Feb-07	1-Oct-07	SL_CE1	Hrs	320		36,170		36,170	25%	9,043
<b>1</b>	<b>06</b>	<b>02</b>	<b>08</b>	<b>02</b>		<b>X2 Praticle Imaging</b>					<b>1,404</b>	<b>77,300</b>	<b>122,348</b>	<b>85,278</b>	<b>207,625</b>		<b>59,320</b>
1	06	02	08	02		X2 Particle Imaging Software	4-Feb-08	31-Jul-08	SL_CP1	Hrs	702		59,357		59,357	25%	14,839
1	06	02	08	02		RCV: Crate/CPU/EVR	29-Apr-08	29-Apr-08	SL_MSEG1	\$\$		9,000		9,929	9,929	30%	2,979
1	06	02	08	02		RCV: I/O	29-Apr-08	29-Apr-08	SL_MSEG1	\$\$		2,000		2,206	2,206	30%	662
1	06	02	08	02		RCV: Vacuum Pumps	29-Apr-08	29-Apr-08	SL_MSEG1	\$\$		16,000		17,651	17,651	30%	5,295
1	06	02	08	02		RCV: Vaccum Valves	29-Apr-08	29-Apr-08	SL_MSEG1	\$\$		14,800		16,327	16,327	30%	4,898
1	06	02	08	02		RCV: Vacuum Gauges	29-Apr-08	29-Apr-08	SL_MSEG1	\$\$		10,000		11,032	11,032	30%	3,310
1	06	02	08	02		RCV: Pumps	29-Apr-08	29-Apr-08	SL_MSEG1	\$\$		16,000		17,651	17,651	30%	5,295
1	06	02	08	02		RCV: Detector Mounting	29-Apr-08	29-Apr-08	SL_MSEG1	\$\$		8,000		8,826	8,826	30%	2,648
1	06	02	08	02		RCV: Stepper Motor Drives	29-Apr-08	29-Apr-08	SL_MSEG1	\$\$		1,500		1,655	1,655	30%	496
1	06	02	08	02		X2 Particle Imaging H/W Build	30-Apr-08	31-Jul-08	SL_CT1	Hrs	351		22,285		22,285	30%	6,686
1	06	02	08	02		X2 Particle Imaging H/W Build	30-Apr-08	31-Jul-08	SL_CE1	Hrs	351		40,706		40,706	30%	12,212
<b>1</b>	<b>06</b>	<b>02</b>	<b>09</b>			<b>Controls Management - Closed to BCWP</b>											
<b>1</b>	<b>06</b>	<b>02</b>	<b>10</b>			<b>Global Controls System</b>					<b>15,479</b>	<b>1,337,426</b>	<b>1,394,446</b>	<b>1,455,705</b>	<b>2,850,151</b>		<b>741,410</b>
<b>1</b>	<b>06</b>	<b>02</b>	<b>10</b>	<b>01</b>		<b>Network</b>					<b>1,120</b>	<b>150,000</b>	<b>99,650</b>	<b>161,287</b>	<b>260,937</b>		<b>65,234</b>
1	06	02	10	01		Develop Controls Network ICDs	2-Oct-06	15-Nov-06	SL_CP1	Hrs	120		9,889		9,889	25%	2,472
1	06	02	10	01		Controls Network Conceptual Design	2-Oct-06	15-Nov-06	SL_CP1	Hrs	120		9,889		9,889	25%	2,472
1	06	02	10	01		Conceptual Design Review (CDR)	16-Nov-06	1-Dec-06	SL_CP1	Hrs	80		6,593		6,593	25%	1,648
1	06	02	10	01		Controls Network Preliminary Design	4-Dec-06	12-Jan-07	SL_CP1	Hrs	120		9,889		9,889	25%	2,472
1	06	02	10	01		Preliminary Desgin Review (PDR)	16-Jan-07	31-Jan-07	SL_CP1	Hrs	40		3,296		3,296	25%	824

WBS Level						LCLA DCE August-2006 Description	Early Start	Early Finish	Res Code	Units	Work Rem. Bud. Qty		Work Rem. Full Burd and Escltd Cost			Contingency %	Contingency \$	
1	2	3	4	5	6						Hours	\$\$	Labor	M&S	Total			
1	06	02	10	01		Controls Network Final Design	1-Feb-07	14-Mar-07	SL_CP1	Hrs	120		9,889		9,889	25%	2,472	
1	06	02	10	01		Final Desgin Review (FDR)	15-Mar-07	30-Mar-07	SL_CP1	Hrs	40		3,296		3,296	25%	824	
1	06	02	10	01		Controls Network Software Development	2-Apr-07	1-May-07	SL_CP1	Hrs	240		19,779		19,779	25%	4,945	
1	06	02	10	01		RCV: 6509 Switches/Routers	30-Mar-07	30-Mar-07	SL_MSEG1	\$\$		150,000		161,287		161,287	25%	40,322
1	06	02	10	01		Controls Network Hardware Development	2-Apr-07	1-May-07	SL_CE1	Hrs	240		27,128		27,128	25%	6,782	
<b>1</b>	<b>06</b>	<b>02</b>	<b>10</b>	<b>02</b>		<b>Machine Protection System</b>					<b>1,120</b>	<b>4,000</b>	<b>99,650</b>	<b>4,301</b>	<b>103,951</b>		<b>25,988</b>	
1	06	02	10	02		Develop Controls MPS ICDs	2-Oct-06	15-Nov-06	SL_CP1	Hrs	120		9,889		9,889	25%	2,472	
1	06	02	10	02		Controls MPS Conceptual Design	2-Oct-06	15-Nov-06	SL_CP1	Hrs	120		9,889		9,889	25%	2,472	
1	06	02	10	02		Conceptual Design Review (CDR)	16-Nov-06	1-Dec-06	SL_CP1	Hrs	80		6,593		6,593	25%	1,648	
1	06	02	10	02		Controls MPS Preliminary Design	4-Dec-06	12-Jan-07	SL_CP1	Hrs	120		9,889		9,889	25%	2,472	
1	06	02	10	02		Preliminary Desgin Review (PDR)	16-Jan-07	31-Jan-07	SL_CP1	Hrs	40		3,296		3,296	25%	824	
1	06	02	10	02		Controls MPS Final Design	1-Feb-07	14-Mar-07	SL_CP1	Hrs	120		9,889		9,889	25%	2,472	
1	06	02	10	02		Final Desgin Review (FDR)	15-Mar-07	30-Mar-07	SL_CP1	Hrs	40		3,296		3,296	25%	824	
1	06	02	10	02		Controls MPS Software Development	2-Apr-07	1-May-07	SL_CP1	Hrs	240		19,779		19,779	25%	4,945	
1	06	02	10	02		RCV: 4 Input Nodes	30-Mar-07	30-Mar-07	SL_MSEG1	\$\$		4,000		4,301		4,301	25%	1,075
1	06	02	10	02		Hardware Network Development	2-Apr-07	1-May-07	SL_CE1	Hrs	240		27,128		27,128	25%	6,782	
<b>1</b>	<b>06</b>	<b>02</b>	<b>10</b>	<b>03</b>		<b>Personnel Protection System</b>					<b>1,720</b>	<b>208,200</b>	<b>156,445</b>	<b>223,867</b>	<b>380,312</b>		<b>95,078</b>	
1	06	02	10	03		Develop Controls PPS ICDs	2-Oct-06	15-Nov-06	SL_CP1	Hrs	160		13,186		13,186	25%	3,296	
1	06	02	10	03		Controls PPS Conceptual Design	2-Oct-06	15-Nov-06	SL_CP1	Hrs	160		13,186		13,186	25%	3,296	
1	06	02	10	03		Conceptual Design Review (CDR)	16-Nov-06	1-Dec-06	SL_CP1	Hrs	80		6,593		6,593	25%	1,648	
1	06	02	10	03		Controls PPS Preliminary Design	4-Dec-06	12-Jan-07	SL_CP1	Hrs	160		13,186		13,186	25%	3,296	
1	06	02	10	03		Preliminary Desgin Review (PDR)	16-Jan-07	31-Jan-07	SL_CP1	Hrs	80		6,593		6,593	25%	1,648	
1	06	02	10	03		Controls PPS Final Design	1-Feb-07	14-Mar-07	SL_CP1	Hrs	240		19,779		19,779	25%	4,945	
1	06	02	10	03		Final Desgin Review (FDR)	15-Mar-07	1-May-07	SL_CP1	Hrs	160		13,186		13,186	25%	3,296	
1	06	02	10	03		Controls PPS Software Development	1-Feb-07	5-Mar-07	SL_CP1	Hrs	200		16,482		16,482	25%	4,121	
1	06	02	10	03		RCV: Near Hall Other cable	27-Apr-07	27-Apr-07	SL_MSEG1	\$\$		2,100		2,258		2,258	25%	565
1	06	02	10	03		RCV: 12 Near Hall 36PR16AS cable	27-Apr-07	27-Apr-07	SL_MSEG1	\$\$		24,000		25,806		25,806	25%	6,451
1	06	02	10	03		RCV: Near Hall Misc. hardware	27-Apr-07	27-Apr-07	SL_MSEG1	\$\$		13,000		13,978		13,978	25%	3,495
1	06	02	10	03		RCV: Near Hall PLC Control Package	27-Apr-07	27-Apr-07	SL_MSEG1	\$\$		20,000		21,505		21,505	25%	5,376
1	06	02	10	03		RCV: Near Hall BSOIC	24-Jul-07	24-Jul-07	SL_MSEG1	\$\$		67,500		72,579		72,579	25%	18,145
1	06	02	10	03		RCV: Far Hall Other cable	27-Apr-07	27-Apr-07	SL_MSEG1	\$\$		2,100		2,258		2,258	25%	565
