

WBS Level						LCLB Description - New Rates	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		
											390,469	57,238,685	43,000,522	60,534,133	103,534,656		17,700,294
1						LCLS PROJECT - PED & CONSTRUCTION					216,077	48,657,762	21,907,223	50,924,166	72,831,390		17,700,294
1	01					LCLS PROJECT MGMT, PLANNING & ADMN (TEC)					25,901	1,941,903	2,560,983	2,142,642	4,703,626		454,917
1	01	01				Environment, Safety & Health					10,849	116,775	1,192,583	116,775	1,309,358		130,936
1	01	01	01			Radiation Physics					8,007	-	805,960	-	805,960		80,596
1	01	01	01			Radiation Physics- Thru July 2009	1-Feb-08	31-Jul-09	SL_PHH2	Hrs	6,215		618,463		618,463	10.0%	61,846
1	01	01	01			Radiation Physics- August 2009-CD4	3-Aug-09	29-Jul-10	SL_PHH2	Hrs	1,792		187,498		187,498	10.0%	18,750
1	01	01	02			ESH Management & Coordination					2,842	116,775	386,623	116,775	503,398		50,340
1	01	01	02			ESH Management & Coordination - FY08	1-Feb-08	30-Sep-08	SL_ESH2	Hrs	417		54,022		54,022	10.0%	5,402
1	01	01	02			ESH Management & Coordination - FY09	1-Oct-08	30-Sep-09	SL_ESH2	Hrs	1,307		176,015		176,015	10.0%	17,602
1	01	01	02			ESH Management & Coordination - FY10	1-Oct-09	29-Jul-10	SL_ESH2	Hrs	1,118		156,585		156,585	10.0%	15,659
1	01	01	02			ESH Management & Coord - Oct 07- Aug 08 (Hislop)	1-Feb-08	29-Aug-08	SL_MSPY2	\$\$		116,775		116,775	10.0%	11,678	
1	01	02				Project Management					8,897	1,597,912	789,063	1,770,893	2,559,956		216,542
1	01	02	01			Project Management Office					8,897	1,597,912	789,063	1,770,893	2,559,956		216,542
1	01	02	01	01		Project Office - General					7,043	-	652,051	-	652,051		32,603
1	01	02	01	01		Project Director - FY08	1-Feb-08	30-Sep-08	SL_PM2	Hrs	104		17,152		17,152	5.0%	858
1	01	02	01	01		Project Director - FY09	1-Oct-08	30-Sep-09	SL_PM2	Hrs	87		14,912		14,912	5.0%	746
1	01	02	01	01		Project Director- FY10	1-Oct-09	29-Jul-10	SL_PM2	Hrs	75		13,369		13,369	5.0%	668
1	01	02	01	01		Senior Project Mgrs - FY08	1-Feb-08	30-Sep-08	SL_PM2	Hrs	653		107,565		107,565	5.0%	5,378
1	01	02	01	01		Senior Project Mgrs - FY09	1-Oct-08	30-Sep-09	SL_PM2	Hrs	261		44,735		44,735	5.0%	2,237
1	01	02	01	01		Senior Project Mgrs - FY10	1-Oct-09	29-Jul-10	SL_PM2	Hrs	224		39,929		39,929	5.0%	1,996
1	01	02	01	01		E-Beam Systems Deputy TEC - FY08	1-Feb-08	30-Sep-08	SL_TSM2	Hrs	209		22,500		22,500	5.0%	1,125
1	01	02	01	01		E-Beam Systems Deputy TEC - FY09	1-Oct-08	30-Sep-09	SL_TSM2	Hrs	87		9,739		9,739	5.0%	487
1	01	02	01	01		E-Beam Systems Deputy TEC- FY10	1-Oct-09	29-Jul-10	SL_TSM2	Hrs	75		8,732		8,732	5.0%	437
1	01	02	01	01		Budget/Finance Officer - FY08	1-Feb-08	30-Sep-08	SL_FA2	Hrs	209		19,048		19,048	5.0%	952
1	01	02	01	01		Budget/Finance Officer - FY09	1-Oct-08	30-Sep-09	SL_FA2	Hrs	87		8,245		8,245	5.0%	412
1	01	02	01	01		Budget/Finance Officer - FY10	1-Oct-09	29-Jul-10	SL_FA2	Hrs	75		7,392		7,392	5.0%	370
1	01	02	01	01		Administrative Support - FY08	1-Feb-08	30-Sep-08	SL_ADMN2	Hrs	1,043		62,042		62,042	5.0%	3,102
1	01	02	01	01		Administrative Support - FY09	1-Oct-08	30-Sep-09	SL_ADMN2	Hrs	1,743		107,786		107,786	5.0%	5,389
1	01	02	01	01		Administrative Support - FY10	1-Oct-09	29-Jul-10	SL_ADMN2	Hrs	746		47,977		47,977	5.0%	2,399
1	01	02	01	01		E-Beam Systems Manager - FY08	1-Feb-08	30-Sep-08	SL_TSM2	Hrs	209		22,500		22,500	5.0%	1,125
1	01	02	01	01		E-Beam Systems Manager - FY09	1-Oct-08	30-Sep-09	SL_TSM2	Hrs	87		9,739		9,739	5.0%	487
1	01	02	01	01		E-Beam Systems Manager - FY10	1-Oct-09	29-Jul-10	SL_TSM2	Hrs	75		8,732		8,732	5.0%	437
1	01	02	01	01		Finance Administrative Support - FY09	2-Oct-08	1-Oct-09	SL_ADMN2	Hrs	436		26,962		26,962	5.0%	1,348
1	01	02	01	01		Finance Administrative Support - FY10	2-Oct-09	30-Jul-10	SL_ADMN2	Hrs	187		12,026		12,026	5.0%	601
1	01	02	01	01		Photon System Manager - FY08	1-Feb-08	30-Sep-08	SL_TSM2	Hrs	209		22,500		22,500	5.0%	1,125
1	01	02	01	01		Photon System Manager - FY09	1-Oct-08	30-Sep-09	SL_TSM2	Hrs	87		9,739		9,739	5.0%	487
1	01	02	01	01		Photon System Manager - FY10	1-Oct-09	29-Jul-10	SL_TSM2	Hrs	75		8,732		8,732	5.0%	437
1	01	02	01	02		Project Support					1,854	1,379,716	137,012	1,517,803	1,654,815		158,631
1	01	02	01	02		Additional Procmt Consulting Serv thru Dec 08	1-Feb-08	19-Dec-08	SL_MSPY2	\$\$		204,716		204,716	204,716	10.0%	20,472
1	01	02	01	02		QA/QC Support - FY08	1-Feb-08	30-Sep-08	SL_QAO2	Hrs	104		12,253		12,253	5.0%	613
1	01	02	01	02		QA/QC Support - FY09	1-Oct-08	30-Sep-09	SL_QAO2	Hrs	87		10,652		10,652	5.0%	533
1	01	02	01	02		QA/QC Support - FY10	1-Oct-09	29-Jul-10	SL_QAO2	Hrs	75		9,550		9,550	5.0%	478
1	01	02	01	02		Computing Mgr Support - FY08	1-Feb-08	30-Sep-08	SL_CRM2	Hrs	104		12,253		12,253	5.0%	613
1	01	02	01	02		Computing Mgr Support - FY09	1-Oct-08	30-Sep-09	SL_CRM2	Hrs	87		10,652		10,652	5.0%	533
1	01	02	01	02		Computing Mgr Support - FY10	1-Oct-09	29-Jul-10	SL_CRM2	Hrs	75		9,550		9,550	5.0%	478
1	01	02	01	02		Computing Res Support - FY08	1-Feb-08	30-Sep-08	SL_CRA2	Hrs	877		46,976		46,976	5.0%	2,349
1	01	02	01	02		Computing Res Support - FY09	1-Oct-08	30-Sep-09	SL_CRA2	Hrs	297		16,550		16,550	5.0%	828
1	01	02	01	02		Computing Res Support - FY10	1-Oct-09	29-Jul-10	SL_CRA2	Hrs	148		8,577		8,577	5.0%	429

LCLS Estimate to Complete

FEB2008 - CD4

WBS Level						LCLB Description - New Rates	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	02	01	02		PMCS Support - Maintenance - Feb08	1-Feb-08	29-Feb-08	SL_MSPS2	\$\$		-		-		10.0%	0
1	01	02	01	02		PMCS Support - Maintenance - Mar08-Sep08	3-Mar-08	30-Sep-08	SL_MSPS2	\$\$		350,000		382,109	382,109	10.0%	38,211
1	01	02	01	02		AWARD: PMCS Support - Maintenance - FY09-CD4	2-Oct-08	2-Oct-08	SL_AWARD	\$\$		910,661		910,661	910,661	10.0%	91,066
1	01	02	01	02		PMCS Support - Maintenance - FY09-CD4	1-Oct-08	29-Jul-10	SA_MSPS2	\$\$		825,000		930,978	930,978	10.0%	93,098
1	01	02	01	03		Project Office M&S						-		253,090	253,090		25,309
1	01	02	01	03		SLAC Project Office Consumables- FY08	1-Feb-08	30-Sep-08	SL_MSCS2	\$\$		78,908		86,147	86,147	10.0%	8,615
1	01	02	01	03		SLAC Project Office Consumables- FY09	1-Oct-08	30-Sep-09	SL_MSCS2	\$\$		32,160		35,918	35,918	10.0%	3,592
1	01	02	01	03		SLAC Project Office Consumables- FY10	1-Oct-09	29-Jul-10	SL_MSCS2	\$\$		40,295		46,039	46,039	10.0%	4,604
1	01	02	01	03		Project Related Travel/ Shipping - FY08	1-Feb-08	30-Sep-08	SL_MSTR2	\$\$		17,640		22,153	22,153	10.0%	2,215
1	01	02	01	03		Project Related Travel/ Shipping - FY09	1-Oct-08	30-Sep-09	SL_MSTR2	\$\$		30,000		38,542	38,542	10.0%	3,854
1	01	02	01	03		Project Related Travel/ Shipping - FY10	1-Oct-09	28-May-10	SL_MSTR2	\$\$		15,000		19,714	19,714	10.0%	1,971
1	01	02	01	03		Software Licenses	1-Feb-08	30-Sep-08	SL_MSEG2	\$\$		4,193		4,578	4,578	10.0%	458
1	01	03				Technical Integration						6,155	227,216	579,337	254,975		834,312
1	01	03	03			System Integration						2,069	27,848	196,184	31,001		227,184
1	01	03	03			Installation Coordination - FY08	1-Feb-08	30-Sep-08	SL_IPM2	Hrs	672		72,341		72,341	20.0%	14,468
1	01	03	03			Installation Coordination - FY09	1-Oct-08	30-Sep-09	SL_IPM2	Hrs	87		9,739		9,739	20.0%	1,948
1	01	03	03			M&S for Integration - FY08-FY09	1-Feb-08	30-Sep-09	SL_MSCS2	\$\$		22,848		25,288	25,288	20.0%	5,058
1	01	03	03			M&S for Integration - FY10	1-Oct-09	29-Jul-10	SL_MSCS2	\$\$		5,000		5,713	5,713	20.0%	1,143
1	01	03	03			Design Supervisor - FY08	1-Feb-08	30-Sep-08	SL_MDD2	Hrs	437		37,131		37,131	10.0%	3,713
1	01	03	03			Design Supervisor - FY09	1-Oct-08	30-Sep-09	SL_MDD2	Hrs	872		76,972		76,972	10.0%	7,697
1	01	03	05			Global Controls						4,086	199,368	383,153	223,974		607,127
1	01	03	05	09		Power Supply Controls						2,940	-	253,986	-		253,986
1	01	03	05	09		Power Conversion Project Coordinator (10% time)	1-Feb-08	30-Sep-08	SL_TSM2	Hrs	298		32,022		32,022	15.0%	4,803
1	01	03	05	09		Misc. Power Supplies Support FY08	1-Feb-08	30-Sep-08	SL_TMUE2	Hrs	149		14,478		14,478	15.0%	2,172
1	01	03	05	09		Misc. Power Supplies Support FY08	1-Feb-08	30-Sep-08	SL_PCDT2	Hrs	149		9,330		9,330	15.0%	1,400
1	01	03	05	09		Misc. Power Supplies Support FY08	1-Feb-08	30-Sep-08	SL_EE2	Hrs	149		14,056		14,056	15.0%	2,108
1	01	03	05	09		Misc. Power Supplies Support FY08	1-Feb-08	30-Sep-08	SL_CT2	Hrs	149		9,330		9,330	15.0%	1,400
1	01	03	05	09		Misc. Power Supplies Support FY08	1-Feb-08	30-Sep-08	SL_CP2	Hrs	149		12,426		12,426	15.0%	1,864
1	01	03	05	09		Controls Power Supplies Management FY09	1-Oct-08	31-Jul-09	SL_CP2	Hrs	577		50,128		50,128	15.0%	7,519
1	01	03	05	09		LINAC Drawings	1-Feb-08	21-Apr-08	SL_MDD2	Hrs	422		35,826		35,826	15.0%	5,374
1	01	03	05	09		Undulator Drawings	22-Apr-08	11-Sep-08	SL_MDD2	Hrs	900		76,388		76,388	15.0%	11,458
1	01	03	05	12		Global Controls Management						1,146	199,368	129,167	223,974		353,141
1	01	03	05	12	01	Global Controls Management LOE						1,146	199,368	129,167	223,974		353,141
1	01	03	05	12	01	Controls Cost Account Manager - FY09	2-Oct-08	30-Sep-09	SL_TSM2	Hrs	42		4,702		4,702	10.0%	470
1	01	03	05	12	01	Controls Deputy Cost Account Manger - FY09	2-Oct-08	30-Sep-09	SL_TSM2	Hrs	208		23,284		23,284	10.0%	2,328
1	01	03	05	12	01	Controls Physicist - FY09	2-Oct-08	30-Sep-09	SL_PHH2	Hrs	208		21,059		21,059	10.0%	2,106
1	01	03	05	12	01	Controls Technical Coordinator - FY09	2-Oct-08	30-Sep-09	SL_CE2	Hrs	208		24,785		24,785	10.0%	2,478
1	01	03	05	12	01	Controls E-Beam Diagnostics Tech Lead - FY09	2-Oct-08	30-Sep-09	SL_MSPS2	\$\$		148,364		165,700	165,700	10.0%	16,570
1	01	03	05	12	01	Controls Cost Account Manager - FY10	2-Oct-09	30-Jul-10	SL_TSM2	Hrs	30		3,493		3,493	10.0%	349
1	01	03	05	12	01	Controls Deputy Cost Account Manger - FY10	2-Oct-09	30-Jul-10	SL_TSM2	Hrs	150		17,463		17,463	10.0%	1,746
1	01	03	05	12	01	Controls Physicist - FY10	2-Oct-09	30-Jul-10	SL_PHH2	Hrs	150		15,794		15,794	10.0%	1,579
1	01	03	05	12	01	Controls Technical Coordinator - FY10	2-Oct-09	30-Jul-10	SL_CE2	Hrs	150		18,588		18,588	10.0%	1,859
1	01	03	05	12	01	Controls E-Beam Diagnostics Tech Lead - FY10	2-Oct-09	30-Jul-10	SL_MSPS2	\$\$		51,004		58,274	58,274	10.0%	5,827
1	03					LINAC SYSTEM						46,798	5,048,172	4,210,517	5,463,217		9,673,735
1	03	01				System Management & Integration						4,066	142,630	438,286	164,961		603,248
1	03	01	01			Linac Mechanical Integration						100	76,106	9,747	83,088		92,835
1	03	01	01	06		LTU System Integration						100	76,106	9,747	83,088		92,835
1	03	01	01	06		LTU Beamline Shielding Fabrication	1-Feb-08	28-Mar-08	SL_MSSC2	\$\$		47,250		51,585	51,585	15.0%	7,738
1	03	01	01	06		LTU Pedestal and Raft Fabrication	1-Feb-08	3-Jul-08	SL_MSSC2	\$\$		28,856		31,503	31,503	5.0%	1,575

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1	2	3	4	5	6						Hours	\$	Labor	M&S	Total		
1	03	01	01	06		LTU Fabrication Oversight	1-Feb-08	25-Jul-08	SL_ME2	Hrs	9		866		866	5.0%	43
1	03	01	01	06		LTU Installation Oversight	1-Feb-08	28-Mar-08	SL_ME2	Hrs	17		1,731		1,731	5.0%	87
1	03	01	01	06		LTU Installation Oversight	1-Feb-08	28-Mar-08	SL_MDD2	Hrs	8		687		687	5.0%	34
1	03	01	01	06		LTU Water System Design Support	1-Feb-08	20-Mar-08	SL_ME2	Hrs	50		5,011		5,011	15.0%	752
1	03	01	01	06		LTU Installation Drawings	1-Feb-08	19-Jun-08	SL_MDD2	Hrs	17		1,451		1,451	5.0%	73
1	03	01	01	07		E-Dump System Integration					-	-	-	-	-		0
1	03	01	01	07		E-Dump Beamline Shielding Fabrication	1-Feb-08	9-Jun-08	SL_MSSC2	\$\$			-		-	5.0%	0
1	03	01	01	07		E-Dump Pedestal and Raft Fabrication	1-Feb-08	9-Jun-08	SL_MSSC2	\$\$			-		-	5.0%	0
1	03	01	01	07		E-Dump Installation Coordination Planning	1-Feb-08	17-Apr-08	SL_ME2	Hrs	-		-		-	5.0%	0
1	03	01	03			Travel					-	48,124	-	61,634	61,634		9,245
1	03	01	03			FY08 Travel	1-Feb-08	30-Sep-08	SL_MSTR2	\$\$		17,500		21,977	21,977	15.0%	3,297
1	03	01	03			FY09 Travel	1-Oct-08	30-Sep-09	SL_MSTR2	\$\$		20,000		25,694	25,694	15.0%	3,854
1	03	01	03			FY10 Travel	1-Oct-09	31-Mar-10	SL_MSTR2	\$\$		10,624		13,963	13,963	15.0%	2,094
1	03	01	04			Linac Management					3,965	18,400	428,540	20,239	448,779		23,451
1	03	01	04			Linac System Management Effort - CONST 70%	1-Feb-08	30-Apr-08	SL_TSM2	Hrs	222		23,871		23,871	5.0%	1,194
1	03	01	04			Technical Leads - CONST 70%	1-Feb-08	30-Apr-08	SL_ME2	Hrs	334		33,777		33,777	5.0%	1,689
1	03	01	04			Computers - CONST	1-Feb-08	27-Jan-09	SL_MSEG2	\$\$		9,200		10,120	10,120	10.0%	1,012
1	03	01	04			Material & Supplies - CONST	1-Feb-08	27-Jan-09	SL_MSCS2	\$\$		9,200		10,120	10,120	10.0%	1,012
1	03	01	04			Linac System Management Effort - CONST 50%	1-Feb-08	27-Jan-09	SL_TSM2	Hrs	783		85,382		85,382	5.0%	4,269
1	03	01	04			Linac System Management Effort - CONST 25%	1-Oct-08	30-Sep-09	SL_TSM2	Hrs	872		97,614		97,614	5.0%	4,881
1	03	01	04			Cost Account Managers - CONST 25%	1-Oct-08	30-Sep-09	SL_ME2	Hrs	1,307		137,603		137,603	5.0%	6,880
1	03	01	04			Linac System Management Effort - CONST 10%	1-Oct-09	31-Mar-10	SL_TSM2	Hrs	179		20,839		20,839	5.0%	1,042
1	03	01	04			Cost Account Managers - CONST 10%	1-Oct-09	31-Mar-10	SL_ME2	Hrs	269		29,454		29,454	5.0%	1,473
1	03	02				Linac Controls & Power Conversion Subsystem					16,080	2,455,952	1,380,022	2,685,265	4,065,287		827,370
1	03	02	01			Personnel Protection System (PPS)					4,171	107,860	363,200	117,755	480,955		120,239
1	03	02	01			LTU Controls Software	1-Feb-08	23-Jun-08	SL_CP2	Hrs	106		8,821		8,821	25.0%	2,205
1	03	02	01			LTU Mechanical Design	1-Feb-08	23-Jun-08	SL_MFE2	Hrs	45		4,535		4,535	25.0%	1,134
1	03	02	01			LTU Design Support	1-Feb-08	12-Nov-08	SL_MDD2	Hrs	630		53,787		53,787	25.0%	13,447
1	03	02	01			LTU Design Support	1-Feb-08	12-Nov-08	SL_CE2	Hrs	630		72,607		72,607	25.0%	18,152
1	03	02	01			LTU Mechanical Fab	1-Feb-08	23-Jun-08	SL_MFE2	Hrs	192		19,437		19,437	25.0%	4,859
1	03	02	01			RCV: 1000 4PR16AS cable	16-May-08	16-May-08	SL_MSEG2	\$\$		1,360		1,485	1,485	25.0%	371
1	03	02	01			RCV: 2000 36PR16AS cable	16-May-08	16-May-08	SL_MSEG2	\$\$		24,000		26,202	26,202	25.0%	6,550
1	03	02	01			RCV: 2 Camera	16-May-08	16-May-08	SL_MSEG2	\$\$		400		437	437	25.0%	109
1	03	02	01			RCV: 2 Annunciator	16-May-08	16-May-08	SL_MSEG2	\$\$		2,400		2,620	2,620	25.0%	655
1	03	02	01			RCV: 6 Search Buttons	16-May-08	16-May-08	SL_MSEG2	\$\$		600		655	655	25.0%	164
1	03	02	01			RCV: 2 Audio Annunciator	16-May-08	16-May-08	SL_MSEG2	\$\$		600		655	655	25.0%	164
1	03	02	01			RCV: 10 Speakers	16-May-08	16-May-08	SL_MSEG2	\$\$		1,000		1,092	1,092	25.0%	273
1	03	02	01			RCV: 6 Door Hardware	16-May-08	16-May-08	SL_MSEG2	\$\$		1,500		1,638	1,638	25.0%	409
1	03	02	01			RCV: 6 PLC Control Package	16-May-08	16-May-08	SL_MSEG2	\$\$		54,000		58,954	58,954	25.0%	14,738
1	03	02	01			RCV: 3 Battery Recharger	16-May-08	16-May-08	SL_MSEG2	\$\$		22,000		24,018	24,018	25.0%	6,005
1	03	02	01			Plant Labor (Crafts)	1-Feb-08	5-Aug-08	SL_MFAT2	Hrs	265		23,168		23,168	25.0%	5,792
1	03	02	01			LTU Control Hardware	19-May-08	8-Oct-08	SL_CT2	Hrs	700		43,995		43,995	25.0%	10,999
1	03	02	01			LTU Control Hardware	19-May-08	8-Oct-08	SL_CE2	Hrs	280		32,144		32,144	25.0%	8,036
1	03	02	01			LTU Build and Test Equipment Racks	9-Oct-08	11-Dec-08	SL_CT2	Hrs	792		51,666		51,666	25.0%	12,917
1	03	02	01			LTU Build and Test Equipment Racks	9-Oct-08	11-Dec-08	SL_CP2	Hrs	317		27,540		27,540	25.0%	6,885
1	03	02	01			LTU Build and Test Equipment Racks	9-Oct-08	11-Dec-08	SL_CE2	Hrs	214		25,500		25,500	25.0%	6,375
1	03	02	02			Beam Containment System (BCS)					1,822	29,088	177,676	31,757	209,432		41,886
1	03	02	02			Toroid Comparator Chassis	5-Feb-08	31-Mar-08	SL_CE2	Hrs	79		9,074		9,074	20.0%	1,815
1	03	02	02			Current Monitor Chassis	5-Feb-08	2-Apr-08	SL_CE2	Hrs	86		9,881		9,881	20.0%	1,976

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WBS Level						LCLB Description - New Rates	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			BCS Chassis PDR	3-Apr-08	3-Apr-08	SL_CE2	Hrs	3		344		344	20.0%	69
1	03	02	02			BCS Chassis FDR	18-Apr-08	18-Apr-08	SL_CE2	Hrs	4		458		458	20.0%	92
1	03	02	02			Generate BCS material list	4-Feb-08	5-Feb-08	SL_CE2	Hrs	-		-		-	20.0%	0
1	03	02	02			Generate BCS cable code sheets (non-long-haul)	25-Feb-08	26-Feb-08	SL_CE2	Hrs	11		1,260		1,260	20.0%	252
1	03	02	02			Generate BCS cable install job orders (non-long-	27-Feb-08	27-Feb-08	SL_CE2	Hrs	6		687		687	20.0%	137
1	03	02	02			Generate BCS fabrication job orders	28-Feb-08	4-Mar-08	SL_CE2	Hrs	5		573		573	20.0%	115
1	03	02	02			Generate BCS cross-connect sheets	30-Apr-08	1-May-08	SL_CE2	Hrs	16		1,833		1,833	20.0%	367
1	03	02	02			Add all jobs to downtime schedule	2-May-08	2-May-08	SL_CE2	Hrs	2		229		229	20.0%	46
1	03	02	02			Review documentation	5-May-08	7-May-08	SL_CE2	Hrs	32		3,666		3,666	20.0%	733
1	03	02	02			Identify BCS EPICS database I/O	6-May-08	8-May-08	SL_CE2	Hrs	40		4,583		4,583	20.0%	917
1	03	02	02			Identify modifications to existing EPICS panels	9-May-08	13-May-08	SL_CE2	Hrs	19		2,177		2,177	20.0%	435
1	03	02	02			Generate plan for integrating modifications of E	14-May-08	16-May-08	SL_CE2	Hrs	24		2,750		2,750	20.0%	550
1	03	02	02			Identify and layout new EPICS panels to be built	19-May-08	22-May-08	SL_CE2	Hrs	40		4,583		4,583	20.0%	917
1	03	02	02			Submit BCS database info to A. Alarcon	23-May-08	23-May-08	SL_CE2	Hrs	4		458		458	20.0%	92
1	03	02	02			RCV: VME Electronic H/W	17-Mar-08	17-Mar-08	SL_MSEG2	\$\$		17,550		19,160	19,160	20.0%	3,832
1	03	02	02			RCV: CEF Parts	30-Jul-08	30-Jul-08	SL_MSEG2	\$\$		7,313		7,984	7,984	20.0%	1,597
1	03	02	02			PIC tester chassis (qty=6)	1-Feb-08	27-Feb-08	SL_MFAT2	Hrs	83		7,233		7,233	20.0%	1,447
1	03	02	02			PIC crate (qty=6)	1-Apr-08	22-Apr-08	SL_MFAT2	Hrs	100		8,736		8,736	20.0%	1,747
1	03	02	02			24V power distribution panel (qty=3)	3-Mar-08	3-Mar-08	SL_MFAT2	Hrs	5		437		437	20.0%	87
1	03	02	02			Toroid comparator chassis (qty=2)	21-Apr-08	1-May-08	SL_MFAT2	Hrs	68		5,940		5,940	20.0%	1,188
1	03	02	02			Current monitor chassis (qty=2)	21-Apr-08	1-May-08	SL_MFAT2	Hrs	68		5,940		5,940	20.0%	1,188
1	03	02	02			LION cables (qty=14)	16-Apr-08	20-May-08	SL_MSEG2	\$\$		4,225		4,613	4,613	20.0%	923
1	03	02	02			Terminal cabinets (qty=3)	1-Apr-08	1-Apr-08	SL_CT2	Hrs	8		502		502	20.0%	100
1	03	02	02			VME breakout terminal box panel (qty=3)	2-Apr-08	2-Apr-08	SL_CT2	Hrs	2		125		125	20.0%	25
1	03	02	02			PIC tester chassis (qty=6)	21-May-08	28-May-08	SL_CE2	Hrs	40		4,583		4,583	20.0%	917
1	03	02	02			PIC crate (qty=6)	21-May-08	21-May-08	SL_CE2	Hrs	3		344		344	20.0%	69
1	03	02	02			Toroid comparator chassis (qty=2)	21-May-08	22-May-08	SL_CE2	Hrs	16		1,833		1,833	20.0%	367
1	03	02	02			Current monitor chassis (qty=2)	21-May-08	22-May-08	SL_CE2	Hrs	16		1,833		1,833	20.0%	367
1	03	02	02			Building 911 Install PIC gas lines	9-Jun-08	10-Jun-08	SL_CT2	Hrs	16		1,004		1,004	20.0%	201
1	03	02	02			Building 913 Install LION gas lines	2-Jun-08	4-Jun-08	SL_CT2	Hrs	24		1,505		1,505	20.0%	301
1	03	02	02			Building 913 Install PIC gas lines	5-Jun-08	6-Jun-08	SL_CT2	Hrs	40		2,509		2,509	20.0%	502
1	03	02	02			Building 913 Install pressure switches (2), valv	9-Jun-08	11-Jun-08	SL_CT2	Hrs	16		1,004		1,004	20.0%	201
1	03	02	02			Building 921 Install PIC gas lines	9-Jun-08	11-Jun-08	SL_CT2	Hrs	24		1,505		1,505	20.0%	301
1	03	02	02			Building 921 Install valves (2) & gas panel	12-Jun-08	27-Jun-08	SL_CT2	Hrs	88		5,520		5,520	20.0%	1,104
1	03	02	02			Mount LION cables	11-Jun-08	19-Jun-08	SL_CE2	Hrs	56		6,416		6,416	20.0%	1,283
1	03	02	02			Leak check gas line	20-Jun-08	23-Jun-08	SL_CT2	Hrs	16		1,004		1,004	20.0%	201
1	03	02	02			Connect LION cables to gas	24-Jun-08	26-Jun-08	SL_CE2	Hrs	16		1,833		1,833	20.0%	367
1	03	02	02			Mount PICs (qty=24)	11-Jun-08	13-Jun-08	SL_CT2	Hrs	16		1,004		1,004	20.0%	201
1	03	02	02			Mount PICs (qty=24)	11-Jun-08	13-Jun-08	SL_CE2	Hrs	8		917		917	20.0%	183
1	03	02	02			Leak check gas line	16-Jun-08	17-Jun-08	SL_CT2	Hrs	16		1,004		1,004	20.0%	201
1	03	02	02			Connect PICs to gas	18-Jun-08	19-Jun-08	SL_CT2	Hrs	16		1,004		1,004	20.0%	201
1	03	02	02			Flow switches in B921 (qty=2)	16-Jun-08	16-Jun-08	SL_CT2	Hrs	8		502		502	20.0%	100
1	03	02	02			Venturis in B921 (qty=4)	18-Jun-08	20-Jun-08	SL_CT2	Hrs	24		1,505		1,505	20.0%	301
1	03	02	02			Flow meter in B921 (qty=2)	23-Jun-08	23-Jun-08	SL_CT2	Hrs	8		502		502	20.0%	100
1	03	02	02			Building 913	29-May-08	29-May-08	SL_CT2	Hrs	8		502		502	20.0%	100
1	03	02	02			Building 921	22-Jul-08	22-Jul-08	SL_CT2	Hrs	8		502		502	20.0%	100
1	03	02	02			Building 911	29-May-08	30-May-08	SL_CT2	Hrs	8		502		502	20.0%	100
1	03	02	02			Building 913	2-Jun-08	4-Jun-08	SL_CT2	Hrs	24		1,505		1,505	20.0%	301
1	03	02	02			Building 921	22-Jul-08	28-Jul-08	SL_CT2	Hrs	32		2,007		2,007	20.0%	401