1	06	02	10	03		RCV: Far Hall 36PR16AS cable	27-Apr-07	27-Apr-07	SL_MSEG1	\$\$		24,000		25,806		25,806	25%	6,451
1	06	02	10	03		RCV: Far Hall Misc. hardware	27-Apr-07	27-Apr-07	SL_MSEG1	\$\$		13,000		13,978		13,978	25%	3,495
1	06	02	10	03		RCV: Far Hall PLC Control Package	27-Apr-07	27-Apr-07	SL_MSEG1	\$\$		20,000		21,505		21,505	25%	5,376
1	06	02	10	03		RCV: Far Hall BSOIC	24-Jul-07	24-Jul-07	SL_MSEG1	\$\$		22,500		24,193		24,193	25%	6,048
1	06	02	10	03		PPS Hardware Development	25-Jul-07	6-Sep-07	SL_CE1	Hrs	480		54,255		54,255	25%	13,564	
<b>1</b>	<b>06</b>	<b>02</b>	<b>10</b>	<b>04</b>		<b>Laser PPS</b>					<b>1,360</b>	<b>49,226</b>	<b>126,777</b>	<b>52,930</b>	<b>179,707</b>		<b>44,927</b>	
1	06	02	10	04		Develop Controls Lasr PPS ICDs	2-Oct-06	15-Nov-06	SL_CP1	Hrs	120		9,889		9,889	25%	2,472	
1	06	02	10	04		Controls PPS Conceptual Design	2-Oct-06	15-Nov-06	SL_CP1	Hrs	120		9,889		9,889	25%	2,472	
1	06	02	10	04		Conceptual Design Review (CDR)	16-Nov-06	1-Dec-06	SL_CP1	Hrs	120		9,889		9,889	25%	2,472	
1	06	02	10	04		Controls Laser PPS Preliminary Design	4-Dec-06	12-Jan-07	SL_CP1	Hrs	120		9,889		9,889	25%	2,472	
1	06	02	10	04		Preliminary Desgin Review (PDR)	16-Jan-07	31-Jan-07	SL_CP1	Hrs	40		3,296		3,296	25%	824	
1	06	02	10	04		Controls PPS Final Design	1-Feb-07	14-Mar-07	SL_CP1	Hrs	120		9,889		9,889	25%	2,472	
1	06	02	10	04		Final Desgin Review (FDR)	15-Mar-07	30-Mar-07	SL_CP1	Hrs	40		3,296		3,296	25%	824	
1	06	02	10	04		Controls Laser PPS Software Development	2-Apr-07	1-May-07	SL_CP1	Hrs	200		16,482		16,482	25%	4,121	
1	06	02	10	04		RCV: Crate/CPU/EVR	30-Mar-07	30-Mar-07	SL_MSEG1	\$\$		9,000		9,677		9,677	25%	2,419
1	06	02	10	04		RCV: 4PR16AS cable	30-Mar-07	30-Mar-07	SL_MSEG1	\$\$		680		731		731	25%	183
1	06	02	10	04		RCV: 36PR16AS cable	30-Mar-07	30-Mar-07	SL_MSEG1	\$\$		6,000		6,451		6,451	25%	1,613
1	06	02	10	04		RCV: Hookup wire	30-Mar-07	30-Mar-07	SL_MSEG1	\$\$		350		376		376	25%	94
1	06	02	10	04		RCV: EO buttons	30-Mar-07	30-Mar-07	SL_MSEG1	\$\$		8,256		8,877		8,877	25%	2,219
1	06	02	10	04		RCV: Laser Shutters & controllers	30-Mar-07	30-Mar-07	SL_MSEG1	\$\$		9,940		10,688		10,688	25%	2,672
1	06	02	10	04		RCV: PLC Control Package	30-Mar-07	30-Mar-07	SL_MSEG1	\$\$		15,000		16,129		16,129	25%	4,032
1	06	02	10	04		Laser PPS Hardware Development	2-Apr-07	1-May-07	SL_CE1	Hrs	480		54,255		54,255	25%	13,564	
<b>1</b>	<b>06</b>	<b>02</b>	<b>10</b>	<b>05</b>		<b>User Safeguards</b>					<b>704</b>	<b>50,000</b>	<b>68,908</b>	<b>54,461</b>	<b>123,370</b>		<b>30,842</b>	
1	06	02	10	05		Specification Near Hall - User Safeguards	1-Dec-06	12-Jan-07	SL_PHS1	Hrs	40		2,926		2,926	25%	731	
1	06	02	10	05		Design Near Hall - User Safeguards	16-Jan-07	13-Mar-07	SL_PHS1	Hrs	40		2,926		2,926	25%	731	
1	06	02	10	05		Design Near Hall - User Safeguards	16-Jan-07	13-Mar-07	SL_ME1	Hrs	40		3,995		3,995	25%	999	
1	06	02	10	05		Design Near Hall - User Safeguards	16-Jan-07	13-Mar-07	SL_MDD1	Hrs	40		3,349		3,349	25%	837	
1	06	02	10	05		Design Near Hall - User Safeguards	16-Jan-07	13-Mar-07	SL_CE1	Hrs	40		4,521		4,521	25%	1,130	
1	06	02	10	05		Safety Review Near Hall - User Safeguards	14-Mar-07	8-May-07	SL_PHS1	Hrs	40		2,926		2,926	25%	731	
1	06	02	10	05		Safety Review Near Hall - User Safeguards	14-Mar-07	8-May-07	SL_CE1	Hrs	40		4,521		4,521	25%	1,130	
1	06	02	10	05		Prep Bid Pkg Near Hall Alarms/Signs - User Safeg	9-May-07	22-May-07	SL_CE1	Hrs	40		4,521		4,521	25%	1,130	
1	06	02	10	05		Prep Bid Pkg NHall Interlock - User Safeguards	9-May-07	22-May-07	SL_CE1	Hrs	40		4,521		4,521	25%	1,130	
1	06	02	10	05		Prepare Near Hall Bid Pkg Detectors - User Safeg	9-May-07	22-May-07	SL_CE1	Hrs	40		4,521		4,521	25%	1,130	

WBS Level						LCLA DCE August-2006 Description	Early Start	Early Finish	Res Code	Units	Work Rem. Bud. Qty		Work Rem. Full Burd and Escltd Cost			Contingency %	Contingency \$
1	2	3	4	5	6						Hours	\$	Labor	M&S	Total		
1	06	02	10	05	6	Vendor Fab/Ship Near Hall Alarm/Sign - User Safe	23-Jul-07	17-Sep-07	SA_MSEQ1	\$\$		5,000		5,376	5,376	25%	1,344
1	06	02	10	05		Vendor Ship Near Hall Intrlock-User Safeguards	23-Jul-07	17-Sep-07	SA_MSEQ1	\$\$		5,000		5,376	5,376	25%	1,344
1	06	02	10	05		Vendor Fab/Ship Near Hall Detectors - User Safeg	23-Jul-07	17-Sep-07	SA_MSEQ1	\$\$		15,000		16,129	16,129	25%	4,032
1	06	02	10	05		Specification Far Hall - User Safeguards	18-Sep-07	15-Oct-07	SL_CE1	Hrs	40		4,582		4,582	25%	1,146
1	06	02	10	05		Design Far Hall - User Safeguards	16-Oct-07	12-Dec-07	SL_PHS1	Hrs	40		3,002		3,002	25%	750
1	06	02	10	05		Design Far Hall - User Safeguards	16-Oct-07	12-Dec-07	SL_ME1	Hrs	40		4,099		4,099	25%	1,025
1	06	02	10	05		Design Far Hall - User Safeguards	16-Oct-07	12-Dec-07	SL_MDD1	Hrs	40		3,436		3,436	25%	859
1	06	02	10	05		Design Far Hall - User Safeguards	16-Oct-07	12-Dec-07	SL_CE1	Hrs	40		4,639		4,639	25%	1,160
1	06	02	10	05		Safety Review Far Hall - User Safeguards	13-Dec-07	26-Feb-08	SL_PHS1	Hrs	40		3,002		3,002	25%	750
1	06	02	10	05		Safety Review Far Hall - User Safeguards	13-Dec-07	26-Feb-08	SL_CE1	Hrs	40		4,639		4,639	25%	1,160
1	06	02	10	05		Prep Bid Pkg Far Hall Alarms/Signs - User Safegu	27-Feb-08	11-Mar-08	SL_CE1	Hrs	8		928		928	25%	232
1	06	02	10	05		Prep Bid Pkg Far Hall Interlock - User Safeguard	27-Feb-08	11-Mar-08	SL_CE1	Hrs	8		928		928	25%	232
1	06	02	10	05		Prepare Far Hall Bid Pkg Detectors - User Safegu	27-Feb-08	11-Mar-08	SL_CE1	Hrs	8		928		928	25%	232
1	06	02	10	05		Vendor Fab/Ship Far Hall Alarm/Sign - User Safeg	8-May-08	3-Jul-08	SA_MSEQ1	\$\$		5,000		5,516	5,516	25%	1,379
1	06	02	10	05		Vendor Ship Far Hall Contain/Intrick-User Safegu	8-May-08	3-Jul-08	SA_MSEQ1	\$\$		5,000		5,516	5,516	25%	1,379
1	06	02	10	05		Vendor Fab/Ship Far Hall Detectors - User Safegu	8-May-08	3-Jul-08	SA_MSEQ1	\$\$		15,000		16,548	16,548	25%	4,137
<b>1</b>	<b>06</b>	<b>02</b>	<b>10</b>	<b>06</b>		<b>Timing System</b>					<b>1,120</b>	<b>30,000</b>	<b>99,650</b>	<b>32,257</b>	<b>131,907</b>		<b>32,977</b>