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WBS Level						LCLB Description - New Rates	Early Start	Early Finish	Res Code	Units	Work Rem. Bud. Qty		Work Rem. Full Burd and Escltd Cost			Contingency %	Contingency \$
2	3	4	5	6	Hours						\$\$	Labor	M&S	Total			
1	03	02	02			Building 911	29-May-08	30-May-08	SL_CT2	Hrs	8		502		502	20.0%	100
1	03	02	02			Building 913	2-Jun-08	4-Jun-08	SL_CT2	Hrs	24		1,505		1,505	20.0%	301
1	03	02	02			Building 921	22-Jul-08	24-Jul-08	SL_CT2	Hrs	24		1,505		1,505	20.0%	301
1	03	02	02			Building 913	29-May-08	29-May-08	SL_CT2	Hrs	8		502		502	20.0%	100
1	03	02	02			Building 921	20-Aug-08	20-Aug-08	SL_CT2	Hrs	8		502		502	20.0%	100
1	03	02	02			Checkout BCS cables	21-Oct-08	22-Oct-08	SL_CE2	Hrs	24		2,860		2,860	20.0%	572
1	03	02	02			Checkout BCS cross connects	23-Oct-08	27-Oct-08	SL_CE2	Hrs	40		4,766		4,766	20.0%	953
1	03	02	02			Checkout BCS beamline devices	28-Oct-08	28-Oct-08	SL_CE2	Hrs	16		1,907		1,907	20.0%	381
1	03	02	02			Checkout BCS electronics	29-Oct-08	30-Oct-08	SL_CE2	Hrs	24		2,860		2,860	20.0%	572
1	03	02	02			Checkout BCS EPICS panels	31-Oct-08	3-Nov-08	SL_CE2	Hrs	16		1,907		1,907	20.0%	381
1	03	02	02			Certify BCS Zone 3	4-Nov-08	7-Nov-08	SL_CE2	Hrs	72		8,579		8,579	20.0%	1,716
1	03	02	02			Certify BCS Zone LCLS	10-Nov-08	21-Nov-08	SL_CE2	Hrs	210		25,023		25,023	20.0%	5,005
1	03	02	02			Certify BCS Global	24-Nov-08	26-Nov-08	SL_CE2	Hrs	96		11,439		11,439	20.0%	2,288
1	03	02	03			Machine Protection System (MPS)					1,048	1,665	111,677	1,818	113,495		28,374
1	03	02	03			Generate PIC System cable code sheets	5-Feb-08	6-Feb-08	SL_CCA2	Hrs	-		-		-	25.0%	0
1	03	02	03			Generate PIC System X-connects sheets	7-Feb-08	7-Feb-08	SL_CCA2	Hrs	-		-		-	25.0%	0
1	03	02	03			Generate PIC System cable install Job Orders	8-Feb-08	8-Feb-08	SL_CCA2	Hrs	-		-		-	25.0%	0
1	03	02	03			Generate PIC System Schematic	13-Feb-08	15-Feb-08	SL_CCA2	Hrs	-		-		-	25.0%	0
1	03	02	03			Review PIC System Documentation (preliminary)	19-Feb-08	20-Feb-08	SL_CE2	Hrs	16		1,833		1,833	25.0%	458
1	03	02	03			Generate Temperature System cable code sheets	1-Feb-08	1-Feb-08	SL_CCA2	Hrs	-		-		-	25.0%	0
1	03	02	03			Generate Temperature System X-connects sheets	4-Feb-08	4-Feb-08	SL_CCA2	Hrs	-		-		-	25.0%	0
1	03	02	03			Generate Temperature System cable install Job Or	5-Feb-08	5-Feb-08	SL_CCA2	Hrs	-		-		-	25.0%	0
1	03	02	03			Review Temperature System Documentation (prelimi	13-Feb-08	14-Feb-08	SL_CE2	Hrs	16		1,833		1,833	25.0%	458
1	03	02	03			Generate Link Node I/O Status cable code sheets	7-Feb-08	11-Feb-08	SL_CCA2	Hrs	-		-		-	25.0%	0
1	03	02	03			Generate Link Node I/O Status X-connects sheets	12-Feb-08	14-Feb-08	SL_CCA2	Hrs	-		-		-	25.0%	0
1	03	02	03			Generate Link Node I/O Status cable install Job	15-Feb-08	15-Feb-08	SL_CCA2	Hrs	-		-		-	25.0%	0
1	03	02	03			Generate Link Node I/O Status Schematic	20-Feb-08	22-Feb-08	SL_CCA2	Hrs	-		-		-	25.0%	0
1	03	02	03			Review Link Node System Documentation (prelimina	25-Feb-08	26-Feb-08	SL_CE2	Hrs	16		1,833		1,833	25.0%	458
1	03	02	03			PIC System Checkout Procedures	31-Mar-08	2-Apr-08	SL_CE2	Hrs	24		2,750		2,750	25.0%	687
1	03	02	03			Temperature System Checkout Procedures	3-Apr-08	7-Apr-08	SL_CE2	Hrs	24		2,750		2,750	25.0%	687
1	03	02	03			Link Node Checkout Procedures	8-Apr-08	14-Apr-08	SL_CE2	Hrs	40		4,583		4,583	25.0%	1,146
1	03	02	03			Review all MPS Documentation	15-Apr-08	21-Apr-08	SL_CE2	Hrs	40		4,583		4,583	25.0%	1,146
1	03	02	03			Add all jobs to Downtime Schedule	22-Apr-08	22-Apr-08	SL_CE2	Hrs	8		917		917	25.0%	229
1	03	02	03			Identify PIC System DB I/O	1-Feb-08	4-Feb-08	SL_CE2	Hrs	-		-		-	25.0%	0
1	03	02	03			Submit PIC System Data Base info to Software Dep	5-Feb-08	6-Feb-08	SL_CE2	Hrs	-		-		-	25.0%	0
1	03	02	03			Identify Temp System DB I/O	7-Feb-08	8-Feb-08	SL_CE2	Hrs	-		-		-	25.0%	0
1	03	02	03			Submit Temp System Data Base info to Software De	11-Feb-08	13-Feb-08	SL_CE2	Hrs	-		-		-	25.0%	0
1	03	02	03			Identify I/O status DB	14-Feb-08	19-Feb-08	SL_CE2	Hrs	-		-		-	25.0%	0
1	03	02	03			Submit Link Node I/O Data Base info to Software	20-Feb-08	21-Feb-08	SL_CE2	Hrs	1		115		115	25.0%	29
1	03	02	03			Procure: PIC System Cables and Connectors	3-Mar-08	14-Mar-08	SL_CE2	Hrs	2		229		229	25.0%	57
1	03	02	03			Procure: Temperature System Cables and Connector	17-Mar-08	28-Mar-08	SL_CE2	Hrs	8		917		917	25.0%	229
1	03	02	03			RCV: Temperature System Cables and Connector	31-Mar-08	31-Mar-08	SL_MSEG2	\$\$		500		546	546	25.0%	136
1	03	02	03			Purchase LinkNode System Cables and Connectors	31-Mar-08	11-Apr-08	SL_CE2	Hrs	1		115		115	25.0%	29
1	03	02	03			RCV: LinkNode System Cables and Connectors	14-Apr-08	14-Apr-08	SL_MSEG2	\$\$		165		180	180	25.0%	45
1	03	02	03			RCV: Temperature System VME VSAM	3-Mar-08	3-Mar-08	SL_MSEG2	\$\$		1,000		1,092	1,092	25.0%	273
1	03	02	03			Bench Test PIC System Electronics	17-Mar-08	28-Mar-08	SL_CE2	Hrs	80		9,166		9,166	25.0%	2,291
1	03	02	03			LTU,BTHW,BTH(B911,912,913)	16-Jul-08	22-Jul-08	SL_CE2	Hrs	40		4,583		4,583	25.0%	1,146
1	03	02	03			LTU,BTHW,BTH(B911,912,913)	16-Jul-08	22-Jul-08	SL_CCA2	Hrs	40		2,669		2,669	25.0%	667
1	03	02	03			Undulator Hall	30-Sep-08	6-Oct-08	SL_CE2	Hrs	40		4,736		4,736	25.0%	1,184

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WBS Level						LCLB Description - New Rates	Early Start	Early Finish	Res Code	Units	Work Rem. Bud. Qty		Work Rem. Full Burd and Escldt Cost			Contingency %	Contingency \$
2	3	4	5	6	Hours						\$	Labor	M&S	Total			
1	03	02	03			Undulator Hall	30-Sep-08	6-Oct-08	SL_CCA2	Hrs	40		2,758		2,758	25.0%	690
1	03	02	03			E-Dump & Bldg.921	16-Sep-08	18-Sep-08	SL_CE2	Hrs	24		2,750		2,750	25.0%	687
1	03	02	03			E-Dump & Bldg.921	16-Sep-08	18-Sep-08	SL_CCA2	Hrs	24		1,601		1,601	25.0%	400
1	03	02	03			LTU,BTHW,BTH(B911,912,913)	23-Jun-08	25-Jun-08	SL_CE2	Hrs	24		2,750		2,750	25.0%	687
1	03	02	03			LTU,BTHW,BTH(B911,912,913)	23-Jun-08	25-Jun-08	SL_CCA2	Hrs	24		1,601		1,601	25.0%	400
1	03	02	03			Undulator Hall	4-Aug-08	6-Aug-08	SL_CE2	Hrs	24		2,750		2,750	25.0%	687
1	03	02	03			Undulator Hall	4-Aug-08	6-Aug-08	SL_CCA2	Hrs	24		1,601		1,601	25.0%	400
1	03	02	03			E-Dump & Bldg.921	30-Sep-08	2-Oct-08	SL_CE2	Hrs	24		2,805		2,805	25.0%	701
1	03	02	03			E-Dump & Bldg.921	30-Sep-08	2-Oct-08	SL_CCA2	Hrs	24		1,633		1,633	25.0%	408
1	03	02	03			LTU,BTHW,BTH(B911,912,913)	2-Sep-08	15-Sep-08	SL_CE2	Hrs	80		9,166		9,166	25.0%	2,291
1	03	02	03			Undulator Hall	2-Sep-08	15-Sep-08	SL_CE2	Hrs	80		9,166		9,166	25.0%	2,291
1	03	02	03			E-Dump & Bldg.921	2-Sep-08	15-Sep-08	SL_CE2	Hrs	80		9,166		9,166	25.0%	2,291
1	03	02	03			Leak check PIC gas System	2-Sep-08	2-Sep-08	SL_CT2	Hrs	16		1,004		1,004	25.0%	251
1	03	02	03			Adjust PIC Gas Flow checkout Pressure Switch	3-Sep-08	3-Sep-08	SL_CT2	Hrs	4		251		251	25.0%	63
1	03	02	03			Certify MPS	16-Oct-08	3-Nov-08	SL_CE2	Hrs	160		19,065		19,065	25.0%	4,766
1	03	02	04			Linac Power Conversion Subsystem					3,132	955,936	227,941	1,043,632	1,271,573		256,252
1	03	02	04	01		Beamline Power Supplies - (Dipole Type)					160	162,500	13,654	177,408	191,062		38,212
1	03	02	04	01		RCV:B280 Intmdt P/S 45V, 330A, 15kW I/A/W	28-Apr-08	28-Apr-08	SL_MSEG2	\$		21,000		22,927		20.0%	4,585
1	03	02	04	01		RCV:B280 Intmdt P/S 50V, 200A, 10kW I/A/W	28-Apr-08	28-Apr-08	SL_MSEG2	\$		25,500		27,839		20.0%	5,568
1	03	02	04	01		RCV:B280 Intmdt P/S 60V, 165A, 10kW I/A/W	28-Apr-08	28-Apr-08	SL_MSEG2	\$		17,000		18,560		20.0%	3,712
1	03	02	04	01		RCV:B280 Intmdt P/S 80V, 125A, 10kW I/A/W	28-Apr-08	28-Apr-08	SL_MSEG2	\$		25,500		27,839		20.0%	5,568
1	03	02	04	01		RCV:B280 Intmdt P/S 100V, 150A, 15kW I/A/W	28-Apr-08	28-Apr-08	SL_MSEG2	\$		21,000		22,927		20.0%	4,585
1	03	02	04	01		RCV:B280 Intmdt P/S 160V, 93A, 15kW I/A/W	28-Apr-08	28-Apr-08	SL_MSEG2	\$		42,000		45,853		20.0%	9,171
1	03	02	04	01		RCV:B280 Intmdt P/S 45V, 330A, 15kW I/A/W	28-Apr-08	28-Apr-08	SL_MSEG2	\$		10,500		11,463		20.0%	2,293
1	03	02	04	01		Bench test and perform safety inspection of PS	29-Apr-08	12-May-08	SL_PCDT2	Hrs	40		2,509		2,509	20.0%	502
1	03	02	04	01		Pre-install Qual Test	13-May-08	27-May-08	SL_PCDE2	Hrs	40		4,583		4,583	20.0%	917
1	03	02	04	01		Pre-install Qual Test	13-May-08	27-May-08	SL_PCCA2	Hrs	40		2,669		2,669	20.0%	534
1	03	02	04	01		Integrate cables	28-May-08	3-Jun-08	SL_TMUE2	Hrs	40		3,893		3,893	20.0%	779
1	03	02	04	03		Beamline Power Supplies - (Trim Type)					160	11,725	13,654	12,801	26,455		5,291
1	03	02	04	03		RCV:B280: AB1756-L61 ControlLogix CPU Series B	28-Apr-08	28-Apr-08	SL_MSEG2	\$		3,074		3,356		20.0%	671
1	03	02	04	03		RCV:B280: AB2711P-T6C20D PanelView Plus 600	28-Apr-08	28-Apr-08	SL_MSEG2	\$		1,731		1,890		20.0%	378
1	03	02	04	03		RCV:B280: AB1492-ACABLE005Y Analog Intrfc Cable	28-Apr-08	28-Apr-08	SL_MSEG2	\$		231		252		20.0%	50
1	03	02	04	03		RCV:B280: AB1492-CABLE005Y Dglt Intrfc Cable	28-Apr-08	28-Apr-08	SL_MSEG2	\$		468		511		20.0%	102
1	03	02	04	03		RCV:B280: AB1756-A7 7-Slot Chassis	28-Apr-08	28-Apr-08	SL_MSEG2	\$		270		295		20.0%	59
1	03	02	04	03		RCV:B280: AB1756-PA72 Power Supply	28-Apr-08	28-Apr-08	SL_MSEG2	\$		492		537		20.0%	107
1	03	02	04	03		RCV:B280: AB1784-CF64 Compact Flash Memory Modle	28-Apr-08	28-Apr-08	SL_MSEG2	\$		70		76		20.0%	15
1	03	02	04	03		RCV:B280: AB1756-EN2T Ethernet Module	28-Apr-08	28-Apr-08	SL_MSEG2	\$		1,890		2,063		20.0%	413
1	03	02	04	03		RCV:B280: AB1756-IB16I 16 Ch. Isltd Dglt Input	28-Apr-08	28-Apr-08	SL_MSEG2	\$		277		302		20.0%	60
1	03	02	04	03		RCV:B280: AB1756-0X8I N.O./N.C. ISOLTD RELY OM	28-Apr-08	28-Apr-08	SL_MSEG2	\$		485		529		20.0%	106
1	03	02	04	03		RCV:B280: AB1756-0F6VI 6 Chnl Isltd Anlg Vltg OM	28-Apr-08	28-Apr-08	SL_MSEG2	\$		1,609		1,757		20.0%	351
1	03	02	04	03		RCV:B280: AB1756-IF6I 6 Ch. Isltd Anlg IM	28-Apr-08	28-Apr-08	SL_MSEG2	\$		1,128		1,231		20.0%	246
1	03	02	04	03		Bench test and perform safety inspection of PS	29-Apr-08	12-May-08	SL_PCDT2	Hrs	40		2,509		2,509	20.0%	502
1	03	02	04	03		Pre-install Qual Test	13-May-08	27-May-08	SL_PCDE2	Hrs	40		4,583		4,583	20.0%	917
1	03	02	04	03		Pre-install Qual Test	13-May-08	27-May-08	SL_PCCA2	Hrs	40		2,669		2,669	20.0%	534
1	03	02	04	03		Integrate cables	28-May-08	3-Jun-08	SL_TMUE2	Hrs	40		3,893		3,893	20.0%	779
1	03	02	04	04		Controls & Power Supply					2,812	781,711	200,632	853,424	1,054,056		212,748
1	03	02	04	04		AWARD: Undulator Cable Plant Contract	1-May-08	1-May-08	SL_AWFY2	\$		331,700		331,700		10.0%	33,170
1	03	02	04	04		RCV: Undulator Cable Plant	29-Jul-08	29-Jul-08	SA_MSEG2	\$		310,000		338,439		10.0%	33,844
1	03	02	04	04		RCV: Cable Plant from Vendor (Outstanding POs)	3-Jun-08	3-Jun-08	SL_MSEG2	\$		181,873		198,557		25.0%	49,639

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WBS Level						LCLB Description - New Rates	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		RCV: Cable Plant from Vendor (Outstanding PRs)	5-May-08	5-May-08	SL_MSEG2	\$\$		227,738		248,630	248,630	25.0%	62,158
1	03	02	04	04		LTU Controls & Power Supply Stores Purchase	1-Feb-08	29-Feb-08	SL_MSEG2	\$\$		-		-	-	25.0%	0
1	03	02	04	04		CF Engineering for Linac Power Supplies System	1-Feb-08	28-Mar-08	SL_SEE2	Hrs	96		10,333		10,333	25.0%	2,583
1	03	02	04	04		CF Engineering for Linac Power Supplies System	1-Feb-08	28-Mar-08	SL_PCCA2	Hrs	50		3,336		3,336	25.0%	834
1	03	02	04	04		Prepare procurement documentation	31-Mar-08	25-Apr-08	SL_SEE2	Hrs	8		861		861	25.0%	215
1	03	02	04	04		Prepare procurement documentation	31-Mar-08	25-Apr-08	SL_PCDE2	Hrs	48		5,500		5,500	25.0%	1,375
1	03	02	04	04		Integrate Rack Hardware	21-Aug-08	21-Aug-08	SL_PCEF2	Hrs	622		39,016		39,016	25.0%	9,754
1	03	02	04	04		Terminate Rack Hardware	22-Aug-08	22-Aug-08	SL_PCEF2	Hrs	1,500		94,089		94,089	25.0%	23,522
1	03	02	04	04		Support CF UIR AC Installation	25-Aug-08	25-Aug-08	SL_TMUE2	Hrs	488		47,498		47,498	25.0%	11,874
1	03	02	04	04		RCV: Racks and AC Internal Distribution	20-Aug-08	20-Aug-08	SL_MSEG2	\$\$		17,500		19,105	19,105	25.0%	4,776
1	03	02	04	04		RCV: Long Haul Connectors, Cbl & Fiber	20-Aug-08	20-Aug-08	SL_MSEG2	\$\$		44,600		48,692	48,692	25.0%	12,173
1	03	02	05			Controls - LLRF					1,894	-	176,432	-	176,432		35,286
1	03	02	05	04		Beam Phase Measurement 2X					86	-	7,142	-	7,142		1,428
1	03	02	05	04		Software Development: Beam Phase Measurement 2x	1-Feb-08	9-May-08	SL_CP2	Hrs	86		7,142		7,142	20.0%	1,428
1	03	02	05	06		Sector 24 T-Cav					90	-	7,518	-	7,518		1,504
1	03	02	05	06		Software Development: Sector 24 T-Cav Hardware	1-Feb-08	9-Jun-08	SL_CP2	Hrs	90		7,518		7,518	20.0%	1,504
1	03	02	05	07		Sector 29/30 Controls (PACs & PADs)					230	-	18,173	-	18,173		3,635
1	03	02	05	07		RCV: Sector 29/30 Control (Packs & Pads) H/W	1-Feb-08	3-Mar-08	SL_MSEG2	\$\$		-		-	-	20.0%	0
1	03	02	05	07		Software Development: Sector 29/30 Control	1-Feb-08	9-Jun-08	SL_CP2	Hrs	180		15,036		15,036	20.0%	3,007
1	03	02	05	07		Fabricate: Sector 29/30 Control	4-Mar-08	31-Mar-08	SL_KT2	Hrs	50		3,136		3,136	20.0%	627
1	03	02	05	10		RF Stability/Feedback					944	-	94,363	-	94,363		18,873
1	03	02	05	10		Design: RF Stability / Feedback	1-Feb-08	26-Nov-08	SL_KE2	Hrs	468		54,022		54,022	20.0%	10,804
1	03	02	05	10		FDR: RF Stability / Feedback	1-Dec-08	1-Dec-08	SL_KE2	Hrs	8		953		953	20.0%	191
1	03	02	05	10		Software Development: RF Stability / Feedback	1-Feb-08	26-Nov-08	SL_CP2	Hrs	468		39,388		39,388	20.0%	7,878
1	03	02	05	11		System Documentation					544	-	49,235	-	49,235		9,847
1	03	02	05	11		System Documentation	1-Feb-08	15-May-09	SL_KPHS2	Hrs	224		16,927		16,927	20.0%	3,385
1	03	02	05	11		System Documentation	1-Feb-08	15-May-09	SL_KE2	Hrs	160		18,685		18,685	20.0%	3,737
1	03	02	05	11		System Documentation	1-Feb-08	15-May-09	SL_CP2	Hrs	160		13,623		13,623	20.0%	2,725
1	03	02	06			Controls - E-Beam Diagnostic					2,237	175,522	181,748	191,624	373,371		80,659
1	03	02	06	01		Controls - Wire Scanners					288	39,800	24,958	43,451	68,409		13,682
1	03	02	06	01		LTU Rack Layout and Wiring	1-Feb-08	2-Jun-08	SL_CE2	Hrs	32		3,666		3,666	20.0%	733
1	03	02	06	01		LTU Rack Layout and Wiring	1-Feb-08	2-Jun-08	SL_CCA2	Hrs	64		4,270		4,270	20.0%	854
1	03	02	06	01		RCV: 5 PMTs	27-May-08	27-May-08	SL_MSEG2	\$\$		8,000		8,734	8,734	20.0%	1,747
1	03	02	06	01		RCV: 1 Charge Integ ADC	31-Mar-08	31-Mar-08	SL_MSEG2	\$\$		10,000		10,917	10,917	20.0%	2,183
1	03	02	06	01		RCV: PMT VME HV cards	31-Mar-08	31-Mar-08	SL_MSEG2	\$\$		15,000		16,376	16,376	20.0%	3,275
1	03	02	06	01		RCV: Misc. Hardware	1-Feb-08	28-Mar-08	SL_MSEG2	\$\$		6,800		7,424	7,424	20.0%	1,485
1	03	02	06	01		LTU Hardware Fab	28-May-08	18-Sep-08	SL_CT2	Hrs	96		6,022		6,022	20.0%	1,204
1	03	02	06	01		LTU Hardware Fab	28-May-08	18-Sep-08	SL_CE2	Hrs	96		10,999		10,999	20.0%	2,200
1	03	02	06	02		Controls - BPMs					1,741	96,104	138,287	104,920	243,207		60,802
1	03	02	06	02		LCLS BPM Engineering Liaison	1-Feb-08	30-Apr-09	SL_CE2	Hrs	420		49,016		49,016	25.0%	12,254
1	03	02	06	02		LCLS BPM Coordinator	1-Feb-08	30-Apr-09	SL_CCA2	Hrs	630		42,819		42,819	25.0%	10,705
1	03	02	06	02		Software Development	1-Feb-08	16-Apr-08	SL_CE2	Hrs	5		550		550	25.0%	137
1	03	02	06	02		RCV: AFE PCB	1-Feb-08	1-Feb-08	SL_MSEG2	\$\$		-		-	-	25.0%	0
1	03	02	06	02		RCV: AFE Parts	1-Feb-08	1-Feb-08	SL_MSEG2	\$\$		-		-	-	25.0%	0
1	03	02	06	02		RCV: PAD PCB	1-Feb-08	1-Feb-08	SL_MSEG2	\$\$		-		-	-	25.0%	0
1	03	02	06	02		Vendor Fab AFE and PAD PCBs	4-Feb-08	15-Feb-08	SL_MSEG2	\$\$		-		-	-	25.0%	0
1	03	02	06	02		Assemble BPM Chassis	4-Feb-08	1-May-08	SL_CT2	Hrs	213		13,329		13,329	25.0%	3,332
1	03	02	06	02		Test Modules	4-Feb-08	1-May-08	SL_CT2	Hrs	48		3,011		3,011	25.0%	753
1	03	02	06	02		Test Modules	4-Feb-08	1-May-08	SL_CE2	Hrs	48		5,500		5,500	25.0%	1,375

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WBS Level						LCLB Description - New Rates	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		Install Modules	1-Apr-08	28-Apr-08	SL_CT2	Hrs	24		1,505		1,505	25.0%	376
1	03	02	06	02		Install Software	29-Apr-08	27-May-08	SL_CT2	Hrs	15		941		941	25.0%	235
1	03	02	06	02		Install Software	29-Apr-08	27-May-08	SL_CE2	Hrs	8		917		917	25.0%	229
1	03	02	06	02		Procure: Network Hardware	1-Feb-08	7-Feb-08	SL_CT2	Hrs	8		502		502	25.0%	125
1	03	02	06	02		RCV: Network Hardware	8-Feb-08	8-Feb-08	SL_MSEG2	\$\$		34,504		37,669	37,669	25.0%	9,417
1	03	02	06	02		Load Racks	11-Feb-08	13-Mar-08	SL_CT2	Hrs	44		2,760		2,760	25.0%	690
1	03	02	06	02		Install Cables	11-Feb-08	10-Mar-08	SL_CT2	Hrs	80		5,018		5,018	25.0%	1,255
1	03	02	06	02		Construct Cables	12-Feb-08	25-Mar-08	SL_CT2	Hrs	176		11,040		11,040	25.0%	2,760
1	03	02	06	02		Procure: VME Crates and CPU	1-Feb-08	7-Feb-08	SL_CT2	Hrs	-		-		-	25.0%	0
1	03	02	06	02		RCV: VME Crates and CPUs	8-Feb-08	8-Feb-08	SL_MSEG2	\$\$		61,600		67,251	67,251	25.0%	16,813
1	03	02	06	02		Load Racks	11-Feb-08	13-Mar-08	SL_CT2	Hrs	22		1,380		1,380	25.0%	345
1	03	02	06	03		Controls - Toroids					80	6,700	7,092	7,315	14,407		1,441
1	03	02	06	03		RCV: 5 I/O	27-May-08	27-May-08	SL_MSEG2	\$\$		6,700		7,315	7,315	10.0%	731
1	03	02	06	03		LTU Hardware Fab	28-May-08	18-Sep-08	SL_CT2	Hrs	40		2,509		2,509	10.0%	251
1	03	02	06	03		LTU Hardware Fab	28-May-08	18-Sep-08	SL_CE2	Hrs	40		4,583		4,583	10.0%	458
1	03	02	06	04		Controls - Stoppers					64	500	5,738	546	6,283		628
1	03	02	06	04		LTU Rack Layout and Wiring	1-Feb-08	29-Feb-08	SL_CE2	Hrs	16		1,833		1,833	10.0%	183
1	03	02	06	04		LTU Rack Layout and Wiring	1-Feb-08	29-Feb-08	SL_CCA2	Hrs	16		1,068		1,068	10.0%	107
1	03	02	06	04		RCV: LTU Intertrack Cables	24-Jun-08	24-Jun-08	SL_MSEG2	\$\$		500		546	546	10.0%	55
1	03	02	06	04		LTU Hardware Fab	25-Jun-08	23-Jul-08	SL_CT2	Hrs	16		1,004		1,004	10.0%	100
1	03	02	06	04		LTU Hardware Fab	25-Jun-08	23-Jul-08	SL_CE2	Hrs	16		1,833		1,833	10.0%	183
1	03	02	06	05		Controls - Profile Monitors					16	5,000	1,418	5,459	6,877		688
1	03	02	06	05		RCV: 2 PMC Interfaced Cables	1-Feb-08	1-Feb-08	SL_MSEG2	\$\$		-		-	-	10.0%	0
1	03	02	06	05		RCV: 4 Intertrack Cables	1-Feb-08	1-Feb-08	SL_MSEG2	\$\$		-		-	-	10.0%	0
1	03	02	06	05		RCV: VME Crate	1-Feb-08	1-Feb-08	SL_MSEG2	\$\$		5,000		5,459	5,459	10.0%	546
1	03	02	06	05		LTU Hardware Fab	4-Feb-08	28-Apr-08	SL_CT2	Hrs	8		502		502	10.0%	50
1	03	02	06	05		LTU Hardware Fab	4-Feb-08	28-Apr-08	SL_CE2	Hrs	8		917		917	10.0%	92
1	03	02	06	09		Controls - Single Beam Dump					-	-	-	-	-		0
1	03	02	06	09		LTU Hardware Fab	1-Feb-08	29-Feb-08	SL_CT2	Hrs	-		-		-	25.0%	0
1	03	02	06	09		LTU Hardware Fab	1-Feb-08	29-Feb-08	SL_CE2	Hrs	-		-		-	25.0%	0
1	03	02	06	12		Controls - Movable Collimator					48	27,418	4,255	29,933	34,188		3,419
1	03	02	06	12		RCV: 16 Motor Contrlr/Drives/Pwr Supplies	27-May-08	27-May-08	SL_MSEG2	\$\$		27,418		29,933	29,933	10.0%	2,993
1	03	02	06	12		LTU Hardware Fab	28-May-08	20-Aug-08	SL_CT2	Hrs	24		1,505		1,505	10.0%	151
1	03	02	06	12		LTU Hardware Fab	28-May-08	20-Aug-08	SL_CE2	Hrs	24		2,750		2,750	10.0%	275
1	03	02	08			Controls - Timing					672	212,744	51,564	232,261	283,825		56,765
1	03	02	08			RCV: BSY Timing Hardware	17-Mar-08	24-Jul-08	SL_MSEG2	\$\$		14,200		15,503	15,503	20.0%	3,101
1	03	02	08			AWARD: LTU Timing Hardware	1-Feb-08	1-Feb-08	SL_AWFY2	\$\$		-		-	-	20.0%	0
1	03	02	08			RCV: LTU Timing Hardware	1-May-08	1-May-08	SA_MSEG2	\$\$		164,000		179,045	179,045	20.0%	35,809
1	03	02	08			Database Development and S/W Testing	2-May-08	30-May-08	SL_CP2	Hrs	200		16,707		16,707	20.0%	3,341
1	03	02	08			Electrical Interconnect & Coordination Drawings	2-Jun-08	13-Jun-08	SL_CCA2	Hrs	112		7,473		7,473	20.0%	1,495
1	03	02	08			RCV: E-Dump Timing Hardware	13-Mar-08	13-Mar-08	SL_MSEG2	\$\$		34,544		37,713	37,713	20.0%	7,543
1	03	02	08			Database Development and S/W Testing	14-Mar-08	10-Apr-08	SL_CP2	Hrs	200		16,707		16,707	20.0%	3,341
1	03	02	08			Electrical Interconnect & Coordination Drawings	14-Mar-08	27-Mar-08	SL_CCA2	Hrs	160		10,676		10,676	20.0%	2,135
1	03	02	09			Controls - Vacuum					349	88,172	29,154	96,260	125,414		25,083
1	03	02	09	01		Controls - Vacuum Instrumentation & Interlocks					349	88,172	29,154	96,260	125,414		25,083
1	03	02	09	01		LTU Control Vacuum Software	1-Apr-08	12-May-08	SL_CP2	Hrs	349		29,154		29,154	20.0%	5,831
1	03	02	09	01		LTU Control Vacuum H/W in House FAB	4-Feb-08	27-May-08	SL_CT2	Hrs	-		-		-	20.0%	0
1	03	02	09	01		LTU Control Vacuum H/W in House FAB	4-Feb-08	27-May-08	SL_CE2	Hrs	-		-		-	20.0%	0
1	03	02	09	01		RCV: 9 LTU Ion Gauge Controllers	29-Apr-08	29-Apr-08	SL_MSEG2	\$\$		18,224		19,896	19,896	20.0%	3,979