1	06	02	10	06		Develop Controls Timing System ICDs	2-Oct-06	15-Nov-06	SL_CP1	Hrs	120		9,889		9,889	25%	2,472
1	06	02	10	06		Controls Timing System Conceptual Design	2-Oct-06	15-Nov-06	SL_CP1	Hrs	120		9,889		9,889	25%	2,472
1	06	02	10	06		Conceptual Design Review (CDR)	16-Nov-06	1-Dec-06	SL_CP1	Hrs	80		6,593		6,593	25%	1,648
1	06	02	10	06		Controls Timing System Preliminary Design	4-Dec-06	12-Jan-07	SL_CP1	Hrs	120		9,889		9,889	25%	2,472
1	06	02	10	06		Preliminary Desgin Review (PDR)	16-Jan-07	31-Jan-07	SL_CP1	Hrs	40		3,296		3,296	25%	824
1	06	02	10	06		Controls Timing System Final Design	1-Feb-07	14-Mar-07	SL_CP1	Hrs	120		9,889		9,889	25%	2,472
1	06	02	10	06		Final Desgin Review (FDR)	15-Mar-07	30-Mar-07	SL_CP1	Hrs	40		3,296		3,296	25%	824
1	06	02	10	06		Controls Timing System Software Development	2-Apr-07	1-May-07	SL_CP1	Hrs	240		19,779		19,779	25%	4,945
1	06	02	10	06		RCV: 2 Crate/CPU	30-Mar-07	30-Mar-07	SL_MSEG1	\$\$		18,000		19,354	19,354	25%	4,839
1	06	02	10	06		RCV: 4 EVRs	30-Mar-07	30-Mar-07	SL_MSEG1	\$\$		12,000		12,903	12,903	25%	3,226
1	06	02	10	06		Controls Timing System Hardware Development	2-Apr-07	1-May-07	SL_CE1	Hrs	240		27,128		27,128	25%	6,782
<b>1</b>	<b>06</b>	<b>02</b>	<b>10</b>	<b>07</b>		<b>Data Management</b>					<b>3,591</b>	<b>240,000</b>	<b>319,386</b>	<b>258,060</b>	<b>577,445</b>		<b>173,234</b>
1	06	02	10	07		Develop Controls Data Management ICDs	1-Aug-06	1-Sep-06	SL_CP1	Hrs	109		8,755		8,755	30%	2,627
1	06	02	10	07		Controls Data Management Conceptual Design	1-Aug-06	1-Sep-06	SL_CP1	Hrs	109		8,755		8,755	30%	2,627
1	06	02	10	07		Conceptual Design Review (CDR)	5-Sep-06	15-Sep-06	SL_CP1	Hrs	54		4,337		4,337	30%	1,301
1	06	02	10	07		Controls Data Management Preliminary Design	18-Sep-06	13-Oct-06	SL_CP1	Hrs	109		8,864		8,864	30%	2,659
1	06	02	10	07		Preliminary Desgin Review (PDR)	16-Oct-06	31-Oct-06	SL_CP1	Hrs	54		4,450		4,450	30%	1,335
1	06	02	10	07		Controls Data Management Final Design	1-Nov-06	15-Dec-06	SL_CP1	Hrs	163		13,433		13,433	30%	4,030
1	06	02	10	07		Final Desgin Review (FDR)	2-Jan-07	31-Jan-07	SL_CP1	Hrs	109		8,983		8,983	30%	2,695
1	06	02	10	07		Controls Data Managment SW Release 1	1-Feb-07	30-Apr-07	SL_CP1	Hrs	326		26,866		26,866	30%	8,060
1	06	02	10	07		RCV: Servers	16-Jan-07	16-Jan-07	SL_MSEG1	\$\$		80,000		86,020	86,020	30%	25,806
1	06	02	10	07		RCV: Disk Farm	16-Jan-07	16-Jan-07	SL_MSEG1	\$\$		160,000		172,040	172,040	30%	51,612
1	06	02	10	07		Controls Data Managment HW Release 1	1-Feb-07	30-Apr-07	SL_CE1	Hrs	109		12,320		12,320	30%	3,696
1	06	02	10	07		Installation: Controls Data Management Releas 1	1-May-07	1-Jun-07	SL_CP1	Hrs	218		17,966		17,966	30%	5,390
1	06	02	10	07		Installation: Controls Data Management Releas 1	1-May-07	1-Jun-07	SL_CE1	Hrs	109		12,320		12,320	30%	3,696
1	06	02	10	07		Test Release 1	4-Jun-07	2-Jul-07	SL_CP1	Hrs	109		8,983		8,983	30%	2,695
1	06	02	10	07		Controls Data Managment SW Release 2	3-Jul-07	1-May-08	SL_CP1	Hrs	517		43,385		43,385	30%	13,016
1	06	02	10	07		Controls Data Managment HW Release 2	3-Jul-07	1-May-08	SL_CE1	Hrs	136		15,653		15,653	30%	4,696
1	06	02	10	07		Installation: Controls Data Management Releas 2	2-May-08	30-May-08	SL_CP1	Hrs	109		9,216		9,216	30%	2,765
1	06	02	10	07		Installation: Controls Data Management Releas 2	2-May-08	30-May-08	SL_CE1	Hrs	54		6,262		6,262	30%	1,879
1	06	02	10	07		Test Release 2	2-Jun-08	31-Jul-08	SL_CP1	Hrs	218		18,433		18,433	30%	5,530
1	06	02	10	07		Controls Data Managment SW Release 3	1-Aug-08	12-Dec-08	SL_CP1	Hrs	462		39,614		39,614	30%	11,884
1	06	02	10	07		Controls Data Managment HW Release 3	1-Aug-08	12-Dec-08	SL_CE1	Hrs	136		15,994		15,994	30%	4,798
1	06	02	10	07		Installation: Controls Data Management Releas 3	15-Dec-08	23-Jan-09	SL_CP1	Hrs	109		9,456		9,456	30%	2,837
1	06	02	10	07		Installation: Controls Data Management Releas 3	15-Dec-08	23-Jan-09	SL_CE1	Hrs	54		6,425		6,425	30%	1,928
1	06	02	10	07		Test Release 3	26-Jan-09	31-Mar-09	SL_CP1	Hrs	218		18,912		18,912	30%	5,674
<b>1</b>	<b>06</b>	<b>02</b>	<b>10</b>	<b>08</b>		<b>Global Cabling &amp; Racks</b>					<b>880</b>	<b>-</b>	<b>99,468</b>	<b>-</b>	<b>99,468</b>		<b>24,867</b>
1	06	02	10	08		Develop Cabling & Racks ICDs	2-Oct-06	15-Nov-06	SL_CE1	Hrs	120		13,564		13,564	25%	3,391
1	06	02	10	08		Cabling & Racks Conceptual Design	2-Oct-06	15-Nov-06	SL_CE1	Hrs	120		13,564		13,564	25%	3,391
1	06	02	10	08		Conceptual Design Review (CDR)	16-Nov-06	1-Dec-06	SL_CE1	Hrs	80		9,043		9,043	25%	2,261
1	06	02	10	08		Cabling & Racks Preliminary Design	4-Dec-06	12-Jan-07	SL_CE1	Hrs	120		13,564		13,564	25%	3,391
1	06	02	10	08		Preliminary Desgin Review (PDR)	16-Jan-07	31-Jan-07	SL_CE1	Hrs	40		4,521		4,521	25%	1,130
1	06	02	10	08		Cabling & Racks Final Design	1-Feb-07	14-Mar-07	SL_CE1	Hrs	120		13,564		13,564	25%	3,391
1	06	02	10	08		Final Desgin Review (FDR)	15-Mar-07	30-Mar-07	SL_CE1	Hrs	40		4,521		4,521	25%	1,130
1	06	02	10	08		Cabling & Racks Hardware Development	2-Apr-07	1-May-07	SL_CE1	Hrs	240		27,128		27,128	25%	6,782
<b>1</b>	<b>06</b>	<b>02</b>	<b>10</b>	<b>09</b>		<b>Laser Timing</b>					<b>-</b>	<b>606,000</b>	<b>-</b>	<b>668,542</b>	<b>668,542</b>		<b>167,135</b>
1	06	02	10	09		RCV: 4 Crate/CPU/EVR	31-Mar-08	31-Mar-08	SL_MSEG1	\$\$		36,000		39,715	39,715	25%	9,929

WBS Level						LCLA DCE August-2006 Description	Early Start	Early Finish	Res Code	Units	Work Rem. Bud. Qty		Work Rem. Full Burd and Escltd Cost			Contingency	Contingency
1	2	3	4	5	6						Hours	\$\$	Labor	M&S	Total	%	\$
1	06	02	10	09		RCV: 32 Fiber for all hutches	31-Mar-08	31-Mar-08	SL_MSEG1	\$\$		320,000		353,025	353,025	25%	88,256
1	06	02	10	09		RCV: 4 Laser Timing Hardware	31-Mar-08	31-Mar-08	SL_MSEG1	\$\$		120,000		132,385	132,385	25%	33,096
1	06	02	10	09		RCV: 4 Laser End Point Synchronization Hardware	31-Mar-08	31-Mar-08	SL_MSEG1	\$\$		120,000		132,385	132,385	25%	33,096
1	06	02	10	09		RCV: 1 Electro Optic Sampling	31-Mar-08	31-Mar-08	SL_MSEG1	\$\$		10,000		11,032	11,032	25%	2,758