WBS Level						LCLB Description - New Rates	Early Start	Early Finish	Res Code	Units	Work Rem. Bud. Qty		Work Rem. Full Burd and Escltd Cost			Contingency %	Contingency \$
2	3	4	5	6	Hours						\$\$	Labor	M&S	Total			
1	03	02	09	01		RCV: 14 LTU Ion Pump Power Supplies	29-Apr-08	29-Apr-08	SL_MSEG2	\$\$		15,040		16,419	16,419	20.0%	3,284
1	03	02	09	01		RCV: 6 LTU Vacuum Valve Controllers	29-Apr-08	29-Apr-08	SL_MSEG2	\$\$		4,080		4,454	4,454	20.0%	891
1	03	02	09	01		RCV: 3 LTU Vacuum Control I/O (PLC)	29-Apr-08	29-Apr-08	SL_MSEG2	\$\$		13,328		14,551	14,551	20.0%	2,910
1	03	02	09	01		RCV: IOC, Crate, Terminal Server	29-Apr-08	29-Apr-08	SL_MSEG2	\$\$		17,500		19,105	19,105	20.0%	3,821
1	03	02	09	01		RCV: LTU Vac Instrumentation & Interlocks Misc	29-Apr-08	29-Apr-08	SL_MSEG2	\$\$		20,000		21,835	21,835	20.0%	4,367
1	03	02	10			Software & Controls Infrastructure					756	884,966	60,631	970,158	1,030,789		182,826
1	03	02	10	04		Data Communications					740	675,366	59,521	737,951	797,472		159,494
1	03	02	10	04		RCV: Switches/Digis/Wireless	29-Apr-08	29-Apr-08	SL_MSEG2	\$\$		210,000		229,265	229,265	20.0%	45,853
1	03	02	10	04		RCV: Fabricated Fiber	29-Apr-08	29-Apr-08	SL_MSEG2	\$\$		201,600		220,095	220,095	20.0%	44,019
1	03	02	10	04		Fiber Pull	30-Apr-08	28-May-08	SL_MSSC2	\$\$		51,000		55,679	55,679	20.0%	11,136
1	03	02	10	04		Fiber Termination	29-May-08	10-Jul-08	SL_MSSC2	\$\$		36,000		39,303	39,303	20.0%	7,861
1	03	02	10	04		RCV: Patch Panels/Cables	18-Mar-08	18-Mar-08	SL_MSEG2	\$\$		26,766		29,221	29,221	20.0%	5,844
1	03	02	10	04		Cat 6 Installation (Through E-Dump)	19-Mar-08	11-Jun-08	SL_MSSC2	\$\$		125,000		136,467	136,467	20.0%	27,293
1	03	02	10	04		Cat 6 Installation - AMOS	2-Feb-09	13-Feb-09	SL_MSSC2	\$\$		25,000		27,921	27,921	20.0%	5,584
1	03	02	10	04		ED&I Support	19-Mar-08	11-Jun-08	SL_TMUO2	Hrs	740		59,521	59,521	20.0%	11,904	
1	03	02	10	05		Computers					16	209,600	1,110	232,207	233,317		23,332
1	03	02	10	05		RCV: VME Crates FY08	29-Apr-08	29-Apr-08	SL_MSEG2	\$\$		75,050		81,935	81,935	10.0%	8,194
1	03	02	10	05		Procure: VME Crates FY09	3-Oct-08	9-Jan-09	SL_CCA2	Hrs	16		1,110	1,110	10.0%	111	
1	03	02	10	05		RCV: VME Crates FY09	12-Jan-09	12-Jan-09	SL_MSEG2	\$\$		134,550		150,272	150,272	10.0%	15,027
1	03	03				Linac Magnets & Supports					176	328,733	15,061	353,189	368,249		25,906
1	03	03	02			Bend Magnet (BX3_LTU)					-	28,400	-	28,950	28,950		1,448
1	03	03	02			RCV: BX3 Supports	1-Feb-08	14-Mar-08	SL_MSSY2	\$\$		22,400		22,400	22,400	5.0%	1,120
1	03	03	02			BX3 Fabricate Safety Cover	1-Feb-08	19-Mar-08	SL_MSEG2	\$\$		6,000		6,550	6,550	5.0%	328
1	03	03	04			Bend Magnet (BY_LTU)					83	25,600	7,233	27,949	35,182		5,277
1	03	03	04			RCV:BYLTU Fabricate Supports	31-Mar-08	31-Mar-08	SL_MSEG2	\$\$		24,000		26,202	26,202	15.0%	3,930
1	03	03	04			BYLTU Misc Hardware	1-Feb-08	5-Jun-08	SL_MSEG2	\$\$		1,600		1,747	1,747	15.0%	262
1	03	03	04			BYLTU Final Assembly/Kit for Installation	6-Jun-08	19-Jun-08	SL_MFAT2	Hrs	83		7,233	7,233	15.0%	1,085	
1	03	03	05			Quad Magnet (Quad_LTU)					51	-	4,458	-	4,458		223
1	03	03	05			Measure Everson Tesla Quad (req #121416, qty 14)	1-Feb-08	11-Apr-08	SL_MES2	Hrs	5		439	439	5.0%	22	
1	03	03	05			Final Assembly LTU Quads	1-Feb-08	28-Mar-08	SL_MFAT2	Hrs	46		4,019	4,019	5.0%	201	
1	03	03	08			Corrector Magnet (Type 4)					-	-	-	-	-		0
1	03	03	08			Engineering Support Corrector Fabrication	1-Feb-08	4-Mar-08	SL_ME2	Hrs	-		-	-	-	20.0%	0
1	03	03	08			Engineering Support Corrector Fabrication	1-Feb-08	4-Mar-08	SL_MDD2	Hrs	-		-	-	-	20.0%	0
1	03	03	09			Bend Magnet (BYD_DUMP)					41	234,983	3,369	256,540	259,909		12,995
1	03	03	09			RCV: BYD Magnets	24-Jun-08	24-Jun-08	SL_MSEG2	\$\$		234,983		256,540	256,540	5.0%	12,827
1	03	03	09			BYD Magnetic Measurement	25-Jun-08	9-Jul-08	SL_MES2	Hrs	41		3,369	3,369	5.0%	168	
1	03	03	11			Bend Magnet (BYPM_LTU)					-	39,750	-	39,750	39,750		5,963
1	03	03	11			RCV: BXPM Fabricate Supports	3-Mar-08	31-Mar-08	SL_MSSY2	\$\$		39,750		39,750	39,750	15.0%	5,963
1	03	04				Linac Vacuum Subsystem					450	209,088	42,589	219,428	262,017		29,357
1	03	04	05			Linac to Undulator (LTU) Vacuum System					223	180,191	21,339	187,880	209,219		20,922
1	03	04	05			Procure Undulator IN Assembly	1-Feb-08	14-Feb-08	SL_MSEG2	\$\$		3,062		3,342	3,342	10.0%	334
1	03	04	05			Vacuum Process Undulator IN Assembly	15-Feb-08	21-Jul-08	SL_MFAT2	Hrs	10		839	839	10.0%	84	
1	03	04	05			RCV: Vacuum Drifts	1-Feb-08	14-Mar-08	SA_MSEG2	\$\$		67,500		73,692	73,692	10.0%	7,369
1	03	04	05			RCV: Drift Supports	1-Feb-08	1-Feb-08	SL_MSSY2	\$\$		68,175		68,175	68,175	10.0%	6,818
1	03	04	05			Purchase Pump Supports	1-Feb-08	28-Feb-08	SL_MSSY2	\$\$		28,200		28,200	28,200	10.0%	2,820
1	03	04	05			Vacuum Process Vacuum Hardware	1-Feb-08	11-Apr-08	SL_MFAT2	Hrs	42		3,669	3,669	10.0%	367	
1	03	04	05			Vacuum Process Vacuum Hardware	1-Feb-08	11-Apr-08	SL_ME2	Hrs	42		4,201	4,201	10.0%	420	
1	03	04	05			Fabricate Dump Kicker Chamber	1-Feb-08	14-Apr-08	SL_MFMS2	Hrs	52		5,792	5,792	10.0%	579	
1	03	04	05			Fabricate Dump Kicker Chamber	1-Feb-08	14-Apr-08	SL_MFAT2	Hrs	52		4,525	4,525	10.0%	453	

WBS Level						LCLB Description - New Rates	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	04	05			Dump Kicker Chamber Material	1-Feb-08	14-Apr-08	SL_MSEG2	\$\$		5,600		6,114	6,114	10.0%	611
1	03	04	05			Design Undulator IN Assembly (BCR_20%)	1-Feb-08	13-May-08	SL_ME2	Hrs	1		81	81	81	10.0%	8
1	03	04	05			Design Undulator IN Assembly (BCR_20%)	1-Feb-08	13-May-08	SL_MDD2	Hrs	2		136	136	136	10.0%	14
1	03	04	05			Procure Undulator IN Assembly	14-May-08	10-Jul-08	SL_MSEG2	\$\$		7,654		8,356	8,356	10.0%	836
1	03	04	05			Vacuum Process Undulator IN Assembly	11-Jul-08	7-Aug-08	SL_MFAT2	Hrs	24		2,097	2,097	2,097	10.0%	210
1	03	04	06			Dumpline Vacuum System					72	-	7,192	-	7,192		719
1	03	04	06			Purchase Dump Drift Supports	1-Feb-08	31-Mar-08	SL_MSEG2	\$\$		-		-	-	10.0%	0
1	03	04	06			Purchase Dump Pump Supports	1-Feb-08	31-Mar-08	SL_MSEG2	\$\$		-		-	-	10.0%	0
1	03	04	06			Vacuum Process Dump Vacuum Hardware	1-Feb-08	24-Jul-08	SL_MFAT2	Hrs	8		734	734	734	10.0%	73
1	03	04	06			Vacuum Process Dump Vacuum Hardware	1-Feb-08	24-Jul-08	SL_ME2	Hrs	6		567	567	567	10.0%	57
1	03	04	06			Fabricate Dump Chamber	1-Feb-08	29-Feb-08	SL_MFMS2	Hrs	33		3,690	3,690	3,690	10.0%	369
1	03	04	06			Fabricate Dump Chamber	1-Feb-08	29-Feb-08	SL_MFAT2	Hrs	25		2,201	2,201	2,201	10.0%	220
1	03	04	07			Vacuum System Undulator Interface					155	-	14,058	-	14,058		1,406
1	03	04	07	01		Entrance Section Assembly					62	-	5,575	-	5,575		558
1	03	04	07	01		Preliminary Design Ent Sec	1-Feb-08	29-Feb-08	SL_PHS2	Hrs	9		667	667	667	10.0%	67
1	03	04	07	01		Preliminary Design Ent Sec	1-Feb-08	29-Feb-08	SL_MVE2	Hrs	18		1,937	1,937	1,937	10.0%	194
1	03	04	07	01		Preliminary Design Ent Sec	1-Feb-08	29-Feb-08	SL_MDD2	Hrs	35		2,971	2,971	2,971	10.0%	297
1	03	04	07	02		Exit Section Assembly					93	-	8,482	-	8,482		848
1	03	04	07	02		Preliminary Prototype Design Exit Sec	1-Feb-08	14-Feb-08	SL_PHS2	Hrs	13		964	964	964	10.0%	96
1	03	04	07	02		Preliminary Prototype Design Exit Sec	1-Feb-08	14-Feb-08	SL_MVE2	Hrs	32		3,444	3,444	3,444	10.0%	344
1	03	04	07	02		Preliminary Prototype Design Exit Sec	1-Feb-08	14-Feb-08	SL_MDD2	Hrs	48		4,074	4,074	4,074	10.0%	407
1	03	04	08			LTU/BSY& Cold Trap Vacuum System					-	28,898	-	31,549	31,549		6,310
1	03	04	08			RCV: Cold Trap from Vendor	27-May-08	27-May-08	SL_MSEG2	\$\$		28,898		31,549	31,549	20.0%	6,310
1	03	05				Linac Electron Diagnostics Summary					3,627	493,903	357,597	516,180	873,777		98,047
1	03	05	01			Wire Scanners (7) Summary					45	131,873	3,931	143,971	147,902		7,395
1	03	05	01			RCV: Wire Scanner Components from Vendor	22-Jul-08	22-Jul-08	SL_MSEG2	\$\$		124,000		135,376	135,376	5.0%	6,769
1	03	05	01			Procure Misc Materials - Wire Scanners	1-Apr-08	25-Apr-08	SL_MSEG2	\$\$		7,873		8,595	8,595	5.0%	430
1	03	05	01			Post Process & Test	11-Jul-08	22-Jul-08	SL_MFAT2	Hrs	45		3,931	3,931	3,931	5.0%	197
1	03	05	02			Beam Position Monitors					106	18,000	10,635	18,000	28,635		4,295
1	03	05	02	03		BPM - FFTB (12) Summary					106	18,000	10,635	18,000	28,635		4,295
1	03	05	02	03		Component Fab & Assembly - BPMs	1-Feb-08	21-Mar-08	SL_MSSY2	\$\$		18,000		18,000	18,000	15.0%	2,700
1	03	05	02	03		Component Fab & Assembly - BPMs	1-Feb-08	21-Mar-08	SL_MFPC2	Hrs	7		1,264	1,264	1,264	15.0%	190
1	03	05	02	03		Component Fab & Assembly - BPMs	1-Feb-08	21-Mar-08	SL_MFMS2	Hrs	41		4,629	4,629	4,629	15.0%	694
1	03	05	02	03		Component Fab & Assembly - BPMs	1-Feb-08	21-Mar-08	SL_MFAT2	Hrs	14		1,206	1,206	1,206	15.0%	181
1	03	05	02	03		Perform QC / Metrology	24-Mar-08	28-Mar-08	SL_MFES2	Hrs	16		1,310	1,310	1,310	15.0%	197
1	03	05	02	03		Perform Functional Testing - BPMs	31-Mar-08	1-Apr-08	SL_CCA2	Hrs	8		514	514	514	15.0%	77
1	03	05	02	03		Post Process & Test	2-Apr-08	8-Apr-08	SL_MFAT2	Hrs	20		1,712	1,712	1,712	15.0%	257
1	03	05	04			Beam Stoppers (4) Summary					489	12,000	53,220	13,101	66,321		9,948
1	03	05	04			Procure Component Material - Stoppers	1-Feb-08	1-Apr-08	SL_MSEG2	\$\$		9,600		10,481	10,481	15.0%	1,572
1	03	05	04			Component Fab & Assembly - Stoppers	2-Apr-08	29-Apr-08	SL_MFPC2	Hrs	62		10,900	10,900	10,900	15.0%	1,635
1	03	05	04			Component Fab & Assembly - Stoppers	2-Apr-08	29-Apr-08	SL_MFMS2	Hrs	207		23,144	23,144	23,144	15.0%	3,472
1	03	05	04			Component Fab & Assembly - Stoppers	2-Apr-08	29-Apr-08	SL_MFAT2	Hrs	104		9,042	9,042	9,042	15.0%	1,356
1	03	05	04			Perform Functional Testing - Stoppers	30-Apr-08	13-May-08	SL_MFAT2	Hrs	58		5,067	5,067	5,067	15.0%	760
1	03	05	04			Post Process & Test	14-May-08	28-May-08	SL_MFAT2	Hrs	58		5,067	5,067	5,067	15.0%	760
1	03	05	04			Vendor Fab 1st Lot - Supports	1-Feb-08	4-Apr-08	SL_MSEG2	\$\$		1,600		1,747	1,747	15.0%	262
1	03	05	04			Procure Misc Materials - Diagnostics Supports	1-Feb-08	14-Feb-08	SL_MSEG2	\$\$		800		873	873	15.0%	131
1	03	05	05			Profile Monitors (7 OTR-3 PHOSPHOR SCREEN-1 YAG)					872	274,160	76,148	278,819	354,967		35,497
1	03	05	05			RCV: Profile Monitors Final Lot	3-Mar-08	28-Mar-08	SL_MSSY2	\$\$		223,376		223,376	223,376	10.0%	22,338
1	03	05	05			RCV: Profile Monitors Final Lot	3-Mar-08	28-Mar-08	SL_MSEG2	\$\$		50,784		55,443	55,443	10.0%	5,544

LCLS Estimate to Complete

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WBS Level						LCLB Description - New Rates	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	05	05			Component Fab & Assembly - Profile Monitors	31-Mar-08	25-Apr-08	SL_MFPC2	Hrs	38		6,635		6,635	10.0%	664
1	03	05	05			Component Fab & Assembly - Profile Monitors	31-Mar-08	25-Apr-08	SL_MFMS2	Hrs	37		4,126		4,126	10.0%	413
1	03	05	05			Component Fab & Assembly - Profile Monitors	31-Mar-08	25-Apr-08	SL_MFAT2	Hrs	112		9,749		9,749	10.0%	975
1	03	05	05			Perform QC / Metrology	28-Apr-08	2-May-08	SL_MFES2	Hrs	83		6,739		6,739	10.0%	674
1	03	05	05			Perform Functional Testing - Profile Monitors	5-May-08	9-May-08	SL_CCA2	Hrs	184		12,278		12,278	10.0%	1,228
1	03	05	05			Post Process & Test	12-May-08	16-May-08	SL_MFAT2	Hrs	184		16,074		16,074	10.0%	1,607
1	03	05	05			Assemble Supports	15-Feb-08	14-Mar-08	SL_MFAT2	Hrs	235		20,547		20,547	10.0%	2,055
1	03	05	09			Single Beam Dump (1) Summary					-	-	-	-	-		0
1	03	05	09			Component Fab & Assembly - Single Beam Dump	1-Feb-08	14-Mar-08	SL_MFPC2	Hrs	-		-		-	20.0%	0
1	03	05	09			Component Fab & Assembly - Single Beam Dump	1-Feb-08	14-Mar-08	SL_MFMS2	Hrs	-		-		-	20.0%	0
1	03	05	09			Post Process & Test	17-Mar-08	25-Apr-08	SL_MFAT2	Hrs	-		-		-	20.0%	0
1	03	05	09			Perform QC & Inspection - Diagnostic Supports	1-Feb-08	14-Mar-08	SL_MFES2	Hrs	-		-		-	20.0%	0
1	03	05	09			Assemble Supports	17-Mar-08	25-Apr-08	SL_MFAT2	Hrs	-		-		-	20.0%	0
1	03	05	10			Electron Beam Dump (1) Summary					545	523	53,511	571	54,082		8,112
1	03	05	10			Component Fab & Assembly - Electron Beam Dump	1-Feb-08	29-Feb-08	SL_MFPC2	Hrs	55		9,698		9,698	15.0%	1,455
1	03	05	10			Component Fab & Assembly - Electron Beam Dump	1-Feb-08	29-Feb-08	SL_MFMS2	Hrs	54		6,082		6,082	15.0%	912
1	03	05	10			Component Fab & Assembly - Electron Beam Dump	1-Feb-08	29-Feb-08	SL_MFAT2	Hrs	219		19,158		19,158	15.0%	2,874
1	03	05	10			Perform QC / Metrology	3-Mar-08	17-Apr-08	SL_MES2	Hrs	35		2,849		2,849	15.0%	427
1	03	05	10			Post Process & Test	18-Apr-08	1-May-08	SL_MFAT2	Hrs	92		8,037		8,037	15.0%	1,206
1	03	05	10			Procure Misc Materials - Diagnostics Supports	1-Feb-08	29-Feb-08	SL_MSEG2	\$\$		523		571	571	15.0%	86
1	03	05	10			Perform QC & Inspection - Diagnostic Supports	29-Feb-08	29-Feb-08	SL_MFES2	Hrs	16		1,318		1,318	15.0%	198
1	03	05	10			Assemble Supports	15-Feb-08	29-Feb-08	SL_MFAT2	Hrs	73		6,369		6,369	15.0%	955
1	03	05	11			Protection Collimators (5) Summary					718	18,216	71,609	19,570	91,180		9,118
1	03	05	11			RCV: 1st Lot Diagnostics Equip from Vendor	15-Feb-08	28-Mar-08	SL_MSSY2	\$\$		3,456		3,456	3,456	10.0%	346
1	03	05	11			RCV: 1st Lot Diagnostics Equip from Vendor	15-Feb-08	28-Mar-08	SL_MSEG2	\$\$		8,640		9,433	9,433	10.0%	943
1	03	05	11			Component Fab & Assembly - Protection Collimat	31-Mar-08	23-May-08	SL_MFPC2	Hrs	65		11,410		11,410	10.0%	1,141
1	03	05	11			Component Fab & Assembly - Protection Collimat	31-Mar-08	23-May-08	SL_MFMS2	Hrs	129		14,423		14,423	10.0%	1,442
1	03	05	11			Component Fab & Assembly - Protection Collimat	31-Mar-08	23-May-08	SL_MFAT2	Hrs	386		33,721		33,721	10.0%	3,372
1	03	05	11			Post Process & Test	27-May-08	23-Jun-08	SL_MFAT2	Hrs	83		7,251		7,251	10.0%	725
1	03	05	11			Vendor Fab 1st Lot - Supports	1-Feb-08	14-Mar-08	SL_MSEG2	\$\$		6,120		6,681	6,681	10.0%	668
1	03	05	11			Assemble Supports	17-Mar-08	25-Apr-08	SL_MFAT2	Hrs	55		4,805		4,805	10.0%	480
1	03	05	12			Movable Collimators (7x,3y) Summary					640	11,724	69,337	12,227	81,564		16,313
1	03	05	12			RCV: 1st Lot Diagnostics Equip from Vendor	1-Feb-08	22-Feb-08	SL_MSSY2	\$\$		6,240		6,240	6,240	20.0%	1,248
1	03	05	12			RCV: 1st Lot Diagnostics Equip from Vendor	1-Feb-08	22-Feb-08	SL_MSEG2	\$\$		3,360		3,668	3,668	20.0%	734
1	03	05	12			Component Fab & Assembly - Movable Collimator	25-Feb-08	14-Mar-08	SL_MFPC2	Hrs	132		23,223		23,223	20.0%	4,645
1	03	05	12			Component Fab & Assembly - Movable Collimator	25-Feb-08	14-Mar-08	SL_MFMS2	Hrs	132		14,792		14,792	20.0%	2,958
1	03	05	12			Component Fab & Assembly - Movable Collimator	25-Feb-08	14-Mar-08	SL_MFAT2	Hrs	132		11,558		11,558	20.0%	2,312
1	03	05	12			Perform QC / Metrology	17-Mar-08	4-Apr-08	SL_MES2	Hrs	74		6,023		6,023	20.0%	1,205
1	03	05	12			Perform Functional Testing - Movable Collimat	7-Apr-08	25-Apr-08	SL_CCA2	Hrs	55		3,670		3,670	20.0%	734
1	03	05	12			Post Process & Test	23-Apr-08	25-Apr-08	SL_MFAT2	Hrs	69		6,028		6,028	20.0%	1,206
1	03	05	12			Vendor Fab 1st Lot - Supports	1-Feb-08	14-Mar-08	SL_MSEG2	\$\$		1,944		2,122	2,122	20.0%	424
1	03	05	12			Procure Misc Materials - Diagnostics Supports	1-Feb-08	14-Mar-08	SL_MSEG2	\$\$		180		197	197	20.0%	39
1	03	05	12			Assemble Supports	17-Mar-08	25-Apr-08	SL_MFAT2	Hrs	42		3,669		3,669	20.0%	734
1	03	05	12			Component Fab & Assembly - Movable Collimator	17-Mar-08	25-Apr-08	SL_MFPC2	Hrs	1		176		176	20.0%	35
1	03	05	12			Component Fab & Assembly - Movable Collimator	17-Mar-08	25-Apr-08	SL_MFMS2	Hrs	1		112		112	20.0%	22
1	03	05	12			Component Fab & Assembly - Movable Collimator	17-Mar-08	25-Apr-08	SL_MFAT2	Hrs	1		87		87	20.0%	17
1	03	05	13			Safety Electron Dump (1) Summary					212	27,407	19,205	29,921	49,126		7,369
1	03	05	13			RCV: Safety Dump from Vendor	24-Mar-08	24-Mar-08	SA_MSEG2	\$\$		23,624		25,791	25,791	15.0%	3,869
1	03	05	13			Procure Component Material - Single Beam Dump	1-Feb-08	29-Feb-08	SL_MSEG2	\$\$		1,164		1,271	1,271	15.0%	191