1	06	02	10	10		<b>Experimental High Level Applications</b>					3,864	-	324,512	-	324,512		81,128
1	06	02	10	10		Develop High Level Apps ICDs	1-Aug-06	1-Sep-06	SL_CP1	Hrs	109		8,755		8,755	25%	2,189
1	06	02	10	10		High Level Apps Conceptual Design	1-Aug-06	1-Sep-06	SL_CP1	Hrs	109		8,755		8,755	25%	2,189
1	06	02	10	10		Conceptual Design Review (CDR)	5-Sep-06	15-Sep-06	SL_CP1	Hrs	54		4,337		4,337	25%	1,084
1	06	02	10	10		High Level Apps Preliminary Design	18-Sep-06	13-Oct-06	SL_CP1	Hrs	109		8,864		8,864	25%	2,216
1	06	02	10	10		Preliminary Desgin Review (PDR)	16-Oct-06	31-Oct-06	SL_CP1	Hrs	54		4,450		4,450	25%	1,113
1	06	02	10	10		High Level Apps Final Design	1-Nov-06	15-Dec-06	SL_CP1	Hrs	163		13,433		13,433	25%	3,358
1	06	02	10	10		Final Desgin Review (FDR)	2-Jan-07	31-Jan-07	SL_CP1	Hrs	109		8,983		8,983	25%	2,246
1	06	02	10	10		High Level Apps SW Release 1	1-Feb-07	30-Apr-07	SL_CP1	Hrs	326		26,866		26,866	25%	6,717
1	06	02	10	10		Installation: High Level Apps Release 1	1-May-07	1-Jun-07	SL_CP1	Hrs	109		8,983		8,983	25%	2,246
1	06	02	10	10		Test Release 1	4-Jun-07	2-Jul-07	SL_CP1	Hrs	109		8,983		8,983	25%	2,246
1	06	02	10	10		High Level Apps SW Release 2	3-Jul-07	1-May-08	SL_CP1	Hrs	1,034		86,771		86,771	25%	21,693
1	06	02	10	10		Installation: High Level Apps Releas 2	2-May-08	30-May-08	SL_CP1	Hrs	109		9,216		9,216	25%	2,304
1	06	02	10	10		Test Release 2	2-Jun-08	31-Jul-08	SL_CP1	Hrs	218		18,433		18,433	25%	4,608
1	06	02	10	10		High Level Apps SW Release 3	1-Aug-08	12-Dec-08	SL_CP1	Hrs	925		79,314		79,314	25%	19,828
1	06	02	10	10		Installation: High Level Apps Releas 3	15-Dec-08	23-Jan-09	SL_CP1	Hrs	109		9,456		9,456	25%	2,364
1	06	02	10	10		Test Release 3	26-Jan-09	31-Mar-09	SL_CP1	Hrs	218		18,912		18,912	25%	4,728
1	06	02	11			<b>Laser Controls</b>					1,360	87,400	115,754	93,977	209,731		52,433
1	06	02	11			Develop Laser Controls System ICDs	2-Oct-06	15-Nov-06	SL_CP1	Hrs	200		16,482		16,482	25%	4,121
1	06	02	11			Laser Controls System Conceptual Design	16-Nov-06	19-Jan-07	SL_CP1	Hrs	120		9,889		9,889	25%	2,472
1	06	02	11			Conceptual Design Review (CDR)	22-Jan-07	2-Feb-07	SL_CP1	Hrs	120		9,889		9,889	25%	2,472
1	06	02	11			Laser Controls System Preliminary Design	5-Feb-07	2-Mar-07	SL_CP1	Hrs	120		9,889		9,889	25%	2,472
1	06	02	11			Preliminary Desgin Review (PDR)	5-Mar-07	20-Mar-07	SL_CP1	Hrs	40		3,296		3,296	25%	824
1	06	02	11			Laser Controls System Final Design	21-Mar-07	30-Apr-07	SL_CP1	Hrs	120		9,889		9,889	25%	2,472
1	06	02	11			Final Desgin Review (FDR)	1-May-07	16-May-07	SL_CP1	Hrs	40		3,296		3,296	25%	824
1	06	02	11			Laser Controls System Software Development	17-May-07	18-Jun-07	SL_CP1	Hrs	480		39,558		39,558	25%	9,889
1	06	02	11			RCV: 1 Crate/CPU/EVR	16-May-07	16-May-07	SL_MSEG1	\$\$		9,000		9,677	9,677	25%	2,419
1	06	02	11			RCV: 24 Position controls	16-May-07	16-May-07	SL_MSEG1	\$\$		48,000		51,612	51,612	25%	12,903
1	06	02	11			RCV: 1 General IO	16-May-07	16-May-07	SL_MSEG1	\$\$		2,500		2,688	2,688	25%	672
1	06	02	11			RCV: 1 Timing	16-May-07	16-May-07	SL_MSEG1	\$\$		2,900		3,118	3,118	25%	780
1	06	02	11			RCV: 5 Video Diagnostics	16-May-07	16-May-07	SL_MSEG1	\$\$		25,000		26,881	26,881	25%	6,720
1	06	02	11			Laser Controls System Hardware Development	17-May-07	18-Jun-07	SL_CE1	Hrs	120		13,564		13,564	25%	3,391
1	06	02	12			<b>K-Measuerment/Vacuum Subsystem</b>					330	12,200	27,125	13,118	40,243		10,061
1	06	02	12			Develop K Measurement Spectrometer Controls ICDs	1-Aug-06	12-Oct-06	SL_CP1	Hrs	20		1,613		1,613	25%	403
1	06	02	12			K Measurement Spectrometer Conceptual Design	1-Aug-06	12-Oct-06	SL_CP1	Hrs	20		1,613		1,613	25%	403
1	06	02	12			Conceptual Design Review (CDR)	13-Oct-06	17-Oct-06	SL_CP1	Hrs	10		824		824	25%	206
1	06	02	12			K Measurement Spectrometer Preliminary Design	18-Oct-06	24-Jan-07	SL_CP1	Hrs	20		1,648		1,648	25%	412
1	06	02	12			Preliminary Design Review (PDR)	25-Jan-07	29-Jan-07	SL_CP1	Hrs	10		824		824	25%	206
1	06	02	12			K Measurement Spectrometer Final Design	30-Jan-07	19-Apr-07	SL_CP1	Hrs	40		3,296		3,296	25%	824
1	06	02	12			Final Design Review (FDR)	20-Apr-07	16-May-07	SL_CP1	Hrs	10		824		824	25%	206
1	06	02	12			K Measurement Spectrometer Software Development	2-Apr-07	1-May-07	SL_CP1	Hrs	200		16,482		16,482	25%	4,121
1	06	02	12			RCV: 1 Crate/CPU/EVR	2-May-07	2-May-07	SL_MSEG1	\$\$		9,000		9,677	9,677	25%	2,419
1	06	02	12			RCV: 1 Timing	2-May-07	2-May-07	SL_MSEG1	\$\$		2,900		3,118	3,118	25%	780
1	06	02	12			RCV: 1 Vacuum PLC	2-May-07	2-May-07	SL_MSEG1	\$\$		300		323	323	25%	81
2						<b>LCLS PROJECT - R&amp;D, SPARES, COMMISSIONING</b>					25,381	317,754	2,588,508	338,380	2,926,888		-
2	01					<b>LCLS PROJECT MGMT, PLANNING &amp; ADMN (OPC)</b>					1,271	113,000	121,127	119,238	240,364		-
2	01	01				<b>Physics Support (OPC)</b>					1,271	113,000	121,127	119,238	240,364		-
2	01	01	11			<b>Global Controls OPC</b>					1,271	113,000	121,127	119,238	240,364		-
2	01	01	11	01		<b>EPICS Control Modules</b>											
2	01	01	11	02		<b>LLRF Controls</b>											
2	01	01	11	03		<b>E-beam Diagnostics &amp; Controls</b>											
2	01	01	11	04		<b>Laser Controls Design</b>											
2	01	01	11	05		<b>Laser Heater Controls Design</b>											
2	01	01	11	06		<b>Timing Controls</b>											
2	01	01	11	07		<b>Vacuum Controls</b>											
2	01	01	11	08		<b>S/W &amp; Controls Infrastructure</b>											
2	01	01	11	09		<b>Power Supply Control</b>											
2	01	01	11	10		<b>MPS/PPS/BCS Controls</b>											
2	01	01	11	11		<b>Global Controls Commissioning</b>											
2	01	01	11	12		<b>Global Controls Management - OPC</b>											

WBS Level						LCLA DCE August-2006 Description	Early Start	Early Finish	Res Code	Units	Work Rem. Bud. Qty		Work Rem. Full Burd and Escltd Cost			Contingency %	Contingency \$
1	2	3	4	5	6						Hours	\$\$	Labor	M&S	Total		
2	01	01	11	13		SLC Aware IOC											
2	01	01	11	14		Controls - Networking and Data Comm. OPC					1,271	-	121,127	-	121,127	-	