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WBS Level						LCLB Description - New Rates	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	05	13			Component Fab & Assembly - Single Beam Dump	25-Mar-08	21-Apr-08	SL_MFMS2	Hrs	28		3,131		3,131	15.0%	470
1	03	05	13			Component Fab & Assembly - Single Beam Dump	25-Mar-08	21-Apr-08	SL_MFAT2	Hrs	92		8,037		8,037	15.0%	1,206
1	03	05	13			Post Process & Test	22-Apr-08	5-May-08	SL_MFAT2	Hrs	46		4,019		4,019	15.0%	603
1	03	05	13			Assemble Supports	22-Apr-08	5-May-08	SL_MFAT2	Hrs	46		4,019		4,019	15.0%	603
1	03	05	13			Vendor Fab Diagnostics Supports	1-Feb-08	21-Mar-08	SL_MSEG2	\$\$		2,328		2,542	2,542	15.0%	381
1	03	05	13			Procure Misc Materials - Diagnostics Supports	25-Mar-08	21-Apr-08	SL_MSEG2	\$\$		291		318	318	15.0%	48
1	03	07				Linac Installation & Alignment					22,399	1,417,866	1,976,962	1,524,194	3,501,157		700,231
1	03	07	06			Linac LTU System Installation & Alignment					12,875	1,146,151	1,130,107	1,227,552	2,357,658		471,532
1	03	07	06			Network & Monumentation- BTH West	22-Feb-08	20-Mar-08	SL_MES2	Hrs	326		26,516		26,516	20.0%	5,303
1	03	07	06			Hole template layout - BTH West	21-Mar-08	17-Apr-08	SL_MES2	Hrs	374		30,439		30,439	20.0%	6,088
1	03	07	06			Install BTH West components	10-Sep-08	21-Oct-08	SL_MFAT2	Hrs	2,121		188,906		188,906	20.0%	37,781
1	03	07	06			Install BTH West components	10-Sep-08	21-Oct-08	SL_ME2	Hrs	586		60,480		60,480	20.0%	12,096
1	03	07	06			Core drill holes: LTU (BTH West)	18-Apr-08	15-May-08	SL_MSSY2	\$\$		36,041		36,041	36,041	20.0%	7,208
1	03	07	06			Install, align & grout supports: LTU (BTH West)	16-May-08	31-Jul-08	SL_MSSY2	\$\$		45,052		45,052	45,052	20.0%	9,010
1	03	07	06			Install Racks & cable plant BTH West (B005.BSY)	4-Mar-08	9-Sep-08	SL_PCDT2	Hrs	365		22,895		22,895	20.0%	4,579
1	03	07	06			Install Racks & cable plant BTH West (B005.BSY)	4-Mar-08	9-Sep-08	SL_PCDE2	Hrs	227		26,008		26,008	20.0%	5,202
1	03	07	06			Install Racks & cable plant BTH West (B005.BSY)	4-Mar-08	9-Sep-08	SL_MSDB2	\$\$		106,089		115,822	115,822	20.0%	23,164
1	03	07	06			Install Phase III Timing Cables	1-Feb-08	27-Mar-08	SL_MSDB2	\$\$		296,943		324,184	324,184	20.0%	64,837
1	03	07	06			Network & Monumentation- BTH	1-Feb-08	3-Mar-08	SL_MES2	Hrs	562		45,708		45,708	20.0%	9,142
1	03	07	06			Hole template layout - BTH	1-Feb-08	1-Apr-08	SL_MES2	Hrs	672		54,664		54,664	20.0%	10,933
1	03	07	06			Install LTU to EBD components	26-Jun-08	5-Sep-08	SL_MFAT2	Hrs	3,724		325,329		325,329	20.0%	65,066
1	03	07	06			Install LTU to EBD components	26-Jun-08	5-Sep-08	SL_ME2	Hrs	1,071		108,385		108,385	20.0%	21,677
1	03	07	06			Install LTU Water	8-Sep-08	14-Nov-08	SL_MSSY2	\$\$		177,745		177,745	177,745	20.0%	35,549
1	03	07	06			Install LTU Water	8-Sep-08	14-Nov-08	SL_MFAT2	Hrs	428		38,372		38,372	20.0%	7,674
1	03	07	06			Terminate cable plant BTH (SB 2.1.2.2.2.3)	22-Oct-08	18-Nov-08	SL_PCDT2	Hrs	216		14,091		14,091	20.0%	2,818
1	03	07	06			Terminate cable plant BTH (SB 2.1.2.2.2.3)	22-Oct-08	18-Nov-08	SL_PCDE2	Hrs	540		64,345		64,345	20.0%	12,869
1	03	07	06			Terminate cable plant BTH (SB 2.1.2.2.2.3)	22-Oct-08	18-Nov-08	SL_PCCA2	Hrs	540		37,474		37,474	20.0%	7,495
1	03	07	06			Terminate cable plant BTH (SB 2.1.2.2.2.3)	22-Oct-08	18-Nov-08	SL_CT2	Hrs	360		23,485		23,485	20.0%	4,697
1	03	07	06			Terminate cable plant BTH (SB 2.1.2.2.2.3)	22-Oct-08	18-Nov-08	SL_CE2	Hrs	30		3,575		3,575	20.0%	715
1	03	07	06			Terminate cable plant BTH (SB 2.1.2.2.2.3)	22-Oct-08	18-Nov-08	SL_CCA2	Hrs	90		6,246		6,246	20.0%	1,249
1	03	07	06			Core drill holes: LTU (BTH)	2-Apr-08	15-Apr-08	SL_MSDB2	\$\$		86,087		93,984	93,984	20.0%	18,797
1	03	07	06			Install, align & grout supports: LTU (BTH)	9-Apr-08	20-May-08	SL_MSDB2	\$\$		118,800		129,699	129,699	20.0%	25,940
1	03	07	06			Install Racks & cable plant BTH (SB 2.1.2.2)	3-Mar-08	23-May-08	SL_PCDT2	Hrs	397		24,896		24,896	20.0%	4,979
1	03	07	06			Install Racks & cable plant BTH (SB 2.1.2.2)	3-Mar-08	23-May-08	SL_PCDE2	Hrs	247		28,295		28,295	20.0%	5,659
1	03	07	06			Install Racks & cable plant BTH (SB 2.1.2.2)	3-Mar-08	23-May-08	SL_MSDB2	\$\$		279,393		305,024	305,024	20.0%	61,005
1	03	07	07			Linac E-Dump System Installation & Alignment					7,401	271,716	642,545	296,643	939,188		187,838
1	03	07	07			Install Dump components - LN	25-Jul-08	21-Aug-08	SL_MFAT2	Hrs	3,085		269,492		269,492	20.0%	53,898
1	03	07	07			Install Dump components - LN	25-Jul-08	21-Aug-08	SL_MES2	Hrs	737		59,947		59,947	20.0%	11,989
1	03	07	07			Install Dump components - LN	25-Jul-08	21-Aug-08	SL_ME2	Hrs	1,749		177,089		177,089	20.0%	35,418
1	03	07	07			Terminate cable plant Dump (SB3.1)	1-Dec-08	7-Jan-09	SL_PCDT2	Hrs	16		1,044		1,044	20.0%	209
1	03	07	07			Terminate cable plant Dump (SB3.1)	1-Dec-08	7-Jan-09	SL_PCDE2	Hrs	20		2,383		2,383	20.0%	477
1	03	07	07			Terminate cable plant Dump (SB3.1)	1-Dec-08	7-Jan-09	SL_PCCA2	Hrs	20		1,388		1,388	20.0%	278
1	03	07	07			Terminate cable plant Dump (SB3.1)	1-Dec-08	7-Jan-09	SL_CT2	Hrs	360		23,485		23,485	20.0%	4,697
1	03	07	07			Terminate cable plant Dump (SB3.1)	1-Dec-08	7-Jan-09	SL_CE2	Hrs	30		3,575		3,575	20.0%	715
1	03	07	07			Terminate cable plant Dump (SB3.1)	1-Dec-08	7-Jan-09	SL_CCA2	Hrs	90		6,246		6,246	20.0%	1,249
1	03	07	07			Checkout Dump System	8-Jan-09	4-Feb-09	SL_CT2	Hrs	560		36,532		36,532	20.0%	7,306
1	03	07	07			Checkout Dump System	8-Jan-09	4-Feb-09	SL_CE2	Hrs	44		5,243		5,243	20.0%	1,049
1	03	07	07			Checkout Dump System	8-Jan-09	4-Feb-09	SL_CCA2	Hrs	64		4,441		4,441	20.0%	888
1	03	07	07			Install, align & grout supports: Dump	4-Feb-08	20-May-08	SL_MSDB2	\$\$		133,760		146,031	146,031	20.0%	29,206

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WBS Level						LCLB Description - New Rates	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	07	07			Install Racks & cable plant Dump (SB3.1)	21-May-08	18-Jun-08	SL_PCDT2	Hrs	387		24,253		24,253	20.0%	4,851
1	03	07	07			Install Racks & cable plant Dump (SB3.1)	21-May-08	18-Jun-08	SL_PCDE2	Hrs	239		27,429		27,429	20.0%	5,486
1	03	07	07			Install Racks & cable plant Dump (SB3.1)	21-May-08	18-Jun-08	SL_MSDB2	\$\$		137,956		150,612	150,612	20.0%	30,122
1	03	07	20			LINAC Installation 2007 Shut Down					2,124	-	204,310	-	204,310		40,862
1	03	07	20	04		Linac Undulator Interface					2,124	-	204,310	-	204,310		40,862
1	03	07	20	04		Exit Section Supts Transport & Install	21-Feb-08	22-Feb-08	SL_TMUO2	Hrs	32		2,574		2,574	20.0%	515
1	03	07	20	04		Exit Section Supports Transport & Install	21-Feb-08	21-Feb-08	SL_TMUO2	Hrs	16		1,287		1,287	20.0%	257
1	03	07	20	04		Entrance Section Assy & Support Arrive at SLAC	1-Feb-08	14-Feb-08	SL_SEE2	Hrs	16		1,722		1,722	20.0%	344
1	03	07	20	04		Entrance Section Assy & Support Arrive at SLAC	1-Feb-08	14-Feb-08	SL_MVE2	Hrs	16		1,722		1,722	20.0%	344
1	03	07	20	04		Entrance Section Assy & Support Arrive at SLAC	1-Feb-08	14-Feb-08	SL_MFAT2	Hrs	40		3,494		3,494	20.0%	699
1	03	07	20	04		Install Entrance Section Components	22-Feb-08	28-Feb-08	SL_SEE2	Hrs	50		5,382		5,382	20.0%	1,076
1	03	07	20	04		Install Entrance Section Components	22-Feb-08	28-Feb-08	SL_MFAT2	Hrs	80		6,989		6,989	20.0%	1,398
1	03	07	20	04		Exit Section Assembly & Support Arrive at SLAC	1-Feb-08	13-Feb-08	SL_SEE2	Hrs	16		1,722		1,722	20.0%	344
1	03	07	20	04		Exit Section Assembly & Support Arrive at SLAC	1-Feb-08	13-Feb-08	SL_MVE2	Hrs	16		1,722		1,722	20.0%	344
1	03	07	20	04		Exit Section Assembly & Support Arrive at SLAC	1-Feb-08	13-Feb-08	SL_MFAT2	Hrs	40		3,494		3,494	20.0%	699
1	03	07	20	04		Install Exit Section Components	14-Feb-08	20-Feb-08	SL_SEE2	Hrs	50		5,382		5,382	20.0%	1,076
1	03	07	20	04		Install Exit Section Components	14-Feb-08	20-Feb-08	SL_MFAT2	Hrs	80		6,989		6,989	20.0%	1,398
1	03	07	20	04		EOU Arrive at SLAC	1-Feb-08	15-Feb-08	SL_SEE2	Hrs	16		1,722		1,722	20.0%	344
1	03	07	20	04		EOU Arrive at SLAC	1-Feb-08	15-Feb-08	SL_MFAT2	Hrs	16		1,398		1,398	20.0%	280
1	03	07	20	04		EOU Arrive at SLAC	1-Feb-08	15-Feb-08	SL_ME2	Hrs	8		810		810	20.0%	162
1	03	07	20	04		Pre-Align EOU at SLAC	18-Feb-08	17-Mar-08	SL_SEE2	Hrs	88		9,472		9,472	20.0%	1,894
1	03	07	20	04		Pre-Align EOU at SLAC	18-Feb-08	17-Mar-08	SL_MES2	Hrs	120		9,767		9,767	20.0%	1,953
1	03	07	20	04		Pre-Align EOU at SLAC	18-Feb-08	17-Mar-08	SL_ME2	Hrs	24		2,430		2,430	20.0%	486
1	03	07	20	04		Install EOU	18-Mar-08	15-Apr-08	SL_SEE2	Hrs	104		11,194		11,194	20.0%	2,239
1	03	07	20	04		Install EOU	18-Mar-08	15-Apr-08	SL_PHS2	Hrs	24		1,779		1,779	20.0%	356
1	03	07	20	04		Install EOU	18-Mar-08	15-Apr-08	SL_MFAT2	Hrs	120		10,483		10,483	20.0%	2,097
1	03	07	20	04		Install EOU	18-Mar-08	15-Apr-08	SL_ME2	Hrs	48		4,859		4,859	20.0%	972
1	03	07	20	04		Install EOU	18-Mar-08	15-Apr-08	SL_CE2	Hrs	40		4,583		4,583	20.0%	917
1	03	07	20	04		Align EOU	16-Apr-08	22-Apr-08	SL_SEE2	Hrs	72		7,750		7,750	20.0%	1,550
1	03	07	20	04		Align EOU	16-Apr-08	22-Apr-08	SL_MES2	Hrs	80		6,511		6,511	20.0%	1,302
1	03	07	20	04		Align EOU	16-Apr-08	22-Apr-08	SL_ME2	Hrs	32		3,239		3,239	20.0%	648
1	03	07	20	04		Validate EOU	23-Apr-08	2-May-08	SL_SEE2	Hrs	56		6,028		6,028	20.0%	1,206
1	03	07	20	04		Validate EOU	23-Apr-08	2-May-08	SL_PHS2	Hrs	16		1,186		1,186	20.0%	237
1	03	07	20	04		Validate EOU	23-Apr-08	2-May-08	SL_ME2	Hrs	24		2,430		2,430	20.0%	486
1	03	07	20	04		Validate EOU	23-Apr-08	2-May-08	SL_CE2	Hrs	16		1,833		1,833	20.0%	367
1	03	07	20	04		Integrate EOU	5-May-08	16-May-08	SL_SEE2	Hrs	96		10,333		10,333	20.0%	2,067
1	03	07	20	04		Integrate EOU	5-May-08	16-May-08	SL_PHS2	Hrs	16		1,186		1,186	20.0%	237
1	03	07	20	04		Integrate EOU	5-May-08	16-May-08	SL_ME2	Hrs	24		2,430		2,430	20.0%	486
1	03	07	20	04		Integrate EOU	5-May-08	16-May-08	SL_CT2	Hrs	120		7,527		7,527	20.0%	1,505
1	03	07	20	04		Integrate EOU	5-May-08	16-May-08	SL_CE2	Hrs	136		15,582		15,582	20.0%	3,116
1	03	07	20	04		Test EOU	19-May-08	2-Jun-08	SL_SEE2	Hrs	96		10,333		10,333	20.0%	2,067
1	03	07	20	04		Test EOU	19-May-08	2-Jun-08	SL_PHS2	Hrs	16		1,186		1,186	20.0%	237
1	03	07	20	04		Test EOU	19-May-08	2-Jun-08	SL_ME2	Hrs	24		2,430		2,430	20.0%	486
1	03	07	20	04		Test EOU	19-May-08	2-Jun-08	SL_CT2	Hrs	80		5,018		5,018	20.0%	1,004
1	03	07	20	04		Test EOU	19-May-08	2-Jun-08	SL_CE2	Hrs	160		18,332		18,332	20.0%	3,666
1	04					UNDULATOR SYSTEM					47,025	3,708,276	4,154,624	3,925,073	8,079,697		2,181,070
1	04	01				Undulator System Management & Integration					6,198	51,424	586,721	55,007	641,728		556,322
1	04	01	01			Undulator System Management					6,198	36,064	586,721	38,932	625,653		556,322
1	04	01	01	01		Undulator System Management - Technical					6,198	9,604	586,721	11,241	597,962		556,322

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WBS Level						LCLB Description - New Rates	Early Start	Early Finish	Res Code	Units	Work Rem. Bud. Qty		Work Rem. Full Burd and Escltd Cost			Contingency %	Contingency \$	
2	3	4	5	6	Hours						\$	Labor	M&S	Total				
1	04	01	01	01		Und Design Support @ SLAC	1-Feb-08	31-Oct-08	SL_MDD2	Hrs	2,123		180,984		180,984	100.0%	180,984	
1	04	01	01	01		Undulator Document Control @ SLAC(600 hrs/yr)	1-Feb-08	31-Oct-08	SL_MDD2	Hrs	726		61,891		61,891	50.0%	30,945	
1	04	01	01	01		Und AM & Int Eng (4000 hrs/yr)	1-Feb-08	29-Apr-09	SL_ME2	Hrs	2,324		239,627		239,627	100.0%	239,627	
1	04	01	01	01		SLAC Travel (30 trips@\$1250/trip)	1-Feb-08	30-Apr-08	SL_MSTR2	\$\$		4,604		5,782		5,782	0.0%	0
1	04	01	01	01		CAD License Maintenance	1-May-08	30-May-08	SL_MSEG2	\$\$		5,000		5,459		5,459	10.0%	546
1	04	01	01	01		Undulator Mgmt/Engr @ SLAC	1-Feb-08	31-Oct-08	SL_ME2	Hrs	1,025		104,219		104,219	100.0%	104,219	
1	04	01	01	02		ANL Project Support					-	26,460	-	27,691	27,691		0	
1	04	01	01	02		SLAC Indirect Tax - FY08 (CNST)	1-Feb-08	30-Sep-08	SL_MSXX2	\$\$		26,460		27,691		27,691	0.0%	0
1	04	01	02			Undulator System Materials & Supplies					-	15,360	-	16,075	16,075		0	
1	04	01	02	01		Undulator System M&S - General					-	15,360	-	16,075	16,075		0	
1	04	01	02	01		Office Supplies and Misc Materials	1-Feb-08	29-Feb-08	AN_MSEG2	\$\$		-		-		40.0%	0	
1	04	01	02	01		Tele/Video Conferencing	1-Feb-08	29-Feb-08	AN_MSEG2	\$\$		-		-		0.0%	0	
1	04	01	02	01		CPUs and Software	1-Feb-08	29-Feb-08	AN_MSEG2	\$\$		-		-		0.0%	0	
1	04	01	02	01		Shipping and Storage	1-Feb-08	29-Feb-08	AN_MSEQ2	\$\$		-		-		0.0%	0	
1	04	01	02	01		Misc Crafts/Shops	1-Feb-08	1-Apr-08	AN_MSEQ2	\$\$		5,120		5,358		5,358	0.0%	0
1	04	01	02	01		Assembly and Staging	1-Feb-08	1-Apr-08	AN_MSEQ2	\$\$		10,240		10,716		10,716	0.0%	0
1	04	01	02	02		Undulator System Travel					-	-	-	-	-		0	
1	04	01	02	02		Domestic Travel	1-Feb-08	29-Feb-08	AN_MSTR2	\$\$		-		-		10.0%	0	
1	04	01	02	02		Foreign Travel	1-Feb-08	29-Feb-08	AN_MSTR2	\$\$		-		-		10.0%	0	
1	04	01	03			Undulator System Reviews and Workshops					-	-	-	-	-		0	
1	04	01	03			Review and Workshop Costs	1-Feb-08	29-Feb-08	AN_MSSC2	\$\$		-		-		0.0%	0	
1	04	02				Controls					6,962	728,584	687,656	774,820	1,462,476		258,756	
1	04	02	08			Undulator Magnet Power Supplies					1,048	790	109,658	862	110,521		16,622	
1	04	02	08	01		Software					80	-	6,683	-	6,683		2,005	
1	04	02	08	01		DBs and Displays	1-Apr-08	14-Apr-08	SL_CP2	Hrs	80		6,683		6,683	30.0%	2,005	
1	04	02	08	02		Beamline Power Supplies (Trim Type)					744	-	82,680	-	82,680		12,501	
1	04	02	08	02	03	PLC Power Supply Protection System					744	-	82,680	-	82,680		12,501	
1	04	02	08	02	03	Develop Ladder Logic	1-Feb-08	28-Mar-08	SL_PCDE2	Hrs	40		4,583		4,583	10.0%	458	
1	04	02	08	02	03	Develop Touch Panel Displays	31-Mar-08	1-May-08	SL_PCDE2	Hrs	192		21,998		21,998	10.0%	2,200	
1	04	02	08	02	03	Documentation	1-Feb-08	12-Feb-08	SL_PCDE2	Hrs	64		7,333		7,333	10.0%	733	
1	04	02	08	02	03	Pre-install Qual Test and Integration	30-Jun-08	2-Jul-08	SL_PCDE2	Hrs	24		2,750		2,750	10.0%	275	
1	04	02	08	02	03	Pre-install Qual Test and Integration	30-Jun-08	2-Jul-08	SL_CP2	Hrs	24		2,005		2,005	10.0%	200	
1	04	02	08	02	03	Design PLC Chassis Rack Interface	1-Feb-08	8-Feb-08	SL_PCDE2	Hrs	48		5,500		5,500	30.0%	1,650	
1	04	02	08	02	03	Integrate cables	15-Feb-08	19-Feb-08	SL_TMUE2	Hrs	16		1,557		1,557	10.0%	156	
1	04	02	08	02	03	Bench-test and assembly	20-Feb-08	20-Feb-08	SL_PCDT2	Hrs	8		502		502	10.0%	50	
1	04	02	08	02	03	Pre-intall Qual Test	21-Feb-08	22-Feb-08	SL_PCDE2	Hrs	8		917		917	10.0%	92	
1	04	02	08	02	03	Pre-intall Qual Test	21-Feb-08	22-Feb-08	SL_PCCA2	Hrs	8		534		534	10.0%	53	
1	04	02	08	02	03	Develop Ladder Logic	1-Feb-08	28-Mar-08	SL_PCDE2	Hrs	40		4,583		4,583	20.0%	917	
1	04	02	08	02	03	Develop Touch Panel Displays	31-Mar-08	1-May-08	SL_PCDE2	Hrs	192		21,998		21,998	20.0%	4,400	
1	04	02	08	02	03	Documentation	1-Feb-08	6-Feb-08	SL_PCDE2	Hrs	32		3,666		3,666	10.0%	367	
1	04	02	08	02	03	Pre-install Qual Test and Integration	30-Jun-08	2-Jul-08	SL_PCDE2	Hrs	24		2,750		2,750	20.0%	550	
1	04	02	08	02	03	Pre-install Qual Test and Integration	30-Jun-08	2-Jul-08	SL_CP2	Hrs	24		2,005		2,005	20.0%	401	
1	04	02	08	03		Rack Assembly					166	790	15,299	862	16,161		1,616	
1	04	02	08	03		Integrate Cables	1-Feb-08	5-Feb-08	SL_PCDE2	Hrs	32		3,666		3,666	10.0%	367	
1	04	02	08	03		Pre-install Qual Test	6-Feb-08	12-Feb-08	SL_PCDT2	Hrs	40		2,509		2,509	10.0%	251	
1	04	02	08	03		Pre-install Qual Test	6-Feb-08	12-Feb-08	SL_PCDE2	Hrs	40		4,583		4,583	10.0%	458	
1	04	02	08	03		Pre-install Qual Test	6-Feb-08	12-Feb-08	SL_PCCA2	Hrs	5		334		334	10.0%	33	
1	04	02	08	03		Pre-install Qual Test	6-Feb-08	12-Feb-08	SL_CP2	Hrs	40		3,341		3,341	10.0%	334	
1	04	02	08	03		RCV: Circuit Breaker, 100A 480V, 3-pole,25kAIC -	3-Mar-08	3-Mar-08	SL_MSEG2	\$\$		640		699		699	10.0%	70

LCLS Estimate to Complete

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WBS Level						LCLB Description - New Rates	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	08	03		RCV: Panel	3-Mar-08	3-Mar-08	SL_MSEG2	\$\$		50		55	55	10.0%	5
1	04	02	08	03		RCV: Cables	3-Mar-08	3-Mar-08	SL_MSEG2	\$\$		100		109	109	10.0%	11
1	04	02	08	03		Integrate Cables	5-Mar-08	5-Mar-08	SL_PCDE2	Hrs	3		344		344	10.0%	34
1	04	02	08	03		Pre-install Qual Test	6-Mar-08	6-Mar-08	SL_PCDT2	Hrs	2		125		125	10.0%	13
1	04	02	08	03		Pre-install Qual Test	6-Mar-08	6-Mar-08	SL_PCDE2	Hrs	2		229		229	10.0%	23
1	04	02	08	03		Pre-install Qual Test	6-Mar-08	6-Mar-08	SL_CP2	Hrs	2		167		167	10.0%	17
1	04	02	08	04		System Checkout					58	-	4,997	-	4,997		500
1	04	02	08	04		Intra-rack cable connections	1-Feb-08	4-Feb-08	SL_PCDE2	Hrs	7		802		802	10.0%	80
1	04	02	08	04		Intra-rack cable connections	1-Feb-08	4-Feb-08	SL_CP2	Hrs	2		167		167	10.0%	17
1	04	02	08	04		Integration Testing	1-Apr-08	14-Apr-08	SL_PCDT2	Hrs	27		1,694		1,694	10.0%	169
1	04	02	08	04		Integration Testing	1-Apr-08	14-Apr-08	SL_PCDE2	Hrs	16		1,833		1,833	10.0%	183
1	04	02	08	04		Integration Testing	1-Apr-08	14-Apr-08	SL_CP2	Hrs	6		501		501	10.0%	50
1	04	02	10			Undulator Control Module					931	244,500	91,947	255,876	347,823		69,292
1	04	02	10	02		UCM EPICS Development					28	-	3,151	-	3,151		630
1	04	02	10	02		Integrate UCM Software with SLAC	1-Feb-08	1-Jul-08	AN_CE2	Hrs	28		3,151		3,151	20.0%	630
1	04	02	10	03		Procure UCMI Prototype					14	2,500	1,576	2,616	4,192		1,078
1	04	02	10	03		Vendor search for UCMI assy vendor	1-Feb-08	1-Apr-08	AN_CE2	Hrs	12		1,351		1,351	20.0%	270
1	04	02	10	03		Prepare requisition for UCMI Prototype	1-Feb-08	1-Apr-08	AN_CE2	Hrs	2		225		225	10.0%	23
1	04	02	10	03		RCV First article UCMI	1-Feb-08	18-Mar-08	AN_MSEG2	\$\$		2,500		2,616	2,616	30.0%	785
1	04	02	10	04		UCMI Proto H/W Assembly					-	-	-	-	-		0
1	04	02	10	04		Assemble first prototype	1-Feb-08	17-Mar-08	AN_CT2	Hrs	-		-		-	30.0%	0
1	04	02	10	05		UCMI Prototype Testing					192	-	21,145	-	21,145		4,544
1	04	02	10	05		Assemble prototype rack	2-Apr-08	3-Apr-08	AN_CE2	Hrs	10		1,125		1,125	20.0%	225
1	04	02	10	05		Installation in LTT	2-Apr-08	3-Apr-08	AN_CT2	Hrs	10		661		661	20.0%	132
1	04	02	10	05		Software integration	2-Apr-08	8-Apr-08	AN_CE2	Hrs	28		3,151		3,151	30.0%	945
1	04	02	10	05		Integrated testing	2-Apr-08	22-Apr-08	AN_CE2	Hrs	144		16,207		16,207	20.0%	3,241
1	04	02	10	07		Procure UCMI First Article					30	5,000	3,320	5,233	8,553		2,054
1	04	02	10	07		Prepare bid package for UCM Interface	1-Feb-08	11-Feb-08	AN_ME2	Hrs	14		1,519		1,519	20.0%	304
1	04	02	10	07		Evaluate vendor proposals UCMI	4-Mar-08	5-Mar-08	AN_ME2	Hrs	16		1,801		1,801	10.0%	180
1	04	02	10	07		AWARD Contract for 1st prot. UCMI	6-Mar-08	6-Mar-08	AN_AW2	\$\$		5,000		5,233	5,233	30.0%	1,570
1	04	02	10	07		RCV First article UCMI	4-Apr-08	4-Apr-08	AA_MSEG2	\$\$		5,000		5,233	5,233	30.0%	1,570
1	04	02	10	08		UCM First Article Testing and QA					96	-	10,805	-	10,805		1,080
1	04	02	10	08		Validation of UCMI First Article	7-Apr-08	18-Apr-08	AN_ME2	Hrs	48		5,402		5,402	10.0%	540
1	04	02	10	08		Validation of UCMI First Article	7-Apr-08	18-Apr-08	AN_CE2	Hrs	32		3,602		3,602	10.0%	360
1	04	02	10	08		Write QA Procedure for UCMI	7-Apr-08	8-Apr-08	AN_ME2	Hrs	16		1,801		1,801	10.0%	180
1	04	02	10	09		Procure Production UCMI					234	160,000	21,085	167,445	188,530		37,616
1	04	02	10	09		Prepare req for production UCMI	21-Apr-08	21-Apr-08	AN_ME2	Hrs	8		900		900	10.0%	90
1	04	02	10	09		AWARD req for production UCMI	22-Apr-08	22-Apr-08	AN_AW2	\$\$		160,000		167,445	167,445	20.0%	33,489
1	04	02	10	09		RCV production UCMI	21-May-08	21-May-08	AA_MSEG2	\$\$		160,000		167,445	167,445	20.0%	33,489
1	04	02	10	09		Production UCMI unit tests	22-May-08	12-Jun-08	AN_CT2	Hrs	113		7,467		7,467	20.0%	1,493
1	04	02	10	09		Production UCMI unit tests	22-May-08	12-Jun-08	AN_CE2	Hrs	113		12,718		12,718	20.0%	2,544
1	04	02	10	10		Procure Production Blade IOC					150	-	13,397	-	13,397		2,679
1	04	02	10	10		RCV production IOC	1-Feb-08	1-Feb-08	AN_MSEG2	\$\$		-		-	-	20.0%	0
1	04	02	10	10		Production IOC units tested	4-Feb-08	15-Feb-08	AN_CT2	Hrs	75		4,956		4,956	20.0%	991
1	04	02	10	10		Production IOC units tested	4-Feb-08	15-Feb-08	AN_CE2	Hrs	75		8,441		8,441	20.0%	1,688
1	04	02	10	14		UCM Interlock & Power Supply					187	77,000	17,468	80,583	98,051		19,610
1	04	02	10	14		RCV: Prototype Components	1-Feb-08	1-Feb-08	AN_MSEG2	\$\$		5,000		5,233	5,233	20.0%	1,047
1	04	02	10	14		UCM-IC Testing	4-Feb-08	26-Mar-08	AN_CE2	Hrs	80		9,004		9,004	20.0%	1,801
1	04	02	10	14		UCM-IC Prototype Fabrication	4-Feb-08	7-Feb-08	AN_CT2	Hrs	35		2,313		2,313	20.0%	463