2	01	01	11	14		WPM Application	2-Jan-07	14-Dec-07	SL_CP1	Hrs	1,271		121,127		121,127		
2	01	01	11	15		Controls S/W Applications LOE					-	113,000	-	119,238	119,238	-	
2	01	01	11	15		LCLS Share of Network Cost	1-Aug-06	1-Aug-06	SL_MSEG1	\$\$		113,000		119,238	119,238		
2	02					INJECTOR SYSTEM (OPC)					8,972	44,200	912,817	47,116	959,933	-	
2	02	02				Injector Controls Subsystem					8,972	44,200	912,817	47,116	959,933	-	
2	02	02	01			Personnel Protection System (PPS) R&D					1,072	30,000	97,869	31,743	129,612	-	
2	02	02	01			BSOIC Design	1-Aug-06	24-Aug-06	SL_CE1	Hrs	8		1,014		1,014		
2	02	02	01			BSOIC Design	1-Aug-06	24-Aug-06	SL_CCA1	Hrs	260		19,184		19,184		
2	02	02	01			Prep Bid Pak - BSOIC	25-Aug-06	8-Sep-06	SL_CE1	Hrs	16		2,027		2,027		
2	02	02	01			Evaluate Proposals - BSOIC	12-Sep-06	12-Sep-06	SL_CE1	Hrs	16		2,027		2,027		
2	02	02	01			PLC PPS Design Evaluation	13-Sep-06	1-Nov-06	SL_MSPS1	\$\$		5,000		5,363	5,363		
2	02	02	01			PLC PPS Design Evaluation	13-Sep-06	1-Nov-06	SL_CE1	Hrs	60		7,727		7,727		
2	02	02	01			Injector Controls PPS Commissioning	1-Dec-06	1-Aug-07	SL_CT1	Hrs	40		2,847		2,847		
2	02	02	01			Injector Controls PPS Commissioning	1-Dec-06	1-Aug-07	SL_CP1	Hrs	174		16,491		16,491		
2	02	02	01			Injector Controls PPS Commissioning	1-Dec-06	1-Aug-07	SL_CE1	Hrs	174		22,618		22,618		
2	02	02	01			Classic- BSOIC Substitution	14-Sep-06	27-Sep-06	SA_MSSC1	\$\$		25,000		26,380	26,380		
2	02	02	01			Fab and Pre Assemble Components (as required)	28-Sep-06	25-Oct-06	SL_PCEF1	Hrs	308		21,857		21,857		
2	02	02	01			Perform Pre-Install Qual Test on Injector PPS	31-Oct-06	29-Nov-06	SL_CE1	Hrs	16		2,080		2,080		
2	02	02	02			Beam Containment Subsystem (BCS)					220	-	27,188	-	27,188	-	
2	02	02	02			Injector Controls BCS Commissioning	27-Nov-06	24-May-07	SL_CP1	Hrs	40		3,791		3,791		
2	02	02	02			Injector Controls BCS Commissioning	27-Nov-06	24-May-07	SL_CE1	Hrs	180		23,398		23,398		
2	02	02	03			Machine Protection Subsystem (MPS)					1,280	-	143,846	-	143,846	-	
2	02	02	03			Injector BPMs Commissioning Suppt	12-Dec-06	10-Aug-07	SL_CP1	Hrs	640		60,655		60,655		
2	02	02	03			Injector BPMs Commissioning Suppt	12-Dec-06	10-Aug-07	SL_CE1	Hrs	640		83,191		83,191		
2	02	02	04			Power Conv (beamline pwr supp) Spares					-	14,200	-	15,373	15,373	-	
2	02	02	04			Procure 12 AMP MCOR Modules (2)-Spares	3-Oct-06	9-Apr-07	SL_MSEG1	\$\$		3,600		3,897	3,897		
2	02	02	04			Procure 30 AMP MCOR Modules (1)-Spares	3-Oct-06	9-Apr-07	SL_MSEG1	\$\$		2,100		2,274	2,274		
2	02	02	04			Procure 15KW Power Supply-Spares	3-Oct-06	9-Apr-07	SL_MSEG1	\$\$		8,500		9,202	9,202		
2	02	02	04	01		Power Supply Controls											
2	02	02	05			LLRF Controls					1,680	-	166,645	-	166,645	-	
2	02	02	05	01		LLRF Controls					1,680	-	166,645	-	166,645	-	
2	02	02	05	01		Injector LLRF Commissioning Suppt	8-Dec-06	8-Aug-07	SL_KT1	Hrs	640		45,545		45,545		
2	02	02	05	01		Injector LLRF Commissioning Suppt	8-Dec-06	8-Aug-07	SL_KE1	Hrs	640		83,191		83,191		
2	02	02	05	01		Injector LLRF Commissioning Suppt	8-Dec-06	8-Aug-07	SL_CP1	Hrs	400		37,909		37,909		
2	02	02	06			E-Beam Diagnostics Controls					2,280	-	228,383	-	228,383	-	
2	02	02	06	01		Controls - Wire Scanners					200	-	20,115	-	20,115	-	
2	02	02	06	01		Injector Wire Scanners Commissioning Suppt	1-Dec-06	1-Aug-07	SL_CT1	Hrs	100		7,116		7,116		
2	02	02	06	01		Injector Wire Scanners Commissioning Suppt	1-Dec-06	1-Aug-07	SL_CE1	Hrs	100		12,999		12,999		
2	02	02	06	02		Controls - BPM Processor Module					1,440	-	143,900	-	143,900	-	
2	02	02	06	02		Injector BPMs Commissioning Suppt	12-Dec-06	10-Aug-07	SL_CT1	Hrs	640		45,545		45,545		
2	02	02	06	02		Injector BPMs Commissioning Suppt	12-Dec-06	10-Aug-07	SL_CP1	Hrs	160		15,164		15,164		
2	02	02	06	02		Injector BPMs Commissioning Suppt	12-Dec-06	10-Aug-07	SL_CE1	Hrs	640		83,191		83,191		
2	02	02	06	03		Controls - Toroids					40	-	4,023	-	4,023	-	
2	02	02	06	03		Injector Toroids Commissioning Suppt	4-Dec-06	2-Aug-07	SL_CT1	Hrs	20		1,423		1,423		
2	02	02	06	03		Injector Toroids Commissioning Suppt	4-Dec-06	2-Aug-07	SL_CE1	Hrs	20		2,600		2,600		
2	02	02	06	05		Controls - Profile Monitors					80	-	8,046	-	8,046	-	
2	02	02	06	05		Injector Profile Monitors Commissioning Suppt	1-Dec-06	20-Mar-07	SL_CT1	Hrs	40		2,847		2,847		
2	02	02	06	05		Injector Profile Monitors Commissioning Suppt	1-Dec-06	20-Mar-07	SL_CE1	Hrs	40		5,199		5,199		
2	02	02	06	06		Control - EO Diagnostic											
2	02	02	06	12		Controls - Movable Collimator					400	-	40,230	-	40,230	-	
2	02	02	06	12		Injector Movable Collimator Commissioning Suppt	1-Dec-06	1-Aug-07	SL_CT1	Hrs	200		14,233		14,233		
2	02	02	06	12		Injector Movable Collimator Commissioning Suppt	1-Dec-06	1-Aug-07	SL_CE1	Hrs	200		25,997		25,997		
2	02	02	06	14		Controls - Faraday Cup					40	-	4,023	-	4,023	-	
2	02	02	06	14		Injector Faraday Cups Commissioning Support	1-Dec-06	1-Aug-07	SL_CT1	Hrs	20		1,423		1,423		
2	02	02	06	14		Injector Faraday Cups Commissioning Support	1-Dec-06	1-Aug-07	SL_CE1	Hrs	20		2,600		2,600		
2	02	02	06	15		Controls - Tune-Up Dump					40	-	4,023	-	4,023	-	
2	02	02	06	15		Tune-up Dump Commissioning Suppt	1-Dec-06	1-Aug-07	SL_CT1	Hrs	20		1,423		1,423		
2	02	02	06	15		Tune-up Dump Commissioning Suppt	1-Dec-06	1-Aug-07	SL_CE1	Hrs	20		2,600		2,600		
2	02	02	06	16		Cherenkov Commissioning Support					40	-	4,023	-	4,023	-	
2	02	02	06	16		Injector Profile Monitors Commissioning Suppt	1-Dec-06	1-Aug-07	SL_CT1	Hrs	20		1,423		1,423		
2	02	02	06	16		Injector Profile Monitors Commissioning Suppt	1-Dec-06	1-Aug-07	SL_CE1	Hrs	20		2,600		2,600		
2	02	02	08			Timing Controls					1,600	-	166,618	-	166,618	-	



WBS Level						LCLA DCE August-2006	Early Start	Early Finish	Res Code	Units	Work Rem. Bud. Qty		Work Rem. Full Burd and Escltd Cost			Contingency %	Contingency \$	
Description											Hours	\$\$	Labor	M&S	Total			
1	2	3	4	5	6													
2	02	02	08			Injector Timing Controls - Commissioning	15-Dec-06	20-Aug-07	SL_CT1	Hrs	320		22,772		22,772			
2	02	02	08			Injector Timing Controls - Commissioning	15-Dec-06	20-Aug-07	SL_CP1	Hrs	640		60,655		60,655			
2	02	02	08			Injector Timing Controls - Commissioning	15-Dec-06	20-Aug-07	SL_CE1	Hrs	640		83,191		83,191			
2	02	02	09			<b>Vacuum Controls</b>					800	-	78,139	-	78,139		-	
2	02	02	09			Injector Controls Commission Support	15-Dec-06	15-Aug-07	SL_CT1	Hrs	200		14,233		14,233			
2	02	02	09			Injector Controls Commission Support	15-Dec-06	15-Aug-07	SL_CP1	Hrs	400		37,909		37,909			
2	02	02	09			Injector Controls Commission Support	15-Dec-06	15-Aug-07	SL_CE1	Hrs	200		25,997		25,997			
2	02	02	10			<b>Software &amp; Controls Infrastructure</b>												
2	02	02	11			<b>EPICS VXI Control Modules</b>												
2	02	02	12			<b>Laser Controls</b>												
2	02	02	13			<b>Laser Heater Controls</b>					40	-	4,128	-	4,128		-	
2	02	02	13			LTU Laser Heater Controls Commissioning Suppt	3-Mar-08	30-Sep-08	SL_CT1	Hrs	20		1,460		1,460			
2	02	02	13			LTU Laser Heater Controls Commissioning Suppt	3-Mar-08	30-Sep-08	SL_CE1	Hrs	20		2,667		2,667			
2	03					<b>LINAC SYSTEM (OPC)</b>					14,738	73,110	1,515,991	79,151	1,595,143		-	
2	03	02				<b>Linac Controls &amp; Power Conversion Subsystem</b>					14,738	73,110	1,515,991	79,151	1,595,143		-	
2	03	02	01			<b>Personnel Protection System (PPS)</b>					720	-	72,868	-	72,868		-	
2	03	02	01			L02/L03 Commissioning 2008	1-May-08	30-Sep-08	SL_CT1	Hrs	120		8,762		8,762			
2	03	02	01			L02/L03 Commissioning 2008	1-May-08	30-Sep-08	SL_CP1	Hrs	120		11,668		11,668			
2	03	02	01			L02/L03 Commissioning 2008	1-May-08	30-Sep-08	SL_CE1	Hrs	120		16,004		16,004			
2	03	02	01			LTU Commissioning 2008	3-Mar-08	30-Sep-08	SL_CT1	Hrs	120		8,762		8,762			
2	03	02	01			LTU Commissioning 2008	3-Mar-08	30-Sep-08	SL_CP1	Hrs	120		11,668		11,668			
2	03	02	01			LTU Commissioning 2008	3-Mar-08	30-Sep-08	SL_CE1	Hrs	120		16,004		16,004			
2	03	02	02			<b>Beam Containment System (BCS)</b>					268	-	32,323	-	32,323		-	
2	03	02	02			XTOD Commissioning	4-Mar-08	30-Sep-08	SL_CP1	Hrs	8		778		778			
2	03	02	02			XTOD Commissioning	4-Mar-08	30-Sep-08	SL_CE1	Hrs	16		2,134		2,134			
2	03	02	02			L02-L03 Controls BCS Commissioning	1-Aug-06	15-Aug-06	SL_CP1	Hrs	40		3,695		3,695			
2	03	02	02			L02-L03 Controls BCS Commissioning	1-Aug-06	15-Aug-06	SL_CE1	Hrs	180		22,805		22,805			
2	03	02	02			Injector Controls BCS Commissioning	4-Mar-08	30-Sep-08	SL_CP1	Hrs	8		778		778			
2	03	02	02			Injector Controls BCS Commissioning	4-Mar-08	30-Sep-08	SL_CE1	Hrs	16		2,134		2,134			
2	03	02	03			<b>Machine Protection System (MPS)</b>					1,600	-	184,483	-	184,483		-	
2	03	02	03			L01-BC1 MPS Commissioning Suppt	3-Dec-07	7-Jul-08	SL_CP1	Hrs	640		62,232		62,232			
2	03	02	03			L01-BC1 MPS Commissioning Suppt	3-Dec-07	7-Jul-08	SL_CE1	Hrs	640		85,354		85,354			
2	03	02	03			L02-L03 MPSs Commissioning Suppt	3-Dec-07	2-Jan-08	SL_CP1	Hrs	80		7,779		7,779			
2	03	02	03			L02-L03 MPSs Commissioning Suppt	3-Dec-07	2-Jan-08	SL_CE1	Hrs	80		10,669		10,669			
2	03	02	03			LTU MPS Commissioning Suppt	3-Mar-08	17-Sep-08	SL_CP1	Hrs	80		7,779		7,779			
2	03	02	03			LTU MPS Commissioning Suppt	3-Mar-08	17-Sep-08	SL_CE1	Hrs	80		10,669		10,669			
2	03	02	04			<b>Power Conversion</b>					174	73,110	14,516	79,151	93,667		-	
2	03	02	04	01		<b>Spare Power Supply (Dipole Type)</b>					80	21,480	6,508	23,255	29,763		-	
2	03	02	04	01		Spare Pwr Supply (Dipole Type) Prcurement	3-Oct-06	12-Mar-07	SL_MSEG1	\$\$		21,480		23,255	23,255			
2	03	02	04	01		Assemble Pwr Supply, Transducer & Control	13-Mar-07	20-Mar-07	SL_PCT1	Hrs	16		1,139		1,139			
2	03	02	04	01		Assemble Pwr Supply, Transducer & Control	13-Mar-07	20-Mar-07	SL_PCE1	Hrs	8		1,040		1,040			
2	03	02	04	01		Assemble Pwr Supply, Transducer & Control	13-Mar-07	20-Mar-07	SL_PCCA1	Hrs	24		1,817		1,817			
2	03	02	04	01		Integrate Pwr Supply, Transducer & Control	21-Mar-07	29-Mar-07	SL_PCEF1	Hrs	26		1,850		1,850			
2	03	02	04	01		Integrate Cables	30-Mar-07	2-Apr-07	SL_TMUE1	Hrs	6		663		663			
2	03	02	04	02		<b>Spare Power Supply (Quad Type)</b>					82	21,480	6,683	23,255	29,938		-	
2	03	02	04	02		Spare Pwr Supply (Quad Type) Procurement	3-Oct-06	12-Mar-07	SL_MSEG1	\$\$		21,480		23,255	23,255			
2	03	02	04	02		Assemble Pwr Supply, Transducer & Control	13-Mar-07	20-Mar-07	SL_PCT1	Hrs	16		1,139		1,139			
2	03	02	04	02		Assemble Pwr Supply, Transducer & Control	13-Mar-07	20-Mar-07	SL_PCE1	Hrs	8		1,040		1,040			
2	03	02	04	02		Assemble Pwr Supply, Transducer & Control	13-Mar-07	20-Mar-07	SL_PCCA1	Hrs	24		1,817		1,817			
2	03	02	04	02		Integrate Pwr Supply, Transducer & Control	21-Mar-07	29-Mar-07	SL_PCEF1	Hrs	26		1,850		1,850			
2	03	02	04	02		Integrate Cables	30-Mar-07	2-Apr-07	SL_TMUE1	Hrs	6		663		663			
2	03	02	04	02		Integrate Magnet Interlock	3-Apr-07	3-Apr-07	SL_TMUI1	Hrs	2		174		174			
2	03	02	04	03		<b>Spare Power Supply (Trim Type)</b>					12	30,150	1,325	32,641	33,967		-	
2	03	02	04	03		Spare Power Supply Procurement	3-Oct-06	12-Mar-07	SL_MSEG1	\$\$		30,150		32,641	32,641			
2	03	02	04	03		Integrate Cables	13-Mar-07	14-Mar-07	SL_TMUE1	Hrs	12		1,325		1,325			
2	03	02	04	04		<b>Controls &amp; Power Supply - Spare Misc Hdwr</b>												
2	03	02	05			<b>Controls - LLRF</b>					3,280	-	329,647	-	329,647		-	
2	03	02	05			L01-BC1 LLRF Commissioning Suppt	1-Dec-06	1-Aug-07	SL_KT1	Hrs	640		45,545		45,545			
2	03	02	05			L01-BC1 LLRF Commissioning Suppt	1-Dec-06	1-Aug-07	SL_KE1	Hrs	640		83,191		83,191			
2	03	02	05			L01-BC1 LLRF Commissioning Suppt	1-Dec-06	1-Aug-07	SL_CP1	Hrs	480		45,491		45,491			
2	03	02	05			L02-L03 LLRF Commissioning Suppt	3-Dec-07	2-Jan-08	SL_KT1	Hrs	80		5,841		5,841			
2	03	02	05			L02-L03 LLRF Commissioning Suppt	3-Dec-07	2-Jan-08	SL_KE1	Hrs	80		10,669		10,669			
2	03	02	05			L02-L03 LLRF Commissioning Suppt	3-Dec-07	2-Jan-08	SL_CP1	Hrs	60		5,834		5,834			
2	03	02	05			LTU LLRF Commissioning Suppt	3-Mar-08	30-Sep-08	SL_KT1	Hrs	560		40,888		40,888			