WBS Level						LCLB Description - New Rates	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	10	14		Prepare Bid Package for UCM-IC	23-Apr-08	6-May-08	AN_CE2	Hrs	30		3,376		3,376	20.0%	675
1	04	02	10	14		RCV: Production UCM-IC	14-Jul-08	14-Jul-08	AN_MSEG2	\$\$		72,000		75,350	75,350	20.0%	15,070
1	04	02	10	14		Prepare UCM-IC for Shipment to SLAC	15-Jul-08	21-Jul-08	AN_CT2	Hrs	35		2,313		2,313	20.0%	463
1	04	02	10	14		Ship UCM-IC Units to SLAC	22-Jul-08	22-Jul-08	AN_CT2	Hrs	7		463		463	20.0%	93
1	04	02	12			Rack and Cable					383	211,235	26,072	221,064	247,135		31,620
1	04	02	12	01		Undulator Racks					383	55,000	26,072	57,559	83,631		9,950
1	04	02	12	01		Undulator rack design	1-Feb-08	14-Feb-08	AN_CT2	Hrs	1		66		66	30.0%	20
1	04	02	12	01		Motor power supply design	1-Feb-08	14-Feb-08	AN_CT2	Hrs	0		20		20	30.0%	6
1	04	02	12	01		AC Interrupt chassis design	1-Feb-08	14-Feb-08	AN_CT2	Hrs	0		20		20	30.0%	6
1	04	02	12	01		Cable tray layout/routing	1-Feb-08	14-Feb-08	AN_MDD2	Hrs	81		5,352		5,352	20.0%	1,070
1	04	02	12	01		Cable tray layout/routing	1-Feb-08	14-Feb-08	AN_CT2	Hrs	81		5,352		5,352	20.0%	1,070
1	04	02	12	01		Tray loading and design	1-Feb-08	14-Feb-08	AN_CT2	Hrs	112		7,401		7,401	10.0%	740
1	04	02	12	01		Prepare req for production SBR	1-Feb-08	21-Feb-08	AN_ME2	Hrs	2		225		225	10.0%	23
1	04	02	12	01		AWARD req for production SBR	22-Feb-08	22-Feb-08	AN_AW2	\$\$		55,000		57,559	57,559	10.0%	5,756
1	04	02	12	01		RCV Production Service Building Racks	7-Apr-08	7-Apr-08	AA_MSEG2	\$\$		55,000		57,559	57,559	10.0%	5,756
1	04	02	12	01		Assemble production components	13-Jun-08	25-Jul-08	AN_CT2	Hrs	75		4,956		4,956	20.0%	991
1	04	02	12	01		Ship loaded racks to SLAC	28-Jul-08	29-Jul-08	AN_ME2	Hrs	15		1,688		1,688	10.0%	169
1	04	02	12	01		Ship loaded racks to SLAC	28-Jul-08	29-Jul-08	AN_CT2	Hrs	15		991		991	10.0%	99
1	04	02	12	02		Intra-Undulator Cabling					-	54,588	-	57,128	57,128		5,713
1	04	02	12	02		RCV production Cables	19-Mar-08	19-Mar-08	AA_MSEG2	\$\$		54,588		57,128	57,128	10.0%	5,713
1	04	02	12	03		Electronics Interface Assembly					-	101,647	-	106,377	106,377		15,956
1	04	02	12	03		Prepare req for production EIA	1-Feb-08	1-Feb-08	AN_ME2	Hrs	-		-		-	20.0%	0
1	04	02	12	03		AWARD req for production EIA	4-Feb-08	4-Feb-08	AN_AW2	\$\$		101,647		106,377	106,377	20.0%	21,275
1	04	02	12	03		RCV production EIA	8-Apr-08	8-Apr-08	AA_MSEG2	\$\$		101,647		106,377	106,377	15.0%	15,956
1	04	02	13			BPM					23	-	2,589	-	2,589		518
1	04	02	13	01		APS Testing					23	-	2,589	-	2,589		518
1	04	02	13	01		Algorithm Development	1-Feb-08	6-Feb-08	AN_CE2	Hrs	-		-		-	30.0%	0
1	04	02	13	01		BPM Test support	7-Feb-08	12-Feb-08	AN_CE2	Hrs	16		1,801		1,801	20.0%	360
1	04	02	13	01		EPICS support	13-Feb-08	18-Feb-08	AN_CE2	Hrs	7		788		788	20.0%	158
1	04	02	14			Long Term Test Prep					-	-	-	-	-		0
1	04	02	14			Hardware Layout Support	1-Feb-08	11-Feb-08	AN_CT2	Hrs	-		-		-	20.0%	0
1	04	02	14			Software Support - Vendor CAM test	12-Feb-08	20-Feb-08	AN_CP2	Hrs	-		-		-	20.0%	0
1	04	02	14			Hardware Support - Vendor CAM test	21-Feb-08	29-Feb-08	AN_CT2	Hrs	-		-		-	20.0%	0
1	04	02	17			Undulator Conrols - Management					802	-	91,636	-	91,636		9,164
1	04	02	17			Technical Management - TEC	1-Feb-08	2-Feb-09	AN_CE2	Hrs	802		91,636		91,636	10.0%	9,164
1	04	02	20			Undulator MPS					1,236	83,000	116,535	90,614	207,149		55,872
1	04	02	20	02		Undulator MPS - IMUX					686	35,000	63,948	38,211	102,159		28,977
1	04	02	20	02		Software design	1-Feb-08	29-Feb-08	SL_CP2	Hrs	16		1,337		1,337	30.0%	401
1	04	02	20	02		Prototype testing	3-Mar-08	28-Mar-08	SL_CP2	Hrs	96		8,019		8,019	30.0%	2,406
1	04	02	20	02		Integrate MPS Link Node software with SLAC	9-Apr-08	6-May-08	SL_CP2	Hrs	200		16,707		16,707	20.0%	3,341
1	04	02	20	02		RCV: MPS Link Node Hardware	21-May-08	21-May-08	SL_MSEG2	\$\$		35,000		38,211	38,211	30.0%	11,463
1	04	02	20	02		Assemble & Pre-install MPS Link Node Prod Units	22-May-08	19-Jun-08	SL_PCDE2	Hrs	214		24,519		24,519	30.0%	7,356
1	04	02	20	02		Integrate & Test MPS Link Node Hardware	20-Jun-08	18-Jul-08	SL_CP2	Hrs	160		13,366		13,366	30.0%	4,010
1	04	02	20	02		RCV: 2 Link Nodes	21-May-08	21-May-08	SL_MSEG2	\$\$		-		-	-	30.0%	0
1	04	02	20	03		Undulator MPS - TIU					187	5,000	18,942	5,459	24,401		4,880
1	04	02	20	03		Integrate MPS TIU software with SLAC	19-Mar-08	15-Apr-08	SL_CP2	Hrs	80		6,683		6,683	20.0%	1,337
1	04	02	20	03		RCV: MPS TIU Hardware	30-Apr-08	30-Apr-08	SL_MSEG2	\$\$		5,000		5,459	5,459	20.0%	1,092
1	04	02	20	03		Assemble & Pre-install MPS TIU Production Units	1-May-08	14-May-08	SL_PCDE2	Hrs	107		12,259		12,259	20.0%	2,452
1	04	02	20	04		Undulator MPS - PLIC					363	15,000	33,645	16,376	50,021		12,845

WBS Level						LCLB Description - New Rates	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	20	04		Software design	1-Feb-08	22-Feb-08	SL_CP2	Hrs	120		10,024	10,024	30.0%	3,007	
1	04	02	20	04		Prototype testing	25-Feb-08	7-Mar-08	SL_CP2	Hrs	80		6,683	6,683	30.0%	2,005	
1	04	02	20	04		Prepare for FDR	10-Mar-08	14-Mar-08	SL_CP2	Hrs	40		3,341	3,341	10.0%	334	
1	04	02	20	04		Conduct FDR	17-Mar-08	18-Mar-08	SL_CP2	Hrs	16		1,337	1,337	10.0%	134	
1	04	02	20	04		RCV: MPS PLIC Hardware	30-Apr-08	30-Apr-08	SL_MSEG2	\$\$		15,000		16,376	16,376	30.0%	4,913
1	04	02	20	04		Assemble & Pre-install MPS PLIC Production Units	1-May-08	14-May-08	SL_PCDE2	Hrs	107		12,259	12,259	20.0%	2,452	
1	04	02	20	05		Undulator MPS - Toroids					-	28,000	-	30,569	30,569		9,171
1	04	02	20	05		RCV: MPS TOROIDS Hardware	30-Apr-08	30-Apr-08	SL_MSEG2	\$\$		28,000		30,569	30,569	30.0%	9,171
1	04	02	21			Undulator Controls - Timing					1,095	34,544	100,904	37,713	138,617		34,654
1	04	02	21			Undulator Timing System Design	1-Feb-08	14-Mar-08	SL_CE2	Hrs	375		42,965	42,965	25.0%	10,741	
1	04	02	21			Undulator Synchronizer H/W Design	1-Feb-08	14-Mar-08	SL_MDD2	Hrs	360		30,555	30,555	25.0%	7,639	
1	04	02	21			RCV: Undulator Timing Hardware	14-Apr-08	14-Apr-08	SL_MSEG2	\$\$		34,544		37,713	37,713	25.0%	9,428
1	04	02	21			Database Development and S/W Testing	15-Apr-08	12-May-08	SL_CP2	Hrs	200		16,707	16,707	25.0%	4,177	
1	04	02	21			Electrical Interconnect & Coordination Drawings	13-May-08	27-May-08	SL_CCA2	Hrs	160		10,676	10,676	25.0%	2,669	
1	04	02	22			Undulator Controls - BPM					767	38,250	87,878	41,759	129,637		20,273
1	04	02	22			Algorithm Development	4-Feb-08	30-Apr-08	SL_CE2	Hrs	112		12,832	12,832	40.0%	5,133	
1	04	02	22			Software Development	1-May-08	26-Jun-08	SL_CE2	Hrs	192		21,998	21,998	20.0%	4,400	
1	04	02	22			Procure: BPMs Hardware	1-Feb-08	31-Mar-08	SL_CE2	Hrs	9		1,031	1,031	20.0%	206	
1	04	02	22			RCV: VME ADC	31-Mar-08	31-Mar-08	SL_MSEG2	\$\$		-		-	30.0%	0	
1	04	02	22			RCV: 4 Transition Panels	1-Apr-08	1-Apr-08	SL_MSEG2	\$\$		600		655	655	20.0%	131
1	04	02	22			RCV: 4 VME Crates & CPUs (BF)	1-Apr-08	1-Apr-08	SL_MSEG2	\$\$		36,000		39,303	39,303	0.0%	0
1	04	02	22			RCV: Bracket for Tunnel - 33	1-Apr-08	1-Apr-08	SL_MSEG2	\$\$		1,650		1,801	1,801	0.0%	0
1	04	02	22			Fabricate Undulator BPM Hardware	2-Apr-08	28-May-08	SL_CE2	Hrs	160		18,332	18,332	20.0%	3,666	
1	04	02	22			Assemble & Pre-install Production Units	29-May-08	11-Jun-08	SL_PCDE2	Hrs	214		24,519	24,519	20.0%	4,904	
1	04	02	22			Assemble & Pre-install Production Units	29-May-08	11-Jun-08	SL_CE2	Hrs	80		9,166	9,166	20.0%	1,833	
1	04	02	23			Undulator Controls - Vacuum					598	116,265	53,755	126,931	180,686		18,069
1	04	02	23			UN Control Vacuum Software	1-Feb-08	23-May-08	SL_CP2	Hrs	240		20,049	20,049	10.0%	2,005	
1	04	02	23			UN Control Vacuum H/W	1-Feb-08	23-May-08	SL_CT2	Hrs	128		8,029	8,029	10.0%	803	
1	04	02	23			UN Control Vacuum H/W	1-Feb-08	23-May-08	SL_CE2	Hrs	128		14,665	14,665	10.0%	1,467	
1	04	02	23			Procure: Vacuum Hardware	1-Feb-08	25-Apr-08	SL_CP2	Hrs	2		175	175	10.0%	18	
1	04	02	23			RCV: 17 Ion Pump Controllers	28-Apr-08	28-Apr-08	SL_MSEG2	\$\$		62,665		68,414	68,414	10.0%	6,841
1	04	02	23			RCV: Vacuum Gauge Controllers	28-Apr-08	28-Apr-08	SL_MSEG2	\$\$		8,000		8,734	8,734	10.0%	873
1	04	02	23			RCV: 2 Valve Controllers	28-Apr-08	28-Apr-08	SL_MSEG2	\$\$		6,000		6,550	6,550	10.0%	655
1	04	02	23			RCV: 2 PLC Interfaces	28-Apr-08	28-Apr-08	SL_MSEG2	\$\$		19,600		21,398	21,398	10.0%	2,140
1	04	02	23			RCV: UN Vacuum Controls Misc	28-Apr-08	28-Apr-08	SL_MSEG2	\$\$		20,000		21,835	21,835	10.0%	2,183
1	04	02	23			Assemble & Pre-install Production Units	27-May-08	9-Jun-08	SL_PCDE2	Hrs	80		9,166	9,166	10.0%	917	
1	04	02	23			Assemble & Pre-install Production Units	27-May-08	9-Jun-08	SL_CP2	Hrs	20		1,671	1,671	10.0%	167	
1	04	02	24			Undulator Controls - ADS System					80	-	6,683	-	6,683		2,673
1	04	02	24			Software Integration	4-Mar-08	31-Mar-08	SL_CP2	Hrs	80		6,683	6,683	40.0%	2,673	
1	04	03				Undulator Magnet & Support					14,963	1,019,165	1,282,973	1,064,407	2,347,380		575,081
1	04	03	03			1st Article Undulators & Long Lead Procurements					1,443	144,728	123,593	151,462	275,054		31,553
1	04	03	03	04		Magnet Assembly & Supports - 1st Articles					385	54,228	33,647	56,751	90,397		13,613
1	04	03	03	04	03	Support/Mover System - Articles 1 & 2					385	54,228	33,647	56,751	90,397		13,613
1	04	03	03	04	03	Evaluate 1st Article Support/Mover @ ANL	1-Feb-08	15-Jul-08	AN_MSEQ2	\$\$		38,250		40,030	40,030	15.0%	6,004
1	04	03	03	04	03	Evaluate 1st Article Support/Mover @ ANL	1-Feb-08	15-Jul-08	AN_MFAT2	Hrs	51		3,370	3,370	15.0%	506	
1	04	03	03	04	03	Evaluate 1st Article Support/Mover @ ANL	1-Feb-08	15-Jul-08	AN_ME2	Hrs	38		4,305	4,305	15.0%	646	
1	04	03	03	04	03	Evaluate 1st Article Support/Mover @ ANL	1-Feb-08	15-Jul-08	AN_CT2	Hrs	38		2,528	2,528	15.0%	379	
1	04	03	03	04	03	Evaluate 1st Article Support/Mover @ ANL	1-Feb-08	15-Jul-08	AN_CE2	Hrs	13		1,435	1,435	15.0%	215	
1	04	03	03	04	03	Ship LTT Components to SLAC	1-Aug-08	8-Aug-08	AN_MSEG2	\$\$		5,000		5,233	5,233	10.0%	523

WBS Level						LCLB Description - New Rates	Early Start	Early Finish	Res Code	Units	Work Rem. Bud. Qty		Work Rem. Full Burd and Escldtd Cost			Contingency %	Contingency \$
2	3	4	5	6	Hours						\$	Labor	M&S	Total			
1	04	03	03	04	03	Survey & Align/Prep for Accept Msmts	1-Feb-08	15-Jul-08	AN_MSEQ2	\$\$		45		47	47	50.0%	24
1	04	03	03	04	03	Survey & Align/Prep for Accept Msmts	1-Feb-08	15-Jul-08	AN_MES2	Hrs	5		574		574	50.0%	287
1	04	03	03	04	03	Remeasure/reshim 1st Art Undulator before Shipmt	1-Jul-08	15-Jul-08	AN_PHS2	Hrs	40		4,502		4,502	15.0%	675
1	04	03	03	04	03	Remeasure/reshim 1st Art Undulator before Shipmt	1-Jul-08	15-Jul-08	AN_MSEG2	\$\$		5,000		5,233	5,233	15.0%	785
1	04	03	03	04	03	Remeasure/reshim 1st Art Undulator before Shipmt	1-Jul-08	15-Jul-08	AN_MFAT2	Hrs	40		2,643		2,643	15.0%	396
1	04	03	03	04	03	Remeasure/reshim 1st Art Undulator before Shipmt	1-Jul-08	15-Jul-08	AN_ME2	Hrs	20		2,251		2,251	15.0%	338
1	04	03	03	04	03	Disassemble/cleanup SUT and LTT & pack component	23-Jun-08	15-Jul-08	AN_MSEG2	\$\$		5,000		5,233	5,233	15.0%	785
1	04	03	03	04	03	Disassemble/cleanup SUT and LTT & pack component	23-Jun-08	15-Jul-08	AN_MFAT2	Hrs	80		5,286		5,286	15.0%	793
1	04	03	03	04	03	Disassemble/cleanup SUT and LTT & pack component	23-Jun-08	15-Jul-08	AN_MES2	Hrs	20		2,251		2,251	15.0%	338
1	04	03	03	04	03	Disassemble/cleanup SUT and LTT & pack component	23-Jun-08	15-Jul-08	AN_ME2	Hrs	40		4,502		4,502	15.0%	675
1	04	03	03	04	03	Const Single&Double Camshaft Mvr Test Apparatus	1-Feb-08	15-Jul-08	AN_MSEG2	\$\$		932		976	976	25.0%	244
1	04	03	03	05		Magnetic Measurement (ANL)					80	5,000	5,286	5,233	10,519		526
1	04	03	03	05	01	Magnetic Measurement (ANL) - Vendor A Und #1					80	5,000	5,286	5,233	10,519		526
1	04	03	03	05	01	Ship Hi-Tech Und Article 01 (1st Art) to SLAC	11-Sep-08	18-Sep-08	AN_MSCS2	\$\$		5,000		5,233	5,233	5.0%	262
1	04	03	03	05	01	Disassemble/pack Undulator Hi-Tech Article 01	3-Sep-08	10-Sep-08	AN_MFAT2	Hrs	80		5,286		5,286	5.0%	264
1	04	03	03	06		Integrated Single-Undulator Module Test					977	85,500	84,660	89,478	174,138		17,414
1	04	03	03	06		Long-Term Stability Single Und Test	1-Feb-08	15-Jul-08	AN_PHS2	Hrs	27		3,039		3,039	10.0%	304
1	04	03	03	06		Long-Term Stability Single Und Test	1-Feb-08	15-Jul-08	AN_MSEQ2	\$\$		27,000		28,256	28,256	10.0%	2,826
1	04	03	03	06		Long-Term Stability Single Und Test	1-Feb-08	15-Jul-08	AN_MFAT2	Hrs	302		19,982		19,982	10.0%	1,998
1	04	03	03	06		Long-Term Stability Single Und Test	1-Feb-08	15-Jul-08	AN_ME2	Hrs	378		42,543		42,543	10.0%	4,254
1	04	03	03	06		Long-Term Stability Single Und Test	1-Feb-08	15-Jul-08	AN_MDD2	Hrs	243		16,057		16,057	10.0%	1,606
1	04	03	03	06		Long-Term Stability Single Und Test	1-Feb-08	15-Jul-08	AN_CE2	Hrs	27		3,039		3,039	10.0%	304
1	04	03	03	06		LTT-Specific Control Equipment	1-Feb-08	15-Jul-08	AN_MSEQ2	\$\$		58,500		61,222	61,222	10.0%	6,122
1	04	03	04			Production Undulator Magnet Assembly & Supports					184	379,053	18,689	379,201	397,890		27,370
1	04	03	04	01		Production Undulator Assembly - Vendor A					-	3,168	-	3,316	3,316		166
1	04	03	04	01		Acceptance Measmt and Verif of Und Assy	1-Feb-08	15-Jul-08	AN_MSEQ2	\$\$		474		496	496	5.0%	25
1	04	03	04	01		Misc. Assembly and Tuning Items	1-Feb-08	15-Jul-08	AN_MSEG2	\$\$		2,694		2,819	2,819	5.0%	141
1	04	03	04	03		Production Support/Mover Fabrication/Assembly					184	375,885	18,689	375,885	394,574		27,204
1	04	03	04	03		Vendor Fab Support/Mover Production Units	1-Feb-08	29-Apr-08	AN_PHS2	Hrs	11		1,244		1,244	45.0%	560
1	04	03	04	03		Vendor Fab Support/Mover Production Units	1-Feb-08	29-Apr-08	AN_ME2	Hrs	109		12,245		12,245	45.0%	5,510
1	04	03	04	03		Vendor Fab Support/Mover Production Units	1-Feb-08	29-Apr-08	AN_MDD2	Hrs	43		2,808		2,808	45.0%	1,264
1	04	03	04	03		Vendor Fab Support/Mover Production Units	1-Feb-08	29-Apr-08	AN_CE2	Hrs	21		2,392		2,392	45.0%	1,076
1	04	03	04	03		RCV: 2 Support/Movers (#29-30)	1-Feb-08	1-Feb-08	AN_MSSF2	\$\$		150,354		150,354	150,354	5.0%	7,518
1	04	03	04	03		RCV: 2 Support/Movers (#31-32)	1-Feb-08	1-Feb-08	AN_MSSF2	\$\$		150,354		150,354	150,354	5.0%	7,518
1	04	03	04	03		RCV: 1 Support/Mover (#33)	11-Apr-08	11-Apr-08	AN_MSSF2	\$\$		75,177		75,177	75,177	5.0%	3,759
1	04	03	05			Quadrupole Focusing Magnets					342	71,298	33,857	71,798	105,655		9,638
1	04	03	05	01		Quadrupole Magnets					342	71,298	33,857	71,798	105,655		9,638
1	04	03	05	01		ANL Vendor Management & 1st/2nd Art Testing	1-Feb-08	30-May-08	AN_PHS2	Hrs	66		7,458		7,458	15.0%	1,119
1	04	03	05	01		ANL Vendor Management & 1st/2nd Art Testing	1-Feb-08	30-May-08	AN_MSEQ2	\$\$		9,262		9,693	9,693	15.0%	1,454
1	04	03	05	01		ANL Vendor Management & 1st/2nd Art Testing	1-Feb-08	30-May-08	AN_MFAT2	Hrs	50		3,284		3,284	15.0%	493
1	04	03	05	01		ANL Vendor Management & 1st/2nd Art Testing	1-Feb-08	30-May-08	AN_ME2	Hrs	176		19,831		19,831	15.0%	2,975
1	04	03	05	01		ANL Vendor Management & 1st/2nd Art Testing	1-Feb-08	30-May-08	AN_MDD2	Hrs	50		3,284		3,284	15.0%	493
1	04	03	05	01		ANL Ship Rejected Q1R back to ET	1-Feb-08	15-Sep-08	AN_MSEG2	\$\$		500		523	523	5.0%	26
1	04	03	05	01		SLAC Ship Rejected Q2R back to ET	1-Feb-08	15-Sep-08	SL_MSEG2	\$\$		500		546	546	5.0%	27
1	04	03	05	01		Vendor Fab/Assy - Quad Mag (Q12,Q13,Q14,Q15)	12-Feb-08	12-Mar-08	AN_MSSF2	\$\$		-		-	-	5.0%	0
1	04	03	05	01		Vendor Fab/Assy - Quad Mag (Q16,Q17,Q18,Q19)	3-Mar-08	12-Mar-08	AN_MSSF2	\$\$		-		-	-	5.0%	0
1	04	03	05	01		Vendor Fab/Assy - Quad Mag (Q20,Q21,Q22,Q23)	3-Mar-08	12-Mar-08	AN_MSSF2	\$\$		-		-	-	5.0%	0
1	04	03	05	01		Vendor Fab/Assy - Quad Mag (Q24,Q25,Q26,Q27)	3-Mar-08	7-Mar-08	AN_MSSF2	\$\$		8,720		8,720	8,720	5.0%	436
1	04	03	05	01		Vendor Fab/Assy - Quad Mag (Q28,Q29,Q30,Q31)	3-Mar-08	12-Mar-08	AN_MSSF2	\$\$		34,878		34,878	34,878	5.0%	1,744

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WBS Level						LCLB Description - New Rates	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	03	05	01		Vendor Fab/Assy - Quad Mag (Q32,Q33)	3-Mar-08	12-Mar-08	AN_MSSF2	\$\$		17,439		17,439	17,439	5.0%	872
1	04	03	06			Undulator Magnetic Measurement Facility (SLAC)					12,671	388,486	1,073,759	424,690	1,498,449		493,715
1	04	03	06	02		Fiducialization and Magnetic Measurements (F/MM)					9,153	175,820	783,377	192,515	975,891		382,252
1	04	03	06	02	01	F/MM Undulator Magnet Sections					8,065	175,820	696,030	192,515	888,545		351,681
1	04	03	06	02	01	Pre-Assemble Girder - 01	21-Apr-08	20-May-08	SL_MSEG2	\$\$		-		-	-	45.0%	0
1	04	03	06	02	01	Pre-Assemble Girder - 01	21-Apr-08	20-May-08	SL_MFAT2	Hrs	-		-	-	-	45.0%	0
1	04	03	06	02	01	Pre-Assemble Girder - 01	21-Apr-08	20-May-08	SL_MES2	Hrs	-		-	-	-	45.0%	0
1	04	03	06	02	01	Assemble Girder - 01	21-May-08	12-Jun-08	SL_MSEG2	\$\$		1,250		1,365	1,365	45.0%	614
1	04	03	06	02	01	Assemble Girder - 01	21-May-08	12-Jun-08	SL_MFAT2	Hrs	31		2,708		2,708	45.0%	1,219
1	04	03	06	02	01	Assemble Girder - 01	21-May-08	12-Jun-08	SL_MES2	Hrs	23		1,872		1,872	45.0%	842
1	04	03	06	02	01	Assemble Girder - 01	21-May-08	12-Jun-08	SL_LSEE2	Hrs	4		431		431	45.0%	194
1	04	03	06	02	01	Pre-Assemble Girder - 02	23-Apr-08	20-May-08	SL_MSEG2	\$\$		-		-	-	45.0%	0
1	04	03	06	02	01	Pre-Assemble Girder - 02	23-Apr-08	20-May-08	SL_MFAT2	Hrs	-		-		-	45.0%	0
1	04	03	06	02	01	Pre-Assemble Girder - 02	23-Apr-08	20-May-08	SL_MES2	Hrs	-		-		-	45.0%	0
1	04	03	06	02	01	Assemble Girder - 02	5-Jun-08	26-Jun-08	SL_MSEG2	\$\$		1,250		1,365	1,365	45.0%	614
1	04	03	06	02	01	Assemble Girder - 02	5-Jun-08	26-Jun-08	SL_MFAT2	Hrs	31		2,708		2,708	45.0%	1,219
1	04	03	06	02	01	Assemble Girder - 02	5-Jun-08	26-Jun-08	SL_MES2	Hrs	23		1,872		1,872	45.0%	842
1	04	03	06	02	01	Assemble Girder - 02	5-Jun-08	26-Jun-08	SL_LSEE2	Hrs	4		431		431	45.0%	194
1	04	03	06	02	01	Pre-Assemble Girder - 03	25-Apr-08	20-May-08	SL_MSEG2	\$\$		-		-	-	45.0%	0
1	04	03	06	02	01	Pre-Assemble Girder - 03	25-Apr-08	20-May-08	SL_MFAT2	Hrs	-		-		-	45.0%	0
1	04	03	06	02	01	Pre-Assemble Girder - 03	25-Apr-08	20-May-08	SL_MES2	Hrs	-		-		-	45.0%	0
1	04	03	06	02	01	Assemble Girder - 03	19-Jun-08	11-Jul-08	SL_MSEG2	\$\$		1,250		1,365	1,365	45.0%	614
1	04	03	06	02	01	Assemble Girder - 03	19-Jun-08	11-Jul-08	SL_MFAT2	Hrs	31		2,708		2,708	45.0%	1,219
1	04	03	06	02	01	Assemble Girder - 03	19-Jun-08	11-Jul-08	SL_MES2	Hrs	23		1,872		1,872	45.0%	842
1	04	03	06	02	01	Assemble Girder - 03	19-Jun-08	11-Jul-08	SL_LSEE2	Hrs	4		431		431	45.0%	194
1	04	03	06	02	01	Pre-Assemble Girder - 04	29-Apr-08	2-Jun-08	SL_MSEG2	\$\$		-		-	-	45.0%	0
1	04	03	06	02	01	Pre-Assemble Girder - 04	29-Apr-08	2-Jun-08	SL_MFAT2	Hrs	-		-		-	45.0%	0
1	04	03	06	02	01	Pre-Assemble Girder - 04	29-Apr-08	2-Jun-08	SL_MES2	Hrs	-		-		-	45.0%	0
1	04	03	06	02	01	Assemble Girder - 04	24-Jun-08	16-Jul-08	SL_MSEG2	\$\$		1,250		1,365	1,365	45.0%	614
1	04	03	06	02	01	Assemble Girder - 04	24-Jun-08	16-Jul-08	SL_MFAT2	Hrs	31		2,708		2,708	45.0%	1,219
1	04	03	06	02	01	Assemble Girder - 04	24-Jun-08	16-Jul-08	SL_MES2	Hrs	23		1,872		1,872	45.0%	842
1	04	03	06	02	01	Assemble Girder - 04	24-Jun-08	16-Jul-08	SL_LSEE2	Hrs	4		431		431	45.0%	194
1	04	03	06	02	01	Pre-Assemble Girder - 05	1-May-08	30-May-08	SL_MSEG2	\$\$		-		-	-	45.0%	0
1	04	03	06	02	01	Pre-Assemble Girder - 05	1-May-08	30-May-08	SL_MFAT2	Hrs	-		-		-	45.0%	0
1	04	03	06	02	01	Pre-Assemble Girder - 05	1-May-08	30-May-08	SL_MES2	Hrs	-		-		-	45.0%	0
1	04	03	06	02	01	Assemble Girder - 05	27-Jun-08	21-Jul-08	SL_MSEG2	\$\$		1,250		1,365	1,365	45.0%	614
1	04	03	06	02	01	Assemble Girder - 05	27-Jun-08	21-Jul-08	SL_MFAT2	Hrs	31		2,708		2,708	45.0%	1,219
1	04	03	06	02	01	Assemble Girder - 05	27-Jun-08	21-Jul-08	SL_MES2	Hrs	23		1,872		1,872	45.0%	842
1	04	03	06	02	01	Assemble Girder - 05	27-Jun-08	21-Jul-08	SL_LSEE2	Hrs	4		431		431	45.0%	194
1	04	03	06	02	01	Pre-Assemble Girder - 06	5-May-08	2-Jun-08	SL_MSEG2	\$\$		1,250		1,365	1,365	45.0%	614
1	04	03	06	02	01	Pre-Assemble Girder - 06	5-May-08	2-Jun-08	SL_MFAT2	Hrs	20		1,747		1,747	45.0%	786
1	04	03	06	02	01	Pre-Assemble Girder - 06	5-May-08	2-Jun-08	SL_MES2	Hrs	12		977		977	45.0%	439
1	04	03	06	02	01	Assemble Girder - 06	2-Jul-08	24-Jul-08	SL_MSEG2	\$\$		2,500		2,729	2,729	45.0%	1,228
1	04	03	06	02	01	Assemble Girder - 06	2-Jul-08	24-Jul-08	SL_MFAT2	Hrs	62		5,416		5,416	45.0%	2,437
1	04	03	06	02	01	Assemble Girder - 06	2-Jul-08	24-Jul-08	SL_MES2	Hrs	46		3,744		3,744	45.0%	1,685
1	04	03	06	02	01	Assemble Girder - 06	2-Jul-08	24-Jul-08	SL_LSEE2	Hrs	8		861		861	45.0%	387
1	04	03	06	02	01	Pre-Assemble Girder - 07	7-May-08	2-Jun-08	SL_MSEG2	\$\$		1,250		1,365	1,365	45.0%	614
1	04	03	06	02	01	Pre-Assemble Girder - 07	7-May-08	2-Jun-08	SL_MFAT2	Hrs	20		1,747		1,747	45.0%	786
1	04	03	06	02	01	Pre-Assemble Girder - 07	7-May-08	2-Jun-08	SL_MES2	Hrs	12		977		977	45.0%	439