WBS Level						LCLA DCE August-2006 Description	Early Start	Early Finish	Res Code	Units	Work Rem. Bud. Qty		Work Rem. Full Burd and Escltd Cost			Contingency %	Contingency \$
1	2	3	4	5	6						Hours	\$\$	Labor	M&S	Total		
2	03	02	05			LTU LLRF Commissioning Suppt	3-Mar-08	30-Sep-08	SL_KE1	Hrs	560		74,685		74,685		
2	03	02	05			LTU LLRF Commissioning Suppt	3-Mar-08	30-Sep-08	SL_CP1	Hrs	180		17,503		17,503		
<b>2</b>	<b>03</b>	<b>02</b>	<b>06</b>			<b>Controls - E-Beam Diagnostic</b>					<b>4,656</b>	<b>-</b>	<b>472,206</b>	<b>-</b>	<b>472,206</b>	<b>-</b>	
<b>2</b>	<b>03</b>	<b>02</b>	<b>06</b>	<b>01</b>		<b>Controls - Wire Scanners</b>					<b>680</b>	<b>-</b>	<b>69,646</b>	<b>-</b>	<b>69,646</b>	<b>-</b>	
2	03	02	06	01		L01-BC1 Wire Scanners Commissioning Suppt	17-Jan-07	30-Aug-07	SL_CT1	Hrs	100		7,116		7,116		
2	03	02	06	01		L01-BC1 Wire Scanners Commissioning Suppt	17-Jan-07	30-Aug-07	SL_CE1	Hrs	100		12,999		12,999		
2	03	02	06	01		L02-L03 Wire Scanners Commissioning Suppt	3-Dec-07	2-Jan-08	SL_CT1	Hrs	80		5,841		5,841		
2	03	02	06	01		L02-L03 Wire Scanners Commissioning Suppt	3-Dec-07	2-Jan-08	SL_CE1	Hrs	80		10,669		10,669		
2	03	02	06	01		LTU Wire Scanners Commissioning Suppt	3-Mar-08	30-Sep-08	SL_CT1	Hrs	160		11,682		11,682		
2	03	02	06	01		LTU Wire Scanners Commissioning Suppt	3-Mar-08	30-Sep-08	SL_CE1	Hrs	160		21,339		21,339		
<b>2</b>	<b>03</b>	<b>02</b>	<b>06</b>	<b>02</b>		<b>Controls - BPMs</b>					<b>2,880</b>	<b>-</b>	<b>291,541</b>	<b>-</b>	<b>291,541</b>	<b>-</b>	
2	03	02	06	02		L01-BC1 BPMs Commissioning Suppt	2-Jan-07	16-Aug-07	SL_CT1	Hrs	640		45,545		45,545		
2	03	02	06	02		L01-BC1 BPMs Commissioning Suppt	2-Jan-07	16-Aug-07	SL_CP1	Hrs	160		15,164		15,164		
2	03	02	06	02		L01-BC1 BPMs Commissioning Suppt	2-Jan-07	16-Aug-07	SL_CE1	Hrs	640		83,191		83,191		
2	03	02	06	02		L02-L03 BPMs Commissioning Suppt	3-Dec-07	2-Jan-08	SL_CT1	Hrs	80		5,841		5,841		
2	03	02	06	02		L02-L03 BPMs Commissioning Suppt	3-Dec-07	2-Jan-08	SL_CP1	Hrs	20		1,945		1,945		
2	03	02	06	02		L02-L03 BPMs Commissioning Suppt	3-Dec-07	2-Jan-08	SL_CE1	Hrs	80		10,669		10,669		
2	03	02	06	02		LTU BPMs Commissioning Suppt	3-Mar-08	30-Sep-08	SL_CT1	Hrs	560		40,888		40,888		
2	03	02	06	02		LTU BPMs Commissioning Suppt	3-Mar-08	30-Sep-08	SL_CP1	Hrs	140		13,613		13,613		
2	03	02	06	02		LTU BPMs Commissioning Suppt	3-Mar-08	30-Sep-08	SL_CE1	Hrs	560		74,685		74,685		
<b>2</b>	<b>03</b>	<b>02</b>	<b>06</b>	<b>03</b>		<b>Controls - Toroids</b>					<b>120</b>	<b>-</b>	<b>12,278</b>	<b>-</b>	<b>12,278</b>	<b>-</b>	
2	03	02	06	03		L01-BC1 Toroids Commissioning Suppt	10-Jan-07	24-Aug-07	SL_CT1	Hrs	20		1,423		1,423		
2	03	02	06	03		L01-BC1 Toroids Commissioning Suppt	10-Jan-07	24-Aug-07	SL_CE1	Hrs	20		2,600		2,600		
2	03	02	06	03		L02-L03 Toroids Commissioning Suppt	3-Dec-07	15-Jan-08	SL_CT1	Hrs	20		1,460		1,460		
2	03	02	06	03		L02-L03 Toroids Commissioning Suppt	3-Dec-07	15-Jan-08	SL_CE1	Hrs	20		2,667		2,667		
2	03	02	06	03		LTU Toroids Commissioning Suppt	3-Mar-08	20-Aug-08	SL_CT1	Hrs	20		1,460		1,460		
2	03	02	06	03		LTU Toroids Commissioning Suppt	3-Mar-08	20-Aug-08	SL_CE1	Hrs	20		2,667		2,667		
<b>2</b>	<b>03</b>	<b>02</b>	<b>06</b>	<b>04</b>		<b>Controls - Stoppers Commissioning</b>					<b>48</b>	<b>-</b>	<b>4,911</b>	<b>-</b>	<b>4,911</b>	<b>-</b>	
2	03	02	06	04		L01-BC1 Commissioning Support	1-Dec-06	1-Aug-07	SL_CT1	Hrs	8		569		569		
2	03	02	06	04		L01-BC1 Commissioning Support	1-Dec-06	1-Aug-07	SL_CE1	Hrs	8		1,040		1,040		
2	03	02	06	04		L02-L03 Commissioning Support	3-Dec-07	31-Jan-08	SL_CT1	Hrs	8		584		584		
2	03	02	06	04		L02-L03 Commissioning Support	3-Dec-07	31-Jan-08	SL_CE1	Hrs	8		1,067		1,067		
2	03	02	06	04		LTU Commissioning Support	3-Mar-08	30-Sep-08	SL_CT1	Hrs	8		584		584		
2	03	02	06	04		LTU Commissioning Support	3-Mar-08	30-Sep-08	SL_CE1	Hrs	8		1,067		1,067		
<b>2</b>	<b>03</b>	<b>02</b>	<b>06</b>	<b>05</b>		<b>Controls - Profile Monitors</b>					<b>200</b>	<b>-</b>	<b>20,429</b>	<b>-</b>	<b>20,429</b>	<b>-</b>	
2	03	02	06	05		L01-BC1 Profile Monitors Commissioning Suppt	1-Dec-06	2-Aug-07	SL_CT1	Hrs	40		2,847		2,847		
2	03	02	06	05		L01-BC1 Profile Monitors Commissioning Suppt	1-Dec-06	2-Aug-07	SL_CE1	Hrs	40		5,199		5,199		
2	03	02	06	05		L02-L03 Profile Monitors Commissioning Suppt	3-Dec-07	15-Jan-08	SL_CT1	Hrs	40		2,921		2,921		
2	03	02	06	05		L02-L03 Profile Monitors Commissioning Suppt	3-Dec-07	15-Jan-08	SL_CE1	Hrs	40		5,335		5,335		
2	03	02	06	05		LTU Profile Monitors Commissioning Suppt	3-Mar-08	30-Sep-08	SL_CT1	Hrs	20		1,460		1,460		
2	03	02	06	05		LTU Profile Monitors Commissioning Suppt	3-Mar-08	30-Sep-08	SL_CE1	Hrs	20		2,667		2,667		
<b>2</b>	<b>03</b>	<b>02</b>	<b>06</b>	<b>07</b>		<b>Controls - BLM</b>					<b>80</b>	<b>-</b>	<b>8,151</b>	<b>-</b>	<b>8,151</b>	<b>-</b>	
2	03	02	06	07		L01-BC1 BLM Commissioning Support	1-Dec-06	1-Aug-07	SL_CT1	Hrs	20		1,423		1,423		
2	03	02	06	07		L01-BC1 BLM Commissioning Support	1-Dec-06	1-Aug-07	SL_CE1	Hrs	20		2,600		2,600		
2	03	02	06	07		L02-L03 BLM Commissioning Support	3-Dec-07	31-Jan-08	SL_CT1	Hrs	20		1,460		1,460		
2	03	02	06	07		L02-L03 BLM Commissioning Support	3-Dec-07	31-Jan-08	SL_CE1	Hrs	20		2,667		2,667		
<b>2</b>	<b>03</b>	<b>02</b>	<b>06</b>	<b>09</b>		<b>Controls - Single Beam Dump</b>					<b>48</b>	<b>-</b>	<b>4,911</b>	<b>-</b>	<b>4,911</b>	<b>-</b>	
2	03	02	06	09		L01-BC1 Commissioning Support	1-Dec-06	1-Aug-07	SL_CT1	Hrs	8		569		569		
2	03	02	06	09		L01-BC1 Commissioning Support	1-Dec-06	1-Aug-07	SL_CE1	Hrs	8		1,040		1,040		
2	03	02	06	09		L02-L03 Commissioning Support	3-Dec-07	31-Jan-08	SL_CT1	Hrs	8		584		584		
2	03	02	06	09		L02-L03 Commissioning Support	3-Dec-07	31-Jan-08	SL_CE1	Hrs	8		1,067		1,067		
2	03	02	06	09		LTU Commissioning Support	3-Mar-08	30-Sep-08	SL_CT1	Hrs	8		584		584		
2	03	02	06	09		LTU Commissioning Support	3-Mar-08	30-Sep-08	SL_CE1	Hrs	8		1,067		1,067		
<b>2</b>	<b>03</b>	<b>02</b>	<b>06</b>	<b>10</b>		<b>Controls - E-Beam Dump</b>					<b>120</b>	<b>-</b>	<b>11,853</b>	<b>-</b>	<b>11,853</b>	<b>-</b>	
2	03	02	06	10		L01-BC1 Commissioning Support	1-Dec-06	1-Aug-07	SL_CT1	Hrs	8		569		569		
2	03	02	06	10		L01-BC1 Commissioning Support	1-Dec-06	1-Aug-07	SL_CP1	Hrs	24		2,275		2,275		
2	03	02	06	10		L01-BC1 Commissioning Support	1-Dec-06	1-Aug-07	SL_CE1	Hrs	8		1,040		1,040		
2	03	02	06	10		L02-L03 Commissioning Support	3-Dec-07	31-Jan-08	SL_CT1	Hrs	8		584		584		
2	03	02	06	10		L02-L03 Commissioning Support	3-Dec-07	31-Jan-08	SL_CP1	Hrs	24		2,334		2,334		
2	03	02	06	10		L02-L03 Commissioning Support	3-Dec-07	31-Jan-08	SL_CE1	Hrs	8		1,067		1,067		
2	03	02	06	10		LTU Commissioning Support	3-Mar-08	30-Sep-08	SL_CT1	Hrs	8		584		584		
2	03	02	06	10		LTU Commissioning Support	3-Mar-08	30-Sep-08	SL_CP1	Hrs	24		2,334		2,334		
2	03	02	06	10		LTU Commissioning Support	3-Mar-08	30-Sep-08	SL_CE1	Hrs	8		1,067		1,067		
<b>2</b>	<b>03</b>	<b>02</b>	<b>06</b>	<b>12</b>		<b>Controls - Collimators</b>					<b>480</b>	<b>-</b>	<b>48,485</b>	<b>-</b>	<b>48,485</b>	<b>-</b>	

WBS Level						LCLA DCE August-2006 Description	Early Start	Early Finish	Res Code	Units	Work Rem. Bud. Qty		Work Rem. Full Burd and Escltd Cost			Contingency %	Contingency \$
1	2	3	4	5	6						Hours	\$\$	Labor	M&S	Total		
2	03	02	06	12		L01-BC1 Movable Collimator Commissioning Suppt	13-Dec-06	13-Aug-07	SL_CT1	Hrs	200		14,233		14,233		
2	03	02	06	12		L01-BC1 Movable Collimator Commissioning Suppt	13-Dec-06	13-Aug-07	SL_CE1	Hrs	200		25,997		25,997		
2	03	02	06	12		L02-L03 Movable Collimator Commissioning Suppt	3-Dec-07	2-Jan-08	SL_CT1	Hrs	20		1,460		1,460		
2	03	02	06	12		L02-L03 Movable Collimator Commissioning Suppt	3-Dec-07	2-Jan-08	SL_CE1	Hrs	20		2,667		2,667		
2	03	02	06	12		LTU Wire Scanners LTU Commissioning Suppt	3-Mar-08	30-Sep-08	SL_CT1	Hrs	20		1,460		1,460		
2	03	02	06	12		LTU Wire Scanners LTU Commissioning Suppt	3-Mar-08	30-Sep-08	SL_CE1	Hrs	20		2,667		2,667		
2	03	02	07			<b>Controls - Laser</b>											
2	03	02	08			<b>Controls - Timing</b>					1,000	-	107,807	-	107,807	-	
2	03	02	08			L01-BC1 Timing Controls Commissioning Support	24-Jan-07	7-Sep-07	SL_CT1	Hrs	8		569		569		
2	03	02	08			L01-BC1 Timing Controls Commissioning Support	24-Jan-07	7-Sep-07	SL_CP1	Hrs	24		2,275		2,275		
2	03	02	08			L01-BC1 Timing Controls Commissioning Support	24-Jan-07	7-Sep-07	SL_CE1	Hrs	8		1,040		1,040		
2	03	02	08			L02-L03 Timing Controls Commissioning Support	3-Dec-07	2-Jan-08	SL_CT1	Hrs	40		2,921		2,921		
2	03	02	08			L02-L03 Timing Controls Commissioning Support	3-Dec-07	2-Jan-08	SL_CP1	Hrs	160		15,558		15,558		
2	03	02	08			L02-L03 Timing Controls Commissioning Support	3-Dec-07	2-Jan-08	SL_CE1	Hrs	160		21,339		21,339		
2	03	02	08			L02-L03 Timing Controls Commissioning Support	1-Apr-08	30-Sep-08	SL_CT1	Hrs	120		8,762		8,762		
2	03	02	08			L02-L03 Timing Controls Commissioning Support	1-Apr-08	30-Sep-08	SL_CP1	Hrs	240		23,337		23,337		
2	03	02	08			L02-L03 Timing Controls Commissioning Support	1-Apr-08	30-Sep-08	SL_CE1	Hrs	240		32,008		32,008		
2	03	02	09			<b>Controls - Vacuum</b>					3,040	-	302,142	-	302,142	-	
2	03	02	09			L01-BC1 Controls Commission Support	30-Oct-06	29-Jun-07	SL_CT1	Hrs	200		14,233		14,233		
2	03	02	09			L01-BC1 Controls Commission Support	30-Oct-06	29-Jun-07	SL_CP1	Hrs	400		37,909		37,909		
2	03	02	09			L01-BC1 Controls Commission Support	30-Oct-06	29-Jun-07	SL_CE1	Hrs	200		25,997		25,997		
2	03	02	09			L02-L03 Controls Commission Support	3-Dec-07	1-Aug-08	SL_CT1	Hrs	200		14,603		14,603		
2	03	02	09			L02-L03 Controls Commission Support	3-Dec-07	1-Aug-08	SL_CP1	Hrs	400		38,895		38,895		
2	03	02	09			L02-L03 Controls Commission Support	3-Dec-07	1-Aug-08	SL_CE1	Hrs	200		26,673		26,673		
2	03	02	09			LTU Controls Commission Support	4-Mar-08	30-Sep-08	SL_CT1	Hrs	320		23,364		23,364		
2	03	02	09			LTU Controls Commission Support	4-Mar-08	30-Sep-08	SL_CP1	Hrs	800		77,790		77,790		
2	03	02	09			LTU Controls Commission Support	4-Mar-08	30-Sep-08	SL_CE1	Hrs	320		42,677		42,677		
2	03	02	10			<b>Software &amp; Controls Infrastructure</b>											
2	04					<b>UNDULATOR SYSTEM (OPC)</b>											
2	04	02				<b>Controls</b>											
2	04	02	01			<b>Controls Management and Integration</b>											
2	04	02	01			Vendor Fab/Assy - Quad PS+ addl items (2)	2-Aug-06	9-Aug-06	SA_MSSC1	\$\$		60,000		63,312		63,312	
2	04	02	01			Vendor Fab/Assy - Quad Cables (2)	5-Jan-07	19-Jan-07	SA_MSSC1	\$\$		8,000		8,661		8,661	
2	04	02	01			REC: SDB Ion Pump	5-Oct-06	15-Nov-06	SA_MSEG1	\$\$		1,418		1,535		1,535	
2	04	02	01			REC: SDB Ion Pump Power Supply	5-Oct-06	15-Nov-06	SA_MSEG1	\$\$		4,996		5,409		5,409	
2	04	02	01			REC: SDB Ion Pump Cable	5-Oct-06	15-Nov-06	SA_MSEG1	\$\$		540		585		585	
2	04	02	01			REC: LDB Power Supply (1)	7-Aug-06	2-Oct-06	SA_MSEG1	\$\$		4,996		5,274		5,274	
2	04	02	01			REC: LDB Cable (1)	3-Aug-06	28-Sep-06	SL_MSEG1	\$\$		540		570		570	
2	04	02	01			REC: LDB Ion Pump (1)	5-Oct-06	1-Dec-06	SA_MSEG1	\$\$		6,954		7,529		7,529	
2	04	02	04			<b>Video</b>											
2	04	02	07			<b>Machine Protection</b>											
2	05					<b>X-RAY TRANSPORT &amp; DIAGNOSTICS SYSTEMS (OPC)</b>											
2	05	02				<b>Controls</b>											
2	05	02	01			<b>Controls - EPICS</b>											
2	05	02	02			<b>Controls - System</b>											
2	06					<b>X-RAY END STATION SYSTEMS (OPC)</b>					400	-	38,573	-	38,573	-	
2	06	02				<b>Controls Subsystem</b>					400	-	38,573	-	38,573	-	
2	06	02	08			<b>User Safeguards</b>					400	-	38,573	-	38,573	-	
2	06	02	08			Support Design of EPICS Interface	1-Aug-06	5-Dec-06	SL_CP1	Hrs	80		7,489		7,489		
2	06	02	08			Support Integration with Data Farm	7-Dec-06	28-Feb-07	SL_CP1	Hrs	40		3,791		3,791		
2	06	02	08			Support Development of Control System	29-Oct-07	1-Apr-08	SL_CP1	Hrs	120		11,668		11,668		
2	06	02	08			Prototype Development Support	29-Oct-07	1-Apr-08	SL_CP1	Hrs	40		3,889		3,889		
2	06	02	08			Support for delivery of 2D Detector	2-Apr-08	21-Nov-08	SL_CP1	Hrs	120		11,735		11,735		