LCLS Estimate to Complete

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WBS Level						LCLB Description - New Rates	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	03	06	02	01	Assemble Girder - 07	8-Jul-08	29-Jul-08	SL_MSEG2	\$\$		2,500		2,729	2,729	45.0%	1,228
1	04	03	06	02	01	Assemble Girder - 07	8-Jul-08	29-Jul-08	SL_MFAT2	Hrs	62		5,416		5,416	45.0%	2,437
1	04	03	06	02	01	Assemble Girder - 07	8-Jul-08	29-Jul-08	SL_MES2	Hrs	46		3,744		3,744	45.0%	1,685
1	04	03	06	02	01	Assemble Girder - 07	8-Jul-08	29-Jul-08	SL_LSEE2	Hrs	8		861		861	45.0%	387
1	04	03	06	02	01	Pre-Assemble Girder - 08	9-May-08	14-May-08	SL_MSEG2	\$\$		2,500		2,729	2,729	45.0%	1,228
1	04	03	06	02	01	Pre-Assemble Girder - 08	9-May-08	14-May-08	SL_MFAT2	Hrs	40		3,494		3,494	45.0%	1,572
1	04	03	06	02	01	Pre-Assemble Girder - 08	9-May-08	14-May-08	SL_MES2	Hrs	24		1,953		1,953	45.0%	879
1	04	03	06	02	01	Assemble Girder - 08	11-Jul-08	1-Aug-08	SL_MSEG2	\$\$		2,500		2,729	2,729	45.0%	1,228
1	04	03	06	02	01	Assemble Girder - 08	11-Jul-08	1-Aug-08	SL_MFAT2	Hrs	62		5,416		5,416	45.0%	2,437
1	04	03	06	02	01	Assemble Girder - 08	11-Jul-08	1-Aug-08	SL_MES2	Hrs	46		3,744		3,744	45.0%	1,685
1	04	03	06	02	01	Assemble Girder - 08	11-Jul-08	1-Aug-08	SL_LSEE2	Hrs	8		861		861	45.0%	387
1	04	03	06	02	01	Pre-Assemble Girder - 09	13-May-08	2-Jun-08	SL_MSEG2	\$\$		1,250		1,365	1,365	45.0%	614
1	04	03	06	02	01	Pre-Assemble Girder - 09	13-May-08	2-Jun-08	SL_MFAT2	Hrs	20		1,747		1,747	45.0%	786
1	04	03	06	02	01	Pre-Assemble Girder - 09	13-May-08	2-Jun-08	SL_MES2	Hrs	12		977		977	45.0%	439
1	04	03	06	02	01	Assemble Girder - 09	16-Jul-08	6-Aug-08	SL_MSEG2	\$\$		2,500		2,729	2,729	45.0%	1,228
1	04	03	06	02	01	Assemble Girder - 09	16-Jul-08	6-Aug-08	SL_MFAT2	Hrs	62		5,416		5,416	45.0%	2,437
1	04	03	06	02	01	Assemble Girder - 09	16-Jul-08	6-Aug-08	SL_MES2	Hrs	46		3,744		3,744	45.0%	1,685
1	04	03	06	02	01	Assemble Girder - 09	16-Jul-08	6-Aug-08	SL_LSEE2	Hrs	8		861		861	45.0%	387
1	04	03	06	02	01	Pre-Assemble Girder - 10	15-May-08	20-May-08	SL_MSEG2	\$\$		2,500		2,729	2,729	45.0%	1,228
1	04	03	06	02	01	Pre-Assemble Girder - 10	15-May-08	20-May-08	SL_MFAT2	Hrs	40		3,494		3,494	45.0%	1,572
1	04	03	06	02	01	Pre-Assemble Girder - 10	15-May-08	20-May-08	SL_MES2	Hrs	24		1,953		1,953	45.0%	879
1	04	03	06	02	01	Assemble Girder - 10	21-Jul-08	11-Aug-08	SL_MSEG2	\$\$		2,500		2,729	2,729	45.0%	1,228
1	04	03	06	02	01	Assemble Girder - 10	21-Jul-08	11-Aug-08	SL_MFAT2	Hrs	62		5,416		5,416	45.0%	2,437
1	04	03	06	02	01	Assemble Girder - 10	21-Jul-08	11-Aug-08	SL_MES2	Hrs	46		3,744		3,744	45.0%	1,685
1	04	03	06	02	01	Assemble Girder - 10	21-Jul-08	11-Aug-08	SL_LSEE2	Hrs	8		861		861	45.0%	387
1	04	03	06	02	01	Pre-Assemble Girder - 11	19-May-08	22-May-08	SL_MSEG2	\$\$		2,500		2,729	2,729	45.0%	1,228
1	04	03	06	02	01	Pre-Assemble Girder - 11	19-May-08	22-May-08	SL_MFAT2	Hrs	40		3,494		3,494	45.0%	1,572
1	04	03	06	02	01	Pre-Assemble Girder - 11	19-May-08	22-May-08	SL_MES2	Hrs	24		1,953		1,953	45.0%	879
1	04	03	06	02	01	Assemble Girder - 11	24-Jul-08	14-Aug-08	SL_MSEG2	\$\$		2,500		2,729	2,729	45.0%	1,228
1	04	03	06	02	01	Assemble Girder - 11	24-Jul-08	14-Aug-08	SL_MFAT2	Hrs	62		5,416		5,416	45.0%	2,437
1	04	03	06	02	01	Assemble Girder - 11	24-Jul-08	14-Aug-08	SL_MES2	Hrs	46		3,744		3,744	45.0%	1,685
1	04	03	06	02	01	Assemble Girder - 11	24-Jul-08	14-Aug-08	SL_LSEE2	Hrs	8		861		861	45.0%	387
1	04	03	06	02	01	Pre-Assemble Girder - 12	21-May-08	27-May-08	SL_MSEG2	\$\$		2,500		2,729	2,729	45.0%	1,228
1	04	03	06	02	01	Pre-Assemble Girder - 12	21-May-08	27-May-08	SL_MFAT2	Hrs	40		3,494		3,494	45.0%	1,572
1	04	03	06	02	01	Pre-Assemble Girder - 12	21-May-08	27-May-08	SL_MES2	Hrs	24		1,953		1,953	45.0%	879
1	04	03	06	02	01	Assemble Girder - 12	29-Jul-08	19-Aug-08	SL_MSEG2	\$\$		2,500		2,729	2,729	45.0%	1,228
1	04	03	06	02	01	Assemble Girder - 12	29-Jul-08	19-Aug-08	SL_MFAT2	Hrs	62		5,416		5,416	45.0%	2,437
1	04	03	06	02	01	Assemble Girder - 12	29-Jul-08	19-Aug-08	SL_MES2	Hrs	46		3,744		3,744	45.0%	1,685
1	04	03	06	02	01	Assemble Girder - 12	29-Jul-08	19-Aug-08	SL_LSEE2	Hrs	8		861		861	45.0%	387
1	04	03	06	02	01	Pre-Assemble Girder - 13	23-May-08	29-May-08	SL_MSEG2	\$\$		2,500		2,729	2,729	45.0%	1,228
1	04	03	06	02	01	Pre-Assemble Girder - 13	23-May-08	29-May-08	SL_MFAT2	Hrs	40		3,494		3,494	45.0%	1,572
1	04	03	06	02	01	Pre-Assemble Girder - 13	23-May-08	29-May-08	SL_MES2	Hrs	24		1,953		1,953	45.0%	879
1	04	03	06	02	01	Assemble Girder - 13	1-Aug-08	22-Aug-08	SL_MSEG2	\$\$		2,500		2,729	2,729	45.0%	1,228
1	04	03	06	02	01	Assemble Girder - 13	1-Aug-08	22-Aug-08	SL_MFAT2	Hrs	62		5,416		5,416	45.0%	2,437
1	04	03	06	02	01	Assemble Girder - 13	1-Aug-08	22-Aug-08	SL_MES2	Hrs	46		3,744		3,744	45.0%	1,685
1	04	03	06	02	01	Assemble Girder - 13	1-Aug-08	22-Aug-08	SL_LSEE2	Hrs	8		861		861	45.0%	387
1	04	03	06	02	01	Pre-Assemble Girder - 14	28-May-08	2-Jun-08	SL_MSEG2	\$\$		2,500		2,729	2,729	45.0%	1,228
1	04	03	06	02	01	Pre-Assemble Girder - 14	28-May-08	2-Jun-08	SL_MFAT2	Hrs	40		3,494		3,494	45.0%	1,572
1	04	03	06	02	01	Pre-Assemble Girder - 14	28-May-08	2-Jun-08	SL_MES2	Hrs	24		1,953		1,953	45.0%	879

LCLS Estimate to Complete

FEB2008 - CD4

WBS Level						LCLB Description - New Rates	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	03	06	02	01	Assemble Girder - 14	6-Aug-08	27-Aug-08	SL_MSEG2	\$\$		2,500		2,729	2,729	45.0%	1,228
1	04	03	06	02	01	Assemble Girder - 14	6-Aug-08	27-Aug-08	SL_MFAT2	Hrs	62		5,416		5,416	45.0%	2,437
1	04	03	06	02	01	Assemble Girder - 14	6-Aug-08	27-Aug-08	SL_MES2	Hrs	46		3,744		3,744	45.0%	1,685
1	04	03	06	02	01	Assemble Girder - 14	6-Aug-08	27-Aug-08	SL_LSEE2	Hrs	8		861		861	45.0%	387
1	04	03	06	02	01	Pre-Assemble Girder - 15	30-May-08	4-Jun-08	SL_MSEG2	\$\$		2,500		2,729	2,729	45.0%	1,228
1	04	03	06	02	01	Pre-Assemble Girder - 15	30-May-08	4-Jun-08	SL_MFAT2	Hrs	40		3,494		3,494	45.0%	1,572
1	04	03	06	02	01	Pre-Assemble Girder - 15	30-May-08	4-Jun-08	SL_MES2	Hrs	24		1,953		1,953	45.0%	879
1	04	03	06	02	01	Assemble Girder - 15	11-Aug-08	2-Sep-08	SL_MSEG2	\$\$		2,500		2,729	2,729	45.0%	1,228
1	04	03	06	02	01	Assemble Girder - 15	11-Aug-08	2-Sep-08	SL_MFAT2	Hrs	62		5,416		5,416	45.0%	2,437
1	04	03	06	02	01	Assemble Girder - 15	11-Aug-08	2-Sep-08	SL_MES2	Hrs	46		3,744		3,744	45.0%	1,685
1	04	03	06	02	01	Assemble Girder - 15	11-Aug-08	2-Sep-08	SL_LSEE2	Hrs	8		861		861	45.0%	387
1	04	03	06	02	01	Pre-Assemble Girder - 16	3-Jun-08	6-Jun-08	SL_MSEG2	\$\$		2,500		2,729	2,729	45.0%	1,228
1	04	03	06	02	01	Pre-Assemble Girder - 16	3-Jun-08	6-Jun-08	SL_MFAT2	Hrs	40		3,494		3,494	45.0%	1,572
1	04	03	06	02	01	Pre-Assemble Girder - 16	3-Jun-08	6-Jun-08	SL_MES2	Hrs	24		1,953		1,953	45.0%	879
1	04	03	06	02	01	Assemble Girder - 16	14-Aug-08	5-Sep-08	SL_MSEG2	\$\$		2,500		2,729	2,729	45.0%	1,228
1	04	03	06	02	01	Assemble Girder - 16	14-Aug-08	5-Sep-08	SL_MFAT2	Hrs	62		5,416		5,416	45.0%	2,437
1	04	03	06	02	01	Assemble Girder - 16	14-Aug-08	5-Sep-08	SL_MES2	Hrs	46		3,744		3,744	45.0%	1,685
1	04	03	06	02	01	Assemble Girder - 16	14-Aug-08	5-Sep-08	SL_LSEE2	Hrs	8		861		861	45.0%	387
1	04	03	06	02	01	Pre-Assemble Girder - 17	5-Jun-08	10-Jun-08	SL_MSEG2	\$\$		2,500		2,729	2,729	45.0%	1,228
1	04	03	06	02	01	Pre-Assemble Girder - 17	5-Jun-08	10-Jun-08	SL_MFAT2	Hrs	40		3,494		3,494	45.0%	1,572
1	04	03	06	02	01	Pre-Assemble Girder - 17	5-Jun-08	10-Jun-08	SL_MES2	Hrs	24		1,953		1,953	45.0%	879
1	04	03	06	02	01	Assemble Girder - 17	19-Aug-08	10-Sep-08	SL_MSEG2	\$\$		2,500		2,729	2,729	45.0%	1,228
1	04	03	06	02	01	Assemble Girder - 17	19-Aug-08	10-Sep-08	SL_MFAT2	Hrs	62		5,416		5,416	45.0%	2,437
1	04	03	06	02	01	Assemble Girder - 17	19-Aug-08	10-Sep-08	SL_MES2	Hrs	46		3,744		3,744	45.0%	1,685
1	04	03	06	02	01	Assemble Girder - 17	19-Aug-08	10-Sep-08	SL_LSEE2	Hrs	8		861		861	45.0%	387
1	04	03	06	02	01	Pre-Assemble Girder - 18	9-Jun-08	12-Jun-08	SL_MSEG2	\$\$		2,500		2,729	2,729	45.0%	1,228
1	04	03	06	02	01	Pre-Assemble Girder - 18	9-Jun-08	12-Jun-08	SL_MFAT2	Hrs	40		3,494		3,494	45.0%	1,572
1	04	03	06	02	01	Pre-Assemble Girder - 18	9-Jun-08	12-Jun-08	SL_MES2	Hrs	24		1,953		1,953	45.0%	879
1	04	03	06	02	01	Assemble Girder - 18	22-Aug-08	15-Sep-08	SL_MSEG2	\$\$		2,500		2,729	2,729	45.0%	1,228
1	04	03	06	02	01	Assemble Girder - 18	22-Aug-08	15-Sep-08	SL_MFAT2	Hrs	62		5,416		5,416	45.0%	2,437
1	04	03	06	02	01	Assemble Girder - 18	22-Aug-08	15-Sep-08	SL_MES2	Hrs	46		3,744		3,744	45.0%	1,685
1	04	03	06	02	01	Assemble Girder - 18	22-Aug-08	15-Sep-08	SL_LSEE2	Hrs	8		861		861	45.0%	387
1	04	03	06	02	01	Pre-Assemble Girder - 19	11-Jun-08	16-Jun-08	SL_MSEG2	\$\$		2,500		2,729	2,729	45.0%	1,228
1	04	03	06	02	01	Pre-Assemble Girder - 19	11-Jun-08	16-Jun-08	SL_MFAT2	Hrs	40		3,494		3,494	45.0%	1,572
1	04	03	06	02	01	Pre-Assemble Girder - 19	11-Jun-08	16-Jun-08	SL_MES2	Hrs	24		1,953		1,953	45.0%	879
1	04	03	06	02	01	Assemble Girder - 19	27-Aug-08	18-Sep-08	SL_MSEG2	\$\$		2,500		2,729	2,729	45.0%	1,228
1	04	03	06	02	01	Assemble Girder - 19	27-Aug-08	18-Sep-08	SL_MFAT2	Hrs	62		5,416		5,416	45.0%	2,437
1	04	03	06	02	01	Assemble Girder - 19	27-Aug-08	18-Sep-08	SL_MES2	Hrs	46		3,744		3,744	45.0%	1,685
1	04	03	06	02	01	Assemble Girder - 19	27-Aug-08	18-Sep-08	SL_LSEE2	Hrs	8		861		861	45.0%	387
1	04	03	06	02	01	Pre-Assemble Girder - 20	13-Jun-08	18-Jun-08	SL_MSEG2	\$\$		2,500		2,729	2,729	45.0%	1,228
1	04	03	06	02	01	Pre-Assemble Girder - 20	13-Jun-08	18-Jun-08	SL_MFAT2	Hrs	40		3,494		3,494	45.0%	1,572
1	04	03	06	02	01	Pre-Assemble Girder - 20	13-Jun-08	18-Jun-08	SL_MES2	Hrs	24		1,953		1,953	45.0%	879
1	04	03	06	02	01	Assemble Girder - 20	2-Sep-08	23-Sep-08	SL_MSEG2	\$\$		2,500		2,729	2,729	45.0%	1,228
1	04	03	06	02	01	Assemble Girder - 20	2-Sep-08	23-Sep-08	SL_MFAT2	Hrs	62		5,416		5,416	45.0%	2,437
1	04	03	06	02	01	Assemble Girder - 20	2-Sep-08	23-Sep-08	SL_MES2	Hrs	46		3,744		3,744	45.0%	1,685
1	04	03	06	02	01	Assemble Girder - 20	2-Sep-08	23-Sep-08	SL_LSEE2	Hrs	8		861		861	45.0%	387
1	04	03	06	02	01	Tune Undulator - 21	1-Feb-08	19-Feb-08	SL_MTAT2	Hrs	-		-		-	10.0%	0
1	04	03	06	02	01	Tune Undulator - 21	1-Feb-08	19-Feb-08	SL_MPSS2	Hrs	-		-		-	10.0%	0
1	04	03	06	02	01	Pre-Assemble Girder - 21	17-Jun-08	20-Jun-08	SL_MSEG2	\$\$		2,500		2,729	2,729	45.0%	1,228

LCLS Estimate to Complete

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WBS Level						LCLB Description - New Rates	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																		
1	04	03	06	02	01	Pre-Assemble Girder - 21	17-Jun-08	20-Jun-08	SL_MFAT2	Hrs	40		3,494		3,494	45.0%	1,572	
1	04	03	06	02	01	Pre-Assemble Girder - 21	17-Jun-08	20-Jun-08	SL_MES2	Hrs	24		1,953		1,953	45.0%	879	
1	04	03	06	02	01	Assemble Girder - 21	5-Sep-08	26-Sep-08	SL_MSEG2	\$\$		2,500		2,729		2,729	45.0%	1,228
1	04	03	06	02	01	Assemble Girder - 21	5-Sep-08	26-Sep-08	SL_MFAT2	Hrs	62		5,416		5,416	45.0%	2,437	
1	04	03	06	02	01	Assemble Girder - 21	5-Sep-08	26-Sep-08	SL_MES2	Hrs	46		3,744		3,744	45.0%	1,685	
1	04	03	06	02	01	Assemble Girder - 21	5-Sep-08	26-Sep-08	SL_LSEE2	Hrs	8		861		861	45.0%	387	
1	04	03	06	02	01	Tune Undulator - 22	11-Feb-08	27-Feb-08	SL_MTAT2	Hrs	-		-		-	10.0%	0	
1	04	03	06	02	01	Tune Undulator - 22	11-Feb-08	27-Feb-08	SL_MPSS2	Hrs	-		-		-	10.0%	0	
1	04	03	06	02	01	Fiducialize Undulator - 22	28-Feb-08	21-Mar-08	SL_MPSS2	Hrs	-		-		-	40.0%	0	
1	04	03	06	02	01	Fiducialize Undulator - 22	28-Feb-08	21-Mar-08	SL_MFAT2	Hrs	-		-		-	40.0%	0	
1	04	03	06	02	01	Fiducialize Undulator - 22	28-Feb-08	21-Mar-08	SL_MES2	Hrs	-		-		-	40.0%	0	
1	04	03	06	02	01	Pre-Assemble Girder - 22	19-Jun-08	24-Jun-08	SL_MSEG2	\$\$		2,500		2,729		2,729	45.0%	1,228
1	04	03	06	02	01	Pre-Assemble Girder - 22	19-Jun-08	24-Jun-08	SL_MFAT2	Hrs	40		3,494		3,494	45.0%	1,572	
1	04	03	06	02	01	Pre-Assemble Girder - 22	19-Jun-08	24-Jun-08	SL_MES2	Hrs	24		1,953		1,953	45.0%	879	
1	04	03	06	02	01	Assemble Girder - 22	10-Sep-08	1-Oct-08	SL_MSEG2	\$\$		2,500		2,729		2,729	45.0%	1,228
1	04	03	06	02	01	Assemble Girder - 22	10-Sep-08	1-Oct-08	SL_MFAT2	Hrs	62		5,416		5,416	45.0%	2,437	
1	04	03	06	02	01	Assemble Girder - 22	10-Sep-08	1-Oct-08	SL_MES2	Hrs	46		3,744		3,744	45.0%	1,685	
1	04	03	06	02	01	Assemble Girder - 22	10-Sep-08	1-Oct-08	SL_LSEE2	Hrs	8		861		861	45.0%	387	
1	04	03	06	02	01	Tune Undulator - 23	20-Feb-08	6-Mar-08	SL_MTAT2	Hrs	-		-		-	10.0%	0	
1	04	03	06	02	01	Tune Undulator - 23	20-Feb-08	6-Mar-08	SL_MPSS2	Hrs	-		-		-	10.0%	0	
1	04	03	06	02	01	Fiducialize Undulator - 23	7-Mar-08	11-Mar-08	SL_MPSS2	Hrs	-		-		-	40.0%	0	
1	04	03	06	02	01	Fiducialize Undulator - 23	7-Mar-08	11-Mar-08	SL_MFAT2	Hrs	-		-		-	40.0%	0	
1	04	03	06	02	01	Fiducialize Undulator - 23	7-Mar-08	11-Mar-08	SL_MES2	Hrs	-		-		-	40.0%	0	
1	04	03	06	02	01	Pre-Assemble Girder - 23	23-Jun-08	26-Jun-08	SL_MSEG2	\$\$		2,500		2,729		2,729	45.0%	1,228
1	04	03	06	02	01	Pre-Assemble Girder - 23	23-Jun-08	26-Jun-08	SL_MFAT2	Hrs	40		3,494		3,494	45.0%	1,572	
1	04	03	06	02	01	Pre-Assemble Girder - 23	23-Jun-08	26-Jun-08	SL_MES2	Hrs	24		1,953		1,953	45.0%	879	
1	04	03	06	02	01	Assemble Girder - 23	15-Sep-08	6-Oct-08	SL_MSEG2	\$\$		2,500		2,744		2,744	45.0%	1,235
1	04	03	06	02	01	Assemble Girder - 23	15-Sep-08	6-Oct-08	SL_MFAT2	Hrs	62		5,468		5,468	45.0%	2,461	
1	04	03	06	02	01	Assemble Girder - 23	15-Sep-08	6-Oct-08	SL_MES2	Hrs	46		3,780		3,780	45.0%	1,701	
1	04	03	06	02	01	Assemble Girder - 23	15-Sep-08	6-Oct-08	SL_LSEE2	Hrs	8		869		869	45.0%	391	
1	04	03	06	02	01	Tune Undulator - 24	28-Feb-08	14-Mar-08	SL_MTAT2	Hrs	-		-		-	10.0%	0	
1	04	03	06	02	01	Tune Undulator - 24	28-Feb-08	14-Mar-08	SL_MPSS2	Hrs	-		-		-	10.0%	0	
1	04	03	06	02	01	Fiducialize Undulator - 24	17-Mar-08	19-Mar-08	SL_MPSS2	Hrs	-		-		-	40.0%	0	
1	04	03	06	02	01	Fiducialize Undulator - 24	17-Mar-08	19-Mar-08	SL_MFAT2	Hrs	-		-		-	40.0%	0	
1	04	03	06	02	01	Fiducialize Undulator - 24	17-Mar-08	19-Mar-08	SL_MES2	Hrs	-		-		-	40.0%	0	
1	04	03	06	02	01	Pre-Assemble Girder - 24	25-Jun-08	30-Jun-08	SL_MSEG2	\$\$		2,500		2,729		2,729	45.0%	1,228
1	04	03	06	02	01	Pre-Assemble Girder - 24	25-Jun-08	30-Jun-08	SL_MFAT2	Hrs	40		3,494		3,494	45.0%	1,572	
1	04	03	06	02	01	Pre-Assemble Girder - 24	25-Jun-08	30-Jun-08	SL_MES2	Hrs	24		1,953		1,953	45.0%	879	
1	04	03	06	02	01	Assemble Girder - 24	18-Sep-08	9-Oct-08	SL_MSEG2	\$\$		2,500		2,753		2,753	45.0%	1,239
1	04	03	06	02	01	Assemble Girder - 24	18-Sep-08	9-Oct-08	SL_MFAT2	Hrs	62		5,499		5,499	45.0%	2,474	
1	04	03	06	02	01	Assemble Girder - 24	18-Sep-08	9-Oct-08	SL_MES2	Hrs	46		3,801		3,801	45.0%	1,710	
1	04	03	06	02	01	Assemble Girder - 24	18-Sep-08	9-Oct-08	SL_LSEE2	Hrs	8		874		874	45.0%	393	
1	04	03	06	02	01	Tune Undulator - 25	11-Mar-08	26-Mar-08	SL_MTAT2	Hrs	51		4,455		4,455	10.0%	446	
1	04	03	06	02	01	Tune Undulator - 25	11-Mar-08	26-Mar-08	SL_MPSS2	Hrs	50		4,718		4,718	10.0%	472	
1	04	03	06	02	01	Fiducialize Undulator - 25	27-Mar-08	31-Mar-08	SL_MPSS2	Hrs	7		660		660	40.0%	264	
1	04	03	06	02	01	Fiducialize Undulator - 25	27-Mar-08	31-Mar-08	SL_MFAT2	Hrs	40		3,494		3,494	40.0%	1,398	
1	04	03	06	02	01	Fiducialize Undulator - 25	27-Mar-08	31-Mar-08	SL_MES2	Hrs	20		1,628		1,628	40.0%	651	
1	04	03	06	02	01	Pre-Assemble Girder - 25	27-Jun-08	2-Jul-08	SL_MSEG2	\$\$		2,500		2,729		2,729	45.0%	1,228
1	04	03	06	02	01	Pre-Assemble Girder - 25	27-Jun-08	2-Jul-08	SL_MFAT2	Hrs	40		3,494		3,494	45.0%	1,572	

LCLS Estimate to Complete

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WBS Level						LCLB Description - New Rates	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	03	06	02	01	Pre-Assemble Girder - 25	27-Jun-08	2-Jul-08	SL_MES2	Hrs	24		1,953		1,953	45.0%	879
1	04	03	06	02	01	Assemble Girder - 25	23-Sep-08	14-Oct-08	SL_MSEG2	\$\$		2,500		2,768	2,768	45.0%	1,246
1	04	03	06	02	01	Assemble Girder - 25	23-Sep-08	14-Oct-08	SL_MFAT2	Hrs	62		5,550		5,550	45.0%	2,498
1	04	03	06	02	01	Assemble Girder - 25	23-Sep-08	14-Oct-08	SL_MES2	Hrs	46		3,837		3,837	45.0%	1,726
1	04	03	06	02	01	Assemble Girder - 25	23-Sep-08	14-Oct-08	SL_LSEE2	Hrs	8		882		882	45.0%	397
1	04	03	06	02	01	Tune Undulator - 26	19-Mar-08	3-Apr-08	SL_MTAT2	Hrs	51		4,455		4,455	10.0%	446
1	04	03	06	02	01	Tune Undulator - 26	19-Mar-08	3-Apr-08	SL_MPSS2	Hrs	50		4,718		4,718	10.0%	472
1	04	03	06	02	01	Fiducialize Undulator - 26	4-Apr-08	8-Apr-08	SL_MPSS2	Hrs	7		660		660	40.0%	264
1	04	03	06	02	01	Fiducialize Undulator - 26	4-Apr-08	8-Apr-08	SL_MFAT2	Hrs	40		3,494		3,494	40.0%	1,398
1	04	03	06	02	01	Fiducialize Undulator - 26	4-Apr-08	8-Apr-08	SL_MES2	Hrs	20		1,628		1,628	40.0%	651
1	04	03	06	02	01	Pre-Assemble Girder - 26	1-Jul-08	7-Jul-08	SL_MSEG2	\$\$		2,500		2,729	2,729	45.0%	1,228
1	04	03	06	02	01	Pre-Assemble Girder - 26	1-Jul-08	7-Jul-08	SL_MFAT2	Hrs	40		3,494		3,494	45.0%	1,572
1	04	03	06	02	01	Pre-Assemble Girder - 26	1-Jul-08	7-Jul-08	SL_MES2	Hrs	24		1,953		1,953	45.0%	879
1	04	03	06	02	01	Assemble Girder - 26	26-Sep-08	17-Oct-08	SL_MSEG2	\$\$		2,500		2,777	2,777	45.0%	1,250
1	04	03	06	02	01	Assemble Girder - 26	26-Sep-08	17-Oct-08	SL_MFAT2	Hrs	62		5,581		5,581	45.0%	2,512
1	04	03	06	02	01	Assemble Girder - 26	26-Sep-08	17-Oct-08	SL_MES2	Hrs	46		3,858		3,858	45.0%	1,736
1	04	03	06	02	01	Assemble Girder - 26	26-Sep-08	17-Oct-08	SL_LSEE2	Hrs	8		887		887	45.0%	399
1	04	03	06	02	01	Tune Undulator - 27	27-Mar-08	11-Apr-08	SL_MTAT2	Hrs	51		4,455		4,455	10.0%	446
1	04	03	06	02	01	Tune Undulator - 27	27-Mar-08	11-Apr-08	SL_MPSS2	Hrs	50		4,718		4,718	10.0%	472
1	04	03	06	02	01	Fiducialize Undulator - 27	14-Apr-08	16-Apr-08	SL_MPSS2	Hrs	7		660		660	40.0%	264
1	04	03	06	02	01	Fiducialize Undulator - 27	14-Apr-08	16-Apr-08	SL_MFAT2	Hrs	40		3,494		3,494	40.0%	1,398
1	04	03	06	02	01	Fiducialize Undulator - 27	14-Apr-08	16-Apr-08	SL_MES2	Hrs	20		1,628		1,628	40.0%	651
1	04	03	06	02	01	Pre-Assemble Girder - 27	3-Jul-08	9-Jul-08	SL_MSEG2	\$\$		2,500		2,729	2,729	45.0%	1,228
1	04	03	06	02	01	Pre-Assemble Girder - 27	3-Jul-08	9-Jul-08	SL_MFAT2	Hrs	40		3,494		3,494	45.0%	1,572
1	04	03	06	02	01	Pre-Assemble Girder - 27	3-Jul-08	9-Jul-08	SL_MES2	Hrs	24		1,953		1,953	45.0%	879
1	04	03	06	02	01	Assemble Girder - 27	1-Oct-08	22-Oct-08	SL_MSEG2	\$\$		2,500		2,792	2,792	45.0%	1,256
1	04	03	06	02	01	Assemble Girder - 27	1-Oct-08	22-Oct-08	SL_MFAT2	Hrs	62		5,633		5,633	45.0%	2,535
1	04	03	06	02	01	Assemble Girder - 27	1-Oct-08	22-Oct-08	SL_MES2	Hrs	46		3,894		3,894	45.0%	1,752
1	04	03	06	02	01	Assemble Girder - 27	1-Oct-08	22-Oct-08	SL_LSEE2	Hrs	8		896		896	45.0%	403
1	04	03	06	02	01	Tune Undulator - 28	4-Apr-08	21-Apr-08	SL_MTAT2	Hrs	51		4,455		4,455	10.0%	446
1	04	03	06	02	01	Tune Undulator - 28	4-Apr-08	21-Apr-08	SL_MPSS2	Hrs	50		4,718		4,718	10.0%	472
1	04	03	06	02	01	Fiducialize Undulator - 28	22-Apr-08	24-Apr-08	SL_MPSS2	Hrs	7		660		660	40.0%	264
1	04	03	06	02	01	Fiducialize Undulator - 28	22-Apr-08	24-Apr-08	SL_MFAT2	Hrs	40		3,494		3,494	40.0%	1,398
1	04	03	06	02	01	Fiducialize Undulator - 28	22-Apr-08	24-Apr-08	SL_MES2	Hrs	20		1,628		1,628	40.0%	651
1	04	03	06	02	01	Pre-Assemble Girder - 28	8-Jul-08	11-Jul-08	SL_MSEG2	\$\$		2,500		2,729	2,729	45.0%	1,228
1	04	03	06	02	01	Pre-Assemble Girder - 28	8-Jul-08	11-Jul-08	SL_MFAT2	Hrs	40		3,494		3,494	45.0%	1,572
1	04	03	06	02	01	Pre-Assemble Girder - 28	8-Jul-08	11-Jul-08	SL_MES2	Hrs	24		1,953		1,953	45.0%	879
1	04	03	06	02	01	Assemble Girder - 28	6-Oct-08	27-Oct-08	SL_MSEG2	\$\$		2,500		2,792	2,792	45.0%	1,256
1	04	03	06	02	01	Assemble Girder - 28	6-Oct-08	27-Oct-08	SL_MFAT2	Hrs	62		5,633		5,633	45.0%	2,535
1	04	03	06	02	01	Assemble Girder - 28	6-Oct-08	27-Oct-08	SL_MES2	Hrs	46		3,894		3,894	45.0%	1,752
1	04	03	06	02	01	Assemble Girder - 28	6-Oct-08	27-Oct-08	SL_LSEE2	Hrs	8		896		896	45.0%	403
1	04	03	06	02	01	Tune Undulator - 29	16-Apr-08	1-May-08	SL_MTAT2	Hrs	51		4,455		4,455	10.0%	446
1	04	03	06	02	01	Tune Undulator - 29	16-Apr-08	1-May-08	SL_MPSS2	Hrs	50		4,718		4,718	10.0%	472
1	04	03	06	02	01	Fiducialize Undulator - 29	2-May-08	6-May-08	SL_MPSS2	Hrs	7		660		660	40.0%	264
1	04	03	06	02	01	Fiducialize Undulator - 29	2-May-08	6-May-08	SL_MFAT2	Hrs	40		3,494		3,494	40.0%	1,398
1	04	03	06	02	01	Fiducialize Undulator - 29	2-May-08	6-May-08	SL_MES2	Hrs	20		1,628		1,628	40.0%	651
1	04	03	06	02	01	Pre-Assemble Girder - 29	10-Jul-08	15-Jul-08	SL_MSEG2	\$\$		2,500		2,729	2,729	45.0%	1,228
1	04	03	06	02	01	Pre-Assemble Girder - 29	10-Jul-08	15-Jul-08	SL_MFAT2	Hrs	40		3,494		3,494	45.0%	1,572
1	04	03	06	02	01	Pre-Assemble Girder - 29	10-Jul-08	15-Jul-08	SL_MES2	Hrs	24		1,953		1,953	45.0%	879

LCLS Estimate to Complete

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WBS Level						LCLB Description - New Rates	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	03	06	02	01	Assemble Girder - 29	9-Oct-08	30-Oct-08	SL_MSEG2	\$\$		2,500		2,792	2,792	45.0%	1,256
1	04	03	06	02	01	Assemble Girder - 29	9-Oct-08	30-Oct-08	SL_MFAT2	Hrs	62		5,633		5,633	45.0%	2,535
1	04	03	06	02	01	Assemble Girder - 29	9-Oct-08	30-Oct-08	SL_MES2	Hrs	46		3,894		3,894	45.0%	1,752
1	04	03	06	02	01	Assemble Girder - 29	9-Oct-08	30-Oct-08	SL_LSEE2	Hrs	8		896		896	45.0%	403
1	04	03	06	02	01	Tune Undulator - 30	24-Apr-08	9-May-08	SL_MTAT2	Hrs	51		4,455		4,455	10.0%	446
1	04	03	06	02	01	Tune Undulator - 30	24-Apr-08	9-May-08	SL_MPSS2	Hrs	50		4,718		4,718	10.0%	472
1	04	03	06	02	01	Fiducialize Undulator - 30	12-May-08	14-May-08	SL_MPSS2	Hrs	6		566		566	40.0%	226
1	04	03	06	02	01	Fiducialize Undulator - 30	12-May-08	14-May-08	SL_MFAT2	Hrs	40		3,494		3,494	40.0%	1,398
1	04	03	06	02	01	Fiducialize Undulator - 30	12-May-08	14-May-08	SL_MES2	Hrs	20		1,628		1,628	40.0%	651
1	04	03	06	02	01	Pre-Assemble Girder - 30	14-Jul-08	17-Jul-08	SL_MSEG2	\$\$		2,500		2,729	2,729	45.0%	1,228
1	04	03	06	02	01	Pre-Assemble Girder - 30	14-Jul-08	17-Jul-08	SL_MFAT2	Hrs	40		3,494		3,494	45.0%	1,572
1	04	03	06	02	01	Pre-Assemble Girder - 30	14-Jul-08	17-Jul-08	SL_MES2	Hrs	24		1,953		1,953	45.0%	879
1	04	03	06	02	01	Assemble Girder - 30	14-Oct-08	4-Nov-08	SL_MSEG2	\$\$		2,500		2,792	2,792	45.0%	1,256
1	04	03	06	02	01	Assemble Girder - 30	14-Oct-08	4-Nov-08	SL_MFAT2	Hrs	62		5,633		5,633	45.0%	2,535
1	04	03	06	02	01	Assemble Girder - 30	14-Oct-08	4-Nov-08	SL_MES2	Hrs	46		3,894		3,894	45.0%	1,752
1	04	03	06	02	01	Assemble Girder - 30	14-Oct-08	4-Nov-08	SL_LSEE2	Hrs	8		896		896	45.0%	403
1	04	03	06	02	01	Tune Undulator - 31	2-May-08	19-May-08	SL_MTAT2	Hrs	51		4,455		4,455	10.0%	446
1	04	03	06	02	01	Tune Undulator - 31	2-May-08	19-May-08	SL_MPSS2	Hrs	50		4,718		4,718	10.0%	472
1	04	03	06	02	01	Fiducialize Undulator - 31	20-May-08	22-May-08	SL_MPSS2	Hrs	6		566		566	40.0%	226
1	04	03	06	02	01	Fiducialize Undulator - 31	20-May-08	22-May-08	SL_MFAT2	Hrs	40		3,494		3,494	40.0%	1,398
1	04	03	06	02	01	Fiducialize Undulator - 31	20-May-08	22-May-08	SL_MES2	Hrs	20		1,628		1,628	40.0%	651
1	04	03	06	02	01	Pre-Assemble Girder - 31	16-Jul-08	21-Jul-08	SL_MSEG2	\$\$		2,500		2,729	2,729	45.0%	1,228
1	04	03	06	02	01	Pre-Assemble Girder - 31	16-Jul-08	21-Jul-08	SL_MFAT2	Hrs	40		3,494		3,494	45.0%	1,572
1	04	03	06	02	01	Pre-Assemble Girder - 31	16-Jul-08	21-Jul-08	SL_MES2	Hrs	24		1,953		1,953	45.0%	879
1	04	03	06	02	01	Assemble Girder - 31	17-Oct-08	7-Nov-08	SL_MSEG2	\$\$		2,500		2,792	2,792	45.0%	1,256
1	04	03	06	02	01	Assemble Girder - 31	17-Oct-08	7-Nov-08	SL_MFAT2	Hrs	62		5,633		5,633	45.0%	2,535
1	04	03	06	02	01	Assemble Girder - 31	17-Oct-08	7-Nov-08	SL_MES2	Hrs	46		3,894		3,894	45.0%	1,752
1	04	03	06	02	01	Assemble Girder - 31	17-Oct-08	7-Nov-08	SL_LSEE2	Hrs	8		896		896	45.0%	403
1	04	03	06	02	01	Tune Undulator - 32	12-May-08	28-May-08	SL_MTAT2	Hrs	51		4,455		4,455	10.0%	446
1	04	03	06	02	01	Tune Undulator - 32	12-May-08	28-May-08	SL_MPSS2	Hrs	50		4,718		4,718	10.0%	472
1	04	03	06	02	01	Fiducialize Undulator - 32	29-May-08	2-Jun-08	SL_MPSS2	Hrs	6		566		566	40.0%	226
1	04	03	06	02	01	Fiducialize Undulator - 32	29-May-08	2-Jun-08	SL_MFAT2	Hrs	40		3,494		3,494	40.0%	1,398
1	04	03	06	02	01	Fiducialize Undulator - 32	29-May-08	2-Jun-08	SL_MES2	Hrs	20		1,628		1,628	40.0%	651
1	04	03	06	02	01	Pre-Assemble Girder - 32	18-Jul-08	23-Jul-08	SL_MSEG2	\$\$		2,500		2,729	2,729	45.0%	1,228
1	04	03	06	02	01	Pre-Assemble Girder - 32	18-Jul-08	23-Jul-08	SL_MFAT2	Hrs	40		3,494		3,494	45.0%	1,572
1	04	03	06	02	01	Pre-Assemble Girder - 32	18-Jul-08	23-Jul-08	SL_MES2	Hrs	24		1,953		1,953	45.0%	879
1	04	03	06	02	01	Assemble Girder - 32	22-Oct-08	12-Nov-08	SL_MSEG2	\$\$		2,500		2,792	2,792	45.0%	1,256
1	04	03	06	02	01	Assemble Girder - 32	22-Oct-08	12-Nov-08	SL_MFAT2	Hrs	62		5,633		5,633	45.0%	2,535
1	04	03	06	02	01	Assemble Girder - 32	22-Oct-08	12-Nov-08	SL_MES2	Hrs	46		3,894		3,894	45.0%	1,752
1	04	03	06	02	01	Assemble Girder - 32	22-Oct-08	12-Nov-08	SL_LSEE2	Hrs	8		896		896	45.0%	403
1	04	03	06	02	01	Tune Undulator - 33	22-May-08	9-Jun-08	SL_MTAT2	Hrs	51		4,455		4,455	10.0%	446
1	04	03	06	02	01	Tune Undulator - 33	22-May-08	9-Jun-08	SL_MPSS2	Hrs	50		4,718		4,718	10.0%	472
1	04	03	06	02	01	Fiducialize Undulator - 33	10-Jun-08	12-Jun-08	SL_MPSS2	Hrs	6		566		566	40.0%	226
1	04	03	06	02	01	Fiducialize Undulator - 33	10-Jun-08	12-Jun-08	SL_MFAT2	Hrs	40		3,494		3,494	40.0%	1,398
1	04	03	06	02	01	Fiducialize Undulator - 33	10-Jun-08	12-Jun-08	SL_MES2	Hrs	20		1,628		1,628	40.0%	651
1	04	03	06	02	01	Pre-Assemble Girder - 33	22-Jul-08	25-Jul-08	SL_MSEG2	\$\$		2,500		2,729	2,729	45.0%	1,228
1	04	03	06	02	01	Pre-Assemble Girder - 33	22-Jul-08	25-Jul-08	SL_MFAT2	Hrs	40		3,494		3,494	45.0%	1,572
1	04	03	06	02	01	Pre-Assemble Girder - 33	22-Jul-08	25-Jul-08	SL_MES2	Hrs	24		1,953		1,953	45.0%	879
1	04	03	06	02	01	Assemble Girder - 33	27-Oct-08	17-Nov-08	SL_MSEG2	\$\$		2,500		2,792	2,792	45.0%	1,256

LCLS Estimate to Complete

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WBS Level						LCLB Description - New Rates	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	03	06	02	01	Assemble Girder - 33	27-Oct-08	17-Nov-08	SL_MFAT2	Hrs	62		5,633		5,633	45.0%	2,535	
1	04	03	06	02	01	Assemble Girder - 33	27-Oct-08	17-Nov-08	SL_MES2	Hrs	46		3,894		3,894	45.0%	1,752	
1	04	03	06	02	01	Assemble Girder - 33	27-Oct-08	17-Nov-08	SL_LSEE2	Hrs	8		896		896	45.0%	403	
1	04	03	06	02	01	Moving and Storing Undulator Assemble	3-Mar-08	30-Sep-08	SL_MFAT2	Hrs	448		39,137		39,137	45.0%	17,612	
1	04	03	06	02	01	Tune Master Undulator (after #24)	17-Mar-08	18-Mar-08	SL_MPSS2	Hrs	16		1,510		1,510	20.0%	302	
1	04	03	06	02	01	Tune Master Undulator (after #24)	17-Mar-08	18-Mar-08	SL_MFAT2	Hrs	16		1,398		1,398	20.0%	280	
1	04	03	06	02	01	Tune Master Undulator (after #28)	22-Apr-08	23-Apr-08	SL_MPSS2	Hrs	16		1,510		1,510	20.0%	302	
1	04	03	06	02	01	Tune Master Undulator (after #28)	22-Apr-08	23-Apr-08	SL_MFAT2	Hrs	16		1,398		1,398	20.0%	280	
1	04	03	06	02	01	Tune Master Undulator (after #32)	29-May-08	30-May-08	SL_MPSS2	Hrs	16		1,510		1,510	20.0%	302	
1	04	03	06	02	01	Tune Master Undulator (after #32)	29-May-08	30-May-08	SL_MFAT2	Hrs	16		1,398		1,398	20.0%	280	
1	04	03	06	02	01	Beam Finder Wire Design & Engr	1-Feb-08	29-Feb-08	SL_ME2	Hrs	28		2,835		2,835	30.0%	850	
1	04	03	06	02	01	Beam Finder Wire Design & Engr	1-Feb-08	29-Feb-08	SL_MDD2	Hrs	16		1,358		1,358	30.0%	407	
1	04	03	06	02	01	Fabrication of Beam Finder Wire	3-Mar-08	27-Jun-08	SL_MSEG2	\$\$		33,320		36,377		36,377	30.0%	10,913
1	04	03	06	02	01	Fabrication of Beam Finder Wire	3-Mar-08	27-Jun-08	SL_MFAT2	Hrs	363		31,677		31,677	30.0%	9,503	
1	04	03	06	02	01	Fabrication of Beam Finder Wire	3-Mar-08	27-Jun-08	SL_MES2	Hrs	59		4,786		4,786	30.0%	1,436	
1	04	03	06	02	01	Fabrication of Beam Finder Wire	3-Mar-08	27-Jun-08	SL_CT2	Hrs	314		19,671		19,671	30.0%	5,901	
1	04	03	06	02	02	F/MM Quadrupoles					1,088	-	87,347	-	87,347		30,571	
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 05	11-Mar-08	13-Mar-08	SL_MPSS2	Hrs	3		236		236	35.0%	83	
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 05	11-Mar-08	13-Mar-08	SL_MPHS2	Hrs	11		815		815	35.0%	285	
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 05	11-Mar-08	13-Mar-08	SL_MFAT2	Hrs	4		349		349	35.0%	122	
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 05	11-Mar-08	13-Mar-08	SL_MES2	Hrs	3		203		203	35.0%	71	
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 06	14-Mar-08	18-Mar-08	SL_MPSS2	Hrs	3		236		236	35.0%	83	
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 06	14-Mar-08	18-Mar-08	SL_MPHS2	Hrs	11		815		815	35.0%	285	
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 06	14-Mar-08	18-Mar-08	SL_MFAT2	Hrs	4		349		349	35.0%	122	
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 06	14-Mar-08	18-Mar-08	SL_MES2	Hrs	3		203		203	35.0%	71	
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 07	19-Mar-08	21-Mar-08	SL_MPSS2	Hrs	3		236		236	35.0%	83	
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 07	19-Mar-08	21-Mar-08	SL_MPHS2	Hrs	11		815		815	35.0%	285	
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 07	19-Mar-08	21-Mar-08	SL_MFAT2	Hrs	4		349		349	35.0%	122	
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 07	19-Mar-08	21-Mar-08	SL_MES2	Hrs	3		203		203	35.0%	71	
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 08	24-Mar-08	26-Mar-08	SL_MPSS2	Hrs	5		472		472	35.0%	165	
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 08	24-Mar-08	26-Mar-08	SL_MPHS2	Hrs	22		1,631		1,631	35.0%	571	
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 08	24-Mar-08	26-Mar-08	SL_MFAT2	Hrs	8		699		699	35.0%	245	
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 08	24-Mar-08	26-Mar-08	SL_MES2	Hrs	5		407		407	35.0%	142	
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 09	27-Mar-08	31-Mar-08	SL_MPSS2	Hrs	5		472		472	35.0%	165	
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 09	27-Mar-08	31-Mar-08	SL_MPHS2	Hrs	22		1,631		1,631	35.0%	571	
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 09	27-Mar-08	31-Mar-08	SL_MFAT2	Hrs	8		699		699	35.0%	245	
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 09	27-Mar-08	31-Mar-08	SL_MES2	Hrs	5		407		407	35.0%	142	
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 10	1-Apr-08	2-Apr-08	SL_MPSS2	Hrs	5		472		472	35.0%	165	
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 10	1-Apr-08	2-Apr-08	SL_MPHS2	Hrs	22		1,631		1,631	35.0%	571	
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 10	1-Apr-08	2-Apr-08	SL_MFAT2	Hrs	8		699		699	35.0%	245	
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 10	1-Apr-08	2-Apr-08	SL_MES2	Hrs	5		407		407	35.0%	142	
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 11	3-Apr-08	4-Apr-08	SL_MPSS2	Hrs	5		472		472	35.0%	165	
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 11	3-Apr-08	4-Apr-08	SL_MPHS2	Hrs	22		1,631		1,631	35.0%	571	
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 11	3-Apr-08	4-Apr-08	SL_MFAT2	Hrs	8		699		699	35.0%	245	
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 11	3-Apr-08	4-Apr-08	SL_MES2	Hrs	5		407		407	35.0%	142	
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 12	7-Apr-08	8-Apr-08	SL_MPSS2	Hrs	5		472		472	35.0%	165	
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 12	7-Apr-08	8-Apr-08	SL_MPHS2	Hrs	22		1,631		1,631	35.0%	571	
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 12	7-Apr-08	8-Apr-08	SL_MFAT2	Hrs	8		699		699	35.0%	245	
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 12	7-Apr-08	8-Apr-08	SL_MES2	Hrs	5		407		407	35.0%	142	

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WBS Level						LCLB Description - New Rates	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	03	06	02	02	Measure and Fiducialize Quadrupole - 13	9-Apr-08	10-Apr-08	SL_MPSS2	Hrs	5		472		472	35.0%	165
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 13	9-Apr-08	10-Apr-08	SL_MPHS2	Hrs	22		1,631		1,631	35.0%	571
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 13	9-Apr-08	10-Apr-08	SL_MFAT2	Hrs	8		699		699	35.0%	245
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 13	9-Apr-08	10-Apr-08	SL_MES2	Hrs	5		407		407	35.0%	142
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 14	11-Apr-08	14-Apr-08	SL_MPSS2	Hrs	5		472		472	35.0%	165
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 14	11-Apr-08	14-Apr-08	SL_MPHS2	Hrs	22		1,631		1,631	35.0%	571
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 14	11-Apr-08	14-Apr-08	SL_MFAT2	Hrs	8		699		699	35.0%	245
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 14	11-Apr-08	14-Apr-08	SL_MES2	Hrs	5		407		407	35.0%	142
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 15	15-Apr-08	16-Apr-08	SL_MPSS2	Hrs	5		472		472	35.0%	165
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 15	15-Apr-08	16-Apr-08	SL_MPHS2	Hrs	22		1,631		1,631	35.0%	571
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 15	15-Apr-08	16-Apr-08	SL_MFAT2	Hrs	8		699		699	35.0%	245
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 15	15-Apr-08	16-Apr-08	SL_MES2	Hrs	5		407		407	35.0%	142
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 16	17-Apr-08	18-Apr-08	SL_MPSS2	Hrs	5		472		472	35.0%	165
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 16	17-Apr-08	18-Apr-08	SL_MPHS2	Hrs	22		1,631		1,631	35.0%	571
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 16	17-Apr-08	18-Apr-08	SL_MFAT2	Hrs	8		699		699	35.0%	245
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 16	17-Apr-08	18-Apr-08	SL_MES2	Hrs	5		407		407	35.0%	142
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 17	21-Apr-08	22-Apr-08	SL_MPSS2	Hrs	5		472		472	35.0%	165
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 17	21-Apr-08	22-Apr-08	SL_MPHS2	Hrs	22		1,631		1,631	35.0%	571
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 17	21-Apr-08	22-Apr-08	SL_MFAT2	Hrs	8		699		699	35.0%	245
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 17	21-Apr-08	22-Apr-08	SL_MES2	Hrs	5		407		407	35.0%	142
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 18	23-Apr-08	24-Apr-08	SL_MPSS2	Hrs	5		472		472	35.0%	165
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 18	23-Apr-08	24-Apr-08	SL_MPHS2	Hrs	22		1,631		1,631	35.0%	571
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 18	23-Apr-08	24-Apr-08	SL_MFAT2	Hrs	8		699		699	35.0%	245
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 18	23-Apr-08	24-Apr-08	SL_MES2	Hrs	5		407		407	35.0%	142
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 19	25-Apr-08	25-Apr-08	SL_MPSS2	Hrs	5		472		472	35.0%	165
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 19	25-Apr-08	25-Apr-08	SL_MPHS2	Hrs	22		1,631		1,631	35.0%	571
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 19	25-Apr-08	25-Apr-08	SL_MFAT2	Hrs	8		699		699	35.0%	245
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 19	25-Apr-08	25-Apr-08	SL_MES2	Hrs	5		407		407	35.0%	142
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 20	28-Apr-08	28-Apr-08	SL_MPSS2	Hrs	5		472		472	35.0%	165
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 20	28-Apr-08	28-Apr-08	SL_MPHS2	Hrs	22		1,631		1,631	35.0%	571
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 20	28-Apr-08	28-Apr-08	SL_MFAT2	Hrs	8		699		699	35.0%	245
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 20	28-Apr-08	28-Apr-08	SL_MES2	Hrs	5		407		407	35.0%	142
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 21	29-Apr-08	29-Apr-08	SL_MPSS2	Hrs	5		472		472	35.0%	165
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 21	29-Apr-08	29-Apr-08	SL_MPHS2	Hrs	22		1,631		1,631	35.0%	571
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 21	29-Apr-08	29-Apr-08	SL_MFAT2	Hrs	8		699		699	35.0%	245
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 21	29-Apr-08	29-Apr-08	SL_MES2	Hrs	5		407		407	35.0%	142
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 22	30-Apr-08	30-Apr-08	SL_MPSS2	Hrs	5		472		472	35.0%	165
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 22	30-Apr-08	30-Apr-08	SL_MPHS2	Hrs	21		1,557		1,557	35.0%	545
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 22	30-Apr-08	30-Apr-08	SL_MFAT2	Hrs	8		699		699	35.0%	245
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 22	30-Apr-08	30-Apr-08	SL_MES2	Hrs	5		407		407	35.0%	142
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 23	1-May-08	1-May-08	SL_MPSS2	Hrs	5		472		472	35.0%	165
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 23	1-May-08	1-May-08	SL_MPHS2	Hrs	21		1,557		1,557	35.0%	545
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 23	1-May-08	1-May-08	SL_MFAT2	Hrs	8		699		699	35.0%	245
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 23	1-May-08	1-May-08	SL_MES2	Hrs	5		407		407	35.0%	142
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 24	2-May-08	2-May-08	SL_MPSS2	Hrs	5		472		472	35.0%	165
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 24	2-May-08	2-May-08	SL_MPHS2	Hrs	21		1,557		1,557	35.0%	545
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 24	2-May-08	2-May-08	SL_MFAT2	Hrs	8		699		699	35.0%	245
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 24	2-May-08	2-May-08	SL_MES2	Hrs	5		407		407	35.0%	142
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 24	5-May-08	5-May-08	SL_MPSS2	Hrs	5		472		472	35.0%	165

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WBS Level						LCLB Description - New Rates	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	03	06	02	02	Measure and Fiducialize Quadrupole - 25	5-May-08	5-May-08	SL_MPHS2	Hrs	21		1,557		1,557	35.0%	545
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 25	5-May-08	5-May-08	SL_MFAT2	Hrs	8		699		699	35.0%	245
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 25	5-May-08	5-May-08	SL_MES2	Hrs	5		407		407	35.0%	142
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 26	6-May-08	6-May-08	SL_MPSS2	Hrs	5		472		472	35.0%	165
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 26	6-May-08	6-May-08	SL_MPHS2	Hrs	21		1,557		1,557	35.0%	545
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 26	6-May-08	6-May-08	SL_MFAT2	Hrs	8		699		699	35.0%	245
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 26	6-May-08	6-May-08	SL_MES2	Hrs	5		407		407	35.0%	142
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 27	7-May-08	7-May-08	SL_MPSS2	Hrs	5		472		472	35.0%	165
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 27	7-May-08	7-May-08	SL_MPHS2	Hrs	21		1,557		1,557	35.0%	545
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 27	7-May-08	7-May-08	SL_MFAT2	Hrs	8		699		699	35.0%	245
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 27	7-May-08	7-May-08	SL_MES2	Hrs	5		407		407	35.0%	142
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 28	8-May-08	8-May-08	SL_MPSS2	Hrs	5		472		472	35.0%	165
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 28	8-May-08	8-May-08	SL_MPHS2	Hrs	21		1,557		1,557	35.0%	545
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 28	8-May-08	8-May-08	SL_MFAT2	Hrs	8		699		699	35.0%	245
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 28	8-May-08	8-May-08	SL_MES2	Hrs	5		407		407	35.0%	142
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 29	9-May-08	9-May-08	SL_MPSS2	Hrs	5		472		472	35.0%	165
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 29	9-May-08	9-May-08	SL_MPHS2	Hrs	21		1,557		1,557	35.0%	545
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 29	9-May-08	9-May-08	SL_MFAT2	Hrs	8		699		699	35.0%	245
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 29	9-May-08	9-May-08	SL_MES2	Hrs	5		407		407	35.0%	142
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 30	12-May-08	12-May-08	SL_MPSS2	Hrs	5		472		472	35.0%	165
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 30	12-May-08	12-May-08	SL_MPHS2	Hrs	21		1,557		1,557	35.0%	545
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 30	12-May-08	12-May-08	SL_MFAT2	Hrs	8		699		699	35.0%	245
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 30	12-May-08	12-May-08	SL_MES2	Hrs	5		407		407	35.0%	142
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 31	13-May-08	13-May-08	SL_MPSS2	Hrs	5		472		472	35.0%	165
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 31	13-May-08	13-May-08	SL_MPHS2	Hrs	21		1,557		1,557	35.0%	545
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 31	13-May-08	13-May-08	SL_MFAT2	Hrs	8		699		699	35.0%	245
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 31	13-May-08	13-May-08	SL_MES2	Hrs	5		407		407	35.0%	142
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 32	14-May-08	14-May-08	SL_MPSS2	Hrs	5		472		472	35.0%	165
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 32	14-May-08	14-May-08	SL_MPHS2	Hrs	21		1,557		1,557	35.0%	545
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 32	14-May-08	14-May-08	SL_MFAT2	Hrs	8		699		699	35.0%	245
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 32	14-May-08	14-May-08	SL_MES2	Hrs	5		407		407	35.0%	142
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 33	15-May-08	15-May-08	SL_MPSS2	Hrs	5		472		472	35.0%	165
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 33	15-May-08	15-May-08	SL_MPHS2	Hrs	21		1,557		1,557	35.0%	545
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 33	15-May-08	15-May-08	SL_MFAT2	Hrs	8		699		699	35.0%	245
1	04	03	06	02	02	Measure and Fiducialize Quadrupole - 33	15-May-08	15-May-08	SL_MES2	Hrs	5		407		407	35.0%	142
1	04	03	06	03		Undulator Monitoring					3,518	212,666	290,382	232,176	522,558		111,463
1	04	03	06	03	01	Stretched Wire System					1,766	143,382	144,601	156,536	301,137		65,081
1	04	03	06	03	01	Design & Specs Electronics	1-Feb-08	31-Mar-08	SL_EE2	Hrs	13		1,191		1,191	25.0%	298
1	04	03	06	03	01	RCV: Wire Monitors	31-Mar-08	31-Mar-08	SL_MSEG2	\$\$		12,384		13,520	13,520	10.0%	1,352
1	04	03	06	03	01	RCV: Wire Monitor Supports	31-Mar-08	31-Mar-08	SL_MSEG2	\$\$		360		393	393	20.0%	79
1	04	03	06	03	01	RCV: Wire Tubes	31-Mar-08	31-Mar-08	SL_MSEG2	\$\$		22,338		24,387	24,387	20.0%	4,877
1	04	03	06	03	01	RCV: RF Signal Processing	1-Apr-08	1-Apr-08	SL_MSEG2	\$\$		15,200		16,594	16,594	35.0%	5,808
1	04	03	06	03	01	RCV: RF Signal Distribution	1-Apr-08	1-Apr-08	SL_MSEG2	\$\$		14,000		15,284	15,284	35.0%	5,350
1	04	03	06	03	01	RCV: RF Power Amplifier	1-May-08	1-May-08	SL_MSEG2	\$\$		8,000		8,734	8,734	35.0%	3,057
1	04	03	06	03	01	RCV: Cables	4-Mar-08	4-Mar-08	SL_MSEG2	\$\$		22,500		24,564	24,564	20.0%	4,913
1	04	03	06	03	01	RCV: Crates	1-May-08	1-May-08	SL_MSEG2	\$\$		23,000		25,110	25,110	20.0%	5,022
1	04	03	06	03	01	RCV: Data Acquisition System	19-Feb-08	19-Feb-08	SL_MSEG2	\$\$		25,600		27,949	27,949	20.0%	5,590
1	04	03	06	03	01	WPM Systems Engineering (CNST)	1-Feb-08	31-Oct-08	SL_MES2	Hrs	1,741		142,319		142,319	20.0%	28,464
1	04	03	06	03	01	Drawings and Documentator	1-Feb-08	1-Jul-08	SL_MDD2	Hrs	13		1,091		1,091	25.0%	273

WBS Level						LCLB Description - New Rates	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	03	06	03	02	Hydrostatic Level System					881	23,600	72,018	25,765	97,783		22,133
1	04	03	06	03	02	RCV: Data Acquisition System	1-Feb-08	1-Feb-08	SL_MSEG2	\$\$		17,100		18,669	18,669	30.0%	5,601
1	04	03	06	03	02	RCV: Cables	5-Mar-08	5-Mar-08	SL_MSEG2	\$\$		6,500		7,096	7,096	30.0%	2,129
1	04	03	06	03	02	HLS Systems Engineering (CNST)	1-Feb-08	31-Oct-08	SL_MES2	Hrs	881		72,018		72,018	20.0%	14,404
1	04	03	06	03	03	F/MM BPMs					265	-	21,568	-	21,568		9,054
1	04	03	06	03	03	Alignment Hardware/Software Acceptance Testing	1-Feb-08	3-Mar-08	SL_MES2	Hrs	205		16,685		16,685	25.0%	4,171
1	04	03	06	03	03	AEG Support and Data Evaluation	1-Feb-08	31-Mar-08	SL_MES2	Hrs	60		4,883		4,883	100.0%	4,883
1	04	03	06	03	04	0					606	45,684	52,195	49,875	102,070		15,195
1	04	03	06	03	04	Install and Test Undulator Handling	1-Feb-08	3-Mar-08	SL_PHS2	Hrs	22		1,631		1,631	10.0%	163
1	04	03	06	03	04	Install and Test Undulator Handling	1-Feb-08	3-Mar-08	SL_MFAT2	Hrs	508		44,379		44,379	10.0%	4,438
1	04	03	06	03	04	Install and Test Undulator Handling	1-Feb-08	3-Mar-08	SL_MES2	Hrs	76		6,185		6,185	10.0%	619
1	04	03	06	03	04	RCV: Girder Assy & Install Equip	1-Feb-08	3-Jun-08	SL_MSEQ2	\$\$		45,684		49,875	49,875	20.0%	9,975
1	04	03	08			Fixed Supports					324	35,600	33,075	37,256	70,331		12,805
1	04	03	08	02		Fixed Support Design					310	2,000	31,499	2,093	33,592		4,830
1	04	03	08	02		Ship 1st Article #1 to SLAC	1-Aug-08	7-Aug-08	AN_MSEG2	\$\$		2,000		2,093	2,093	5.0%	105
1	04	03	08	02		Vendor Fab Fixed Support Production Units	1-Feb-08	25-Feb-08	AN_PHS2	Hrs	18		2,026		2,026	15.0%	304
1	04	03	08	02		Vendor Fab Fixed Support Production Units	1-Feb-08	25-Feb-08	AN_ME2	Hrs	184		20,664		20,664	15.0%	3,100
1	04	03	08	02		Vendor Fab Fixed Support Production Units	1-Feb-08	25-Feb-08	AN_MDD2	Hrs	72		4,758		4,758	15.0%	714
1	04	03	08	02		Vendor Fab Fixed Support Production Units	1-Feb-08	25-Feb-08	AN_CE2	Hrs	36		4,052		4,052	15.0%	608
1	04	03	08	05		Thermometry					-	12,000	-	12,558	12,558		3,140
1	04	03	08	05		Mechanical Hardware for Temp Monitoring System	1-Feb-08	28-Mar-08	AN_MSEG2	\$\$		12,000		12,558	12,558	25.0%	3,140
1	04	03	08	07		Earthquake Bracing					14	21,600	1,576	22,605	24,181		4,836
1	04	03	08	07		Procure Earthquake Bracing	1-Feb-08	30-May-08	AN_MSEG2	\$\$		21,600		22,605	22,605	20.0%	4,521
1	04	03	08	07		Procure Earthquake Bracing	1-Feb-08	30-May-08	AN_ME2	Hrs	14		1,576		1,576	20.0%	315
1	04	04				Vacuum System					1,605	183,384	136,616	191,917	328,533		60,555
1	04	04	02			Undulator Vacuum Chamber Assembly					875	103,000	74,729	107,792	182,521		36,504
1	04	04	02	02		Production Chamber Weldment					875	103,000	74,729	107,792	182,521		36,504
1	04	04	02	02		Oversee Construction of Chamber Supports	1-Feb-08	11-Aug-08	AN_MVE2	Hrs	76		8,509		8,509	20.0%	1,702
1	04	04	02	02		Oversee Construction of Chamber Supports	1-Feb-08	11-Aug-08	AN_MFMS2	Hrs	8		917		917	20.0%	183
1	04	04	02	02		Oversee Construction of Chamber Supports	1-Feb-08	11-Aug-08	AN_MFAT2	Hrs	124		8,167		8,167	20.0%	1,633
1	04	04	02	02		Oversee Construction of Chamber Supports	1-Feb-08	11-Aug-08	AN_MDD2	Hrs	45		2,974		2,974	20.0%	595
1	04	04	02	02		Oversee Construction of Vacuum Chamber	1-Feb-08	25-Apr-08	AN_MVE2	Hrs	66		7,462		7,462	20.0%	1,492
1	04	04	02	02		Oversee Construction of Vacuum Chamber	1-Feb-08	25-Apr-08	AN_MFAT2	Hrs	77		5,068		5,068	20.0%	1,014
1	04	04	02	02		Oversee Construction of Vacuum Chamber	1-Feb-08	25-Apr-08	AN_ME2	Hrs	72		8,047		8,047	20.0%	1,609
1	04	04	02	02		Oversee Construction of Vacuum Chamber	1-Feb-08	25-Apr-08	AN_MDD2	Hrs	36		2,405		2,405	20.0%	481
1	04	04	02	02		Additional Polishing (1-33)	1-Feb-08	19-Feb-08	AN_MSSC2	\$\$		-		-	-	20.0%	0
1	04	04	02	02		Ship Chambers 11-20 from EFC	1-Feb-08	14-Feb-08	AN_MVE2	Hrs	-		-		-	20.0%	0
1	04	04	02	02		Ship Chambers 11-20 from EFC	1-Feb-08	14-Feb-08	AN_MSEG2	\$\$		-		-	-	20.0%	0
1	04	04	02	02		Ship Chambers 11-20 from EFC	1-Feb-08	14-Feb-08	AN_MFAT2	Hrs	-		-		-	20.0%	0
1	04	04	02	02		Ship Chambers 21-30 from EFC	14-Feb-08	13-Mar-08	AN_MVE2	Hrs	-		-		-	20.0%	0
1	04	04	02	02		Ship Chambers 21-30 from EFC	14-Feb-08	13-Mar-08	AN_MSEG2	\$\$		-		-	-	20.0%	0
1	04	04	02	02		Ship Chambers 21-30 from EFC	14-Feb-08	13-Mar-08	AN_MFAT2	Hrs	-		-		-	20.0%	0
1	04	04	02	02		Ship Chambers 31-33 from EFC to Machinists	7-Apr-08	10-Apr-08	AN_MVE2	Hrs	-		-		-	20.0%	0
1	04	04	02	02		Ship Chambers 31-33 from EFC to Machinists	7-Apr-08	10-Apr-08	AN_MSEG2	\$\$		-		-	-	20.0%	0
1	04	04	02	02		Ship Chambers 31-33 from EFC to Machinists	7-Apr-08	10-Apr-08	AN_MFAT2	Hrs	-		-		-	20.0%	0
1	04	04	02	02		Prep & Ship Chambers 1-5 to SLAC	1-Feb-08	29-Feb-08	AN_MVE2	Hrs	-		-		-	20.0%	0
1	04	04	02	02		Prep & Ship Chambers 1-5 to SLAC	1-Feb-08	29-Feb-08	AN_MSEG2	\$\$		-		-	-	20.0%	0
1	04	04	02	02		Prep & Ship Chambers 1-5 to SLAC	1-Feb-08	29-Feb-08	AN_MFAT2	Hrs	-		-		-	20.0%	0
1	04	04	02	02		Chambers 6-10 Arrive at ANL from Vendor B	1-Feb-08	7-Feb-08	AN_MVE2	Hrs	-		-		-	20.0%	0

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WBS Level						LCLB Description - New Rates	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	04	02	02		Chambers 6-10 Arrive at ANL from Vendor B	1-Feb-08	7-Feb-08	AN_MSEG2	\$\$	-	-	-	-	20.0%	0	
1	04	04	02	02		Chambers 6-10 Arrive at ANL from Vendor B	1-Feb-08	7-Feb-08	AN_MFAT2	Hrs	-	-	-	-	20.0%	0	
1	04	04	02	02		Process Chambers 6-10 @ ANL	7-Feb-08	27-Feb-08	AN_MVE2	Hrs	-	-	-	-	20.0%	0	
1	04	04	02	02		Process Chambers 6-10 @ ANL	7-Feb-08	27-Feb-08	AN_MFMS2	Hrs	-	-	-	-	20.0%	0	
1	04	04	02	02		Process Chambers 6-10 @ ANL	7-Feb-08	27-Feb-08	AN_MFAT2	Hrs	-	-	-	-	20.0%	0	
1	04	04	02	02		Prep & Ship Chambers 6-10 to SLAC	28-Feb-08	5-Mar-08	AN_MVE2	Hrs	-	-	-	-	20.0%	0	
1	04	04	02	02		Prep & Ship Chambers 6-10 to SLAC	28-Feb-08	5-Mar-08	AN_MSEG2	\$\$	-	-	-	-	20.0%	0	
1	04	04	02	02		Prep & Ship Chambers 6-10 to SLAC	28-Feb-08	5-Mar-08	AN_MFAT2	Hrs	-	-	-	-	20.0%	0	
1	04	04	02	02		Chambers 11-20 Arrive at ANL	19-Feb-08	21-Feb-08	AN_MVE2	Hrs	-	-	-	-	20.0%	0	
1	04	04	02	02		Chambers 11-20 Arrive at ANL	19-Feb-08	21-Feb-08	AN_MSEG2	\$\$	-	-	-	-	20.0%	0	
1	04	04	02	02		Chambers 11-20 Arrive at ANL	19-Feb-08	21-Feb-08	AN_MFAT2	Hrs	-	-	-	-	20.0%	0	
1	04	04	02	02		Process Chambers 11-20 @ ANL	20-Feb-08	4-Mar-08	AN_MVE2	Hrs	7	743	743	743	20.0%	149	
1	04	04	02	02		Process Chambers 11-20 @ ANL	20-Feb-08	4-Mar-08	AN_MFMS2	Hrs	19	2,096	2,096	2,096	20.0%	419	
1	04	04	02	02		Process Chambers 11-20 @ ANL	20-Feb-08	4-Mar-08	AN_MFAT2	Hrs	36	2,379	2,379	2,379	20.0%	476	
1	04	04	02	02		Prep & Ship Chambers 11-20 to SLAC	5-Mar-08	14-Mar-08	AN_MVE2	Hrs	2	203	203	203	20.0%	41	
1	04	04	02	02		Prep & Ship Chambers 11-20 to SLAC	5-Mar-08	14-Mar-08	AN_MSEG2	\$\$	3,000	3,140	3,140	3,140	20.0%	628	
1	04	04	02	02		Prep & Ship Chambers 11-20 to SLAC	5-Mar-08	14-Mar-08	AN_MFAT2	Hrs	5	317	317	317	20.0%	63	
1	04	04	02	02		Chambers 21-30 Arrive at ANL	19-Feb-08	22-Feb-08	AN_MVE2	Hrs	1	158	158	158	20.0%	32	
1	04	04	02	02		Chambers 21-30 Arrive at ANL	19-Feb-08	22-Feb-08	AN_MSEG2	\$\$	60,900	63,734	63,734	63,734	20.0%	12,747	
1	04	04	02	02		Chambers 21-30 Arrive at ANL	19-Feb-08	22-Feb-08	AN_MFAT2	Hrs	3	185	185	185	20.0%	37	
1	04	04	02	02		Process Chambers 21-30 @ ANL	4-Mar-08	7-Apr-08	AN_MVE2	Hrs	22	2,476	2,476	2,476	20.0%	495	
1	04	04	02	02		Process Chambers 21-30 @ ANL	4-Mar-08	7-Apr-08	AN_MFMS2	Hrs	64	6,987	6,987	6,987	20.0%	1,397	
1	04	04	02	02		Process Chambers 21-30 @ ANL	4-Mar-08	7-Apr-08	AN_MFAT2	Hrs	120	7,929	7,929	7,929	20.0%	1,586	
1	04	04	02	02		Prep & Ship Chambers 21-30 to SLAC	8-Apr-08	14-Apr-08	AN_MVE2	Hrs	6	675	675	675	20.0%	135	
1	04	04	02	02		Prep & Ship Chambers 21-30 to SLAC	8-Apr-08	14-Apr-08	AN_MSEG2	\$\$	10,000	10,465	10,465	10,465	20.0%	2,093	
1	04	04	02	02		Prep & Ship Chambers 21-30 to SLAC	8-Apr-08	14-Apr-08	AN_MFAT2	Hrs	16	1,057	1,057	1,057	20.0%	211	
1	04	04	02	02		Chambers 31-33 arrive at ANL	16-Apr-08	21-Apr-08	AN_MVE2	Hrs	1	113	113	113	20.0%	23	
1	04	04	02	02		Chambers 31-33 arrive at ANL	16-Apr-08	21-Apr-08	AN_MSEG2	\$\$	26,100	27,314	27,314	27,314	20.0%	5,463	
1	04	04	02	02		Chambers 31-33 arrive at ANL	16-Apr-08	21-Apr-08	AN_MFAT2	Hrs	1	66	66	66	20.0%	13	
1	04	04	02	02		Process Chambers 31-33 @ ANL	22-Apr-08	7-May-08	AN_MVE2	Hrs	7	788	788	788	20.0%	158	
1	04	04	02	02		Process Chambers 31-33 @ ANL	22-Apr-08	7-May-08	AN_MFMS2	Hrs	19	2,074	2,074	2,074	20.0%	415	
1	04	04	02	02		Process Chambers 31-33 @ ANL	22-Apr-08	7-May-08	AN_MFAT2	Hrs	36	2,379	2,379	2,379	20.0%	476	
1	04	04	02	02		Prep & Ship Chambers 31-33 to SLAC	8-May-08	14-May-08	AN_MVE2	Hrs	2	225	225	225	20.0%	45	
1	04	04	02	02		Prep & Ship Chambers 31-33 to SLAC	8-May-08	14-May-08	AN_MSEG2	\$\$	3,000	3,140	3,140	3,140	20.0%	628	
1	04	04	02	02		Prep & Ship Chambers 31-33 to SLAC	8-May-08	14-May-08	AN_MFAT2	Hrs	5	330	330	330	20.0%	66	
1	04	04	03			Beam-line Bellows Module Assembly					266	20,346	23,442	21,293		8,947	
1	04	04	03	02		Production Bellows Module					266	20,346	23,442	21,293		8,947	
1	04	04	03	02		RCV: Bellows Lot #1 (2)Outer Shell	11-Feb-08	11-Feb-08	AN_MVE2	Hrs	2	225	225	225	20.0%	45	
1	04	04	03	02		RCV: Bellows Lot #1 (2)Outer Shell	11-Feb-08	11-Feb-08	AN_MSEG2	\$\$	500	523	523	523	20.0%	105	
1	04	04	03	02		RCV: Bellows Lot #1 (2)Outer Shell	11-Feb-08	11-Feb-08	AN_MFMS2	Hrs	4	437	437	437	20.0%	87	
1	04	04	03	02		RCV: Bellows Lot #1 (2) Internal	12-Feb-08	12-Feb-08	AN_MVE2	Hrs	-	-	-	-	20.0%	0	
1	04	04	03	02		RCV: Bellows Lot #1 (2) Internal	12-Feb-08	12-Feb-08	AN_MFMS2	Hrs	-	-	-	-	20.0%	0	
1	04	04	03	02		RCV: Bellows Lot #1 (2) Internal	12-Feb-08	12-Feb-08	AA_MSEG2	\$\$	-	-	-	-	20.0%	0	
1	04	04	03	02		Clean-Bake-Leak Check Bellows	13-Feb-08	4-Mar-08	AN_MVE2	Hrs	12	1,351	1,351	1,351	20.0%	270	
1	04	04	03	02		Clean-Bake-Leak Check Bellows	13-Feb-08	4-Mar-08	AN_MFAT2	Hrs	16	1,057	1,057	1,057	20.0%	211	
1	04	04	03	02		Package-Ship to SLAC - Bellows	5-Mar-08	13-Mar-08	AN_MVE2	Hrs	8	900	900	900	20.0%	180	
1	04	04	03	02		Package-Ship to SLAC - Bellows	5-Mar-08	13-Mar-08	AN_MSEG2	\$\$	200	209	209	209	20.0%	42	
1	04	04	03	02		RCV: Bellows Lot #2 (35)Outer Shell	14-Mar-08	14-Mar-08	AN_MVE2	Hrs	8	900	900	900	20.0%	180	
1	04	04	03	02		RCV: Bellows Lot #2 (35)Outer Shel	14-Mar-08	14-Mar-08	AN_MFMS2	Hrs	24	2,620	2,620	2,620	20.0%	524	

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WBS Level						LCLB Description - New Rates	Early Start	Early Finish	Res Code	Units	Work Rem. Bud. Qty		Work Rem. Full Burd and Escltd Cost			Contingency %	Contingency \$
2	3	4	5	6	Hours						\$\$	Labor	M&S	Total			
1	04	04	03	02		RCV: Bellows Lot #2 (35)Outer Shell	14-Mar-08	14-Mar-08	AA_MSEG2	\$\$		15,946		16,688	16,688	20.0%	3,338
1	04	04	03	02		RCV: Bellows Lot #2 (35) Internal	15-Feb-08	15-Feb-08	AN_MVE2	Hrs	8		900		900	20.0%	180
1	04	04	03	02		RCV: Bellows Lot #2 (35) Internal	15-Feb-08	15-Feb-08	AN_MFMS2	Hrs	24		2,620		2,620	20.0%	524
1	04	04	03	02		RCV: Bellows Lot #2 (35) Internal	15-Feb-08	15-Feb-08	AA_MSEG2	\$\$		3,200		3,349	3,349	20.0%	670
1	04	04	03	02		Clean-Bake-Leak Check Bellows	17-Mar-08	4-Apr-08	AN_MVE2	Hrs	24		2,701		2,701	20.0%	540
1	04	04	03	02		Clean-Bake-Leak Check Bellows	17-Mar-08	4-Apr-08	AN_MFAT2	Hrs	120		7,929		7,929	20.0%	1,586
1	04	04	03	02		Package-Ship to SLAC - Bellows(35)	7-Apr-08	18-Apr-08	AN_MVE2	Hrs	16		1,801		1,801	20.0%	360
1	04	04	03	02		Package-Ship to SLAC - Bellows(35)	7-Apr-08	18-Apr-08	AN_MSEG2	\$\$		500		523	523	20.0%	105
1	04	04	05			Short Diagnostic Break (SDB) Assembly					232	15,461	19,107	16,181	35,288		5,205
1	04	04	05			RCV: SDB Quad Spools (33)	15-Feb-08	13-Mar-08	AN_MSSC2	\$\$		14,461		15,134	15,134	15.0%	2,270
1	04	04	05			RCV: SDB Ion Pump Support (33)	15-Feb-08	12-Mar-08	AN_MSSC2	\$\$		-		-	-	10.0%	0
1	04	04	05			QA Quad Spools (33)	14-Mar-08	18-Mar-08	AN_MVE2	Hrs	4		450		450	15.0%	68
1	04	04	05			QA Quad Spools (33)	14-Mar-08	18-Mar-08	AN_MFMS2	Hrs	12		1,310		1,310	15.0%	196
1	04	04	05			QA Ion Pump Supports	13-Mar-08	19-Mar-08	AN_MVE2	Hrs	4		450		450	10.0%	45
1	04	04	05			QA Ion Pump Supports	13-Mar-08	19-Mar-08	AN_MFMS2	Hrs	12		1,310		1,310	10.0%	131
1	04	04	05			Arrival of SLAC Bellows	29-Feb-08	6-Mar-08	AN_MVE2	Hrs	-		-		-	10.0%	0
1	04	04	05			Clean SLAC Bellows	7-Mar-08	13-Mar-08	AN_MVE2	Hrs	7		765		765	15.0%	115
1	04	04	05			Clean SLAC Bellows	7-Mar-08	13-Mar-08	AN_MFAT2	Hrs	27		1,797		1,797	15.0%	270
1	04	04	05			Clean-Bake Quad Spools (33)	19-Mar-08	25-Mar-08	AN_MVE2	Hrs	14		1,621		1,621	15.0%	243
1	04	04	05			Clean-Bake Quad Spools (33)	19-Mar-08	25-Mar-08	AN_MFAT2	Hrs	36		2,379		2,379	15.0%	357
1	04	04	05			Bake SLAC Bellows	14-Mar-08	20-Mar-08	AN_MVE2	Hrs	8		900		900	15.0%	135
1	04	04	05			Bake SLAC Bellows	14-Mar-08	20-Mar-08	AN_MFAT2	Hrs	32		2,115		2,115	15.0%	317
1	04	04	05			Prep and Ship SLAC Bellows	21-Mar-08	27-Mar-08	AN_MVE2	Hrs	8		900		900	15.0%	135
1	04	04	05			Prep and Ship SLAC Bellows	21-Mar-08	27-Mar-08	AN_MFAT2	Hrs	24		1,586		1,586	15.0%	238
1	04	04	05			Ship Ion Pump support	28-Mar-08	3-Apr-08	AN_MVE2	Hrs	7		810		810	15.0%	122
1	04	04	05			Ship Ion Pump support	28-Mar-08	3-Apr-08	AN_MFAT2	Hrs	22		1,427		1,427	15.0%	214
1	04	04	05			Ship to SLAC SDB	4-Apr-08	10-Apr-08	AN_MSEG2	\$\$		1,000		1,047	1,047	15.0%	157
1	04	04	05			Ship Quad Spools (33)	26-Mar-08	26-Mar-08	AN_MVE2	Hrs	7		810		810	15.0%	122
1	04	04	05			Ship Quad Spools (33)	26-Mar-08	26-Mar-08	AN_MFAT2	Hrs	7		476		476	15.0%	71
1	04	04	05			Transmit SDB Design & Drawings to SLAC	11-Apr-08	17-Apr-08	AN_ME2	Hrs	-		-		-	15.0%	0
1	04	04	05			Transmit SDB Design & Drawings to SLAC	11-Apr-08	17-Apr-08	AN_MDD2	Hrs	-		-		-	15.0%	0
1	04	04	06			Long Diagnostic Break (LDB) Assembly					232	44,577	19,338	46,651	65,989		9,898
1	04	04	06			LDB Girder Extension Award Effort	1-Feb-08	14-Feb-08	AN_MVE2	Hrs	-		-		-	15.0%	0
1	04	04	06			RCV: LDB Quad Spool (10)	21-Feb-08	21-Feb-08	AN_MSEG2	\$\$		7,000		7,326	7,326	15.0%	1,099
1	04	04	06			RCV: LDB Valve Spool	15-Feb-08	27-Mar-08	AN_MSSC2	\$\$		23,000		24,070	24,070	15.0%	3,611
1	04	04	06			RCV: LDB Girder Extension	15-Feb-08	27-Mar-08	AN_MVE2	Hrs	8		900		900	15.0%	135
1	04	04	06			RCV: LDB Girder Extension	15-Feb-08	27-Mar-08	AN_MSSC2	\$\$		5,327		5,575	5,575	15.0%	836
1	04	04	06			RCV: LDB Girder Extension	15-Feb-08	27-Mar-08	AN_MFAT2	Hrs	16		1,057		1,057	15.0%	159
1	04	04	06			RCV: LDB Chamber Support (11)	15-Feb-08	27-Mar-08	AN_MSSC2	\$\$		8,250		8,634	8,634	15.0%	1,295
1	04	04	06			RCV: LDB Ion Pump Support (11)	15-Feb-08	17-Mar-08	AN_MSSC2	\$\$		-		-	-	15.0%	0
1	04	04	06			QA Production Lot LDB	28-Mar-08	10-Apr-08	AN_MVE2	Hrs	8		900		900	15.0%	135
1	04	04	06			QA Production Lot LDB	28-Mar-08	10-Apr-08	AN_MFMS2	Hrs	24		2,620		2,620	15.0%	393
1	04	04	06			Approve Production Lot LDB	11-Apr-08	15-Apr-08	AN_MVE2	Hrs	8		900		900	15.0%	135
1	04	04	06			Clean LDB	16-Apr-08	25-Apr-08	AN_MVE2	Hrs	8		900		900	15.0%	135
1	04	04	06			Clean LDB	16-Apr-08	25-Apr-08	AN_MFAT2	Hrs	32		2,115		2,115	15.0%	317
1	04	04	06			Bake LDB	28-Apr-08	2-May-08	AN_MVE2	Hrs	8		900		900	15.0%	135
1	04	04	06			Bake LDB	28-Apr-08	2-May-08	AN_MFAT2	Hrs	32		2,115		2,115	15.0%	317
1	04	04	06			Prepare Long Diagnostic Break for Shipment	5-May-08	9-May-08	AN_MVE2	Hrs	8		900		900	15.0%	135
1	04	04	06			Prepare Long Diagnostic Break for Shipment	5-May-08	9-May-08	AN_MFAT2	Hrs	24		1,586		1,586	15.0%	238

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WBS Level						LCLB Description - New Rates	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	04	06			Pack Long Diagnostic Break for Shipping	12-May-08	16-May-08	AN_MVE2	Hrs	8		900	900	15.0%	135	
1	04	04	06			Pack Long Diagnostic Break for Shipping	12-May-08	16-May-08	AN_MFAT2	Hrs	24		1,586	1,586	15.0%	238	
1	04	04	06			Ship to SLAC LDB	19-May-08	23-May-08	AN_MSEG2	\$\$		1,000		1,047	15.0%	157	
1	04	04	06			Transmit Design and Drawings to SLAC	27-May-08	2-Jun-08	AN_ME2	Hrs	8		900	900	15.0%	135	
1	04	04	06			Transmit Design and Drawings to SLAC	27-May-08	2-Jun-08	AN_MDD2	Hrs	16		1,057	1,057	15.0%	159	
1	04	05				Diagnostics					4,068	1,026,013	350,637	1,081,279		309,001	
1	04	05	05			RFBPM					2,552	781,274	218,858	820,338		207,839	
1	04	05	05	03		X-Band BPM Production					2,552	781,274	218,858	820,338		207,839	
1	04	05	05	03		BPMs Final Brazing at ANL (31 Production)	15-Apr-08	1-Jul-08	AN_MSEG2	\$\$		91,800		96,071	20.0%	19,214	
1	04	05	05	03		Complete Body Fixtures(2) & Moly Rings (10)	10-Apr-08	25-Apr-08	AN_MSEG2	\$\$		9,000		9,419	20.0%	1,884	
1	04	05	05	03		Ortin Preforms	10-Apr-08	22-May-08	AN_MSEG2	\$\$		9,000		9,419	20.0%	1,884	
1	04	05	05	03		Georo Braze Matl	10-Apr-08	22-May-08	AN_MSEG2	\$\$		4,500		4,709	20.0%	942	
1	04	05	05	03		RFBPM Production Management Effort	1-Feb-08	15-Apr-08	AN_MFAT2	Hrs	145		9,579	9,579	20.0%	1,916	
1	04	05	05	03		RFBPM Production Management Effort	1-Feb-08	15-Apr-08	AN_ME2	Hrs	54		6,118	6,118	20.0%	1,224	
1	04	05	05	03		RFBPM Production Management Effort	1-Feb-08	15-Apr-08	AN_EE2	Hrs	54		6,118	6,118	20.0%	1,224	
1	04	05	05	03		RFBPM Production Management Effort	16-Apr-08	29-Aug-08	AN_MFAT2	Hrs	200		13,216	13,216	20.0%	2,643	
1	04	05	05	03		RFBPM Production Management Effort	16-Apr-08	29-Aug-08	AN_ME2	Hrs	100		11,255	11,255	20.0%	2,251	
1	04	05	05	03		RFBPM Production Management Effort	16-Apr-08	29-Aug-08	AN_EE2	Hrs	100		11,255	11,255	20.0%	2,251	
1	04	05	05	03		RCV: Undulator Down Converter (40)& Encl	16-Jun-08	18-Jun-08	AN_MSEG2	\$\$		219,200		229,399	20.0%	45,880	
1	04	05	05	03		RCV: Undulator Down Converter (40)& Encl	16-Jun-08	18-Jun-08	AN_ME2	Hrs	8		900	900	20.0%	180	
1	04	05	05	03		RCV: Undulator Down Converter (40)& Encl	16-Jun-08	18-Jun-08	AN_EE2	Hrs	8		900	900	20.0%	180	
1	04	05	05	03		AWARD: Electronics Support (40)	22-Feb-08	26-Feb-08	AN_AWARD	\$\$		-		-	20.0%	0	
1	04	05	05	03		RCV: Electronics Support (40)	23-Apr-08	25-Apr-08	AN_MSEG2	\$\$		24,000		25,117	20.0%	5,023	
1	04	05	05	03		RCV: Electronics Support (40)	23-Apr-08	25-Apr-08	AN_ME2	Hrs	8		900	900	20.0%	180	
1	04	05	05	03		RCV: Local Oscillator (40)	14-May-08	16-May-08	AN_MSEG2	\$\$		60,000		62,792	20.0%	12,558	
1	04	05	05	03		RCV: Local Oscillator (40)	14-May-08	16-May-08	AN_ME2	Hrs	8		900	900	20.0%	180	
1	04	05	05	03		RCV: Local Oscillator (40)	14-May-08	16-May-08	AN_EE2	Hrs	8		900	900	20.0%	180	
1	04	05	05	03		Prepare Bid of RF Cabling	1-Feb-08	4-Feb-08	SL_EE2	Hrs	4		378	378	20.0%	76	
1	04	05	05	03		AWARD: RF Cabling (40)	11-Mar-08	13-Mar-08	SL_AWARD	\$\$		15,300		15,300	20.0%	3,060	
1	04	05	05	03		RF Cabling (40) Award Effort	11-Mar-08	13-Mar-08	SL_EE2	Hrs	2		189	189	20.0%	38	
1	04	05	05	03		RCV: RF Cabling (36)	21-May-08	22-May-08	SA_MSEG2	\$\$		60,000		65,504	20.0%	13,101	
1	04	05	05	03		QA Production Lot	19-Jun-08	18-Jul-08	AN_MFMS2	Hrs	40		4,367	4,367	20.0%	873	
1	04	05	05	03		QA Production Lot	19-Jun-08	18-Jul-08	AN_ME2	Hrs	16		1,801	1,801	20.0%	360	
1	04	05	05	03		QA Production Lot	19-Jun-08	18-Jul-08	AN_EE2	Hrs	16		1,801	1,801	20.0%	360	
1	04	05	05	03		QA Production Lot	19-Jun-08	18-Jul-08	AN_CT2	Hrs	16		1,057	1,057	20.0%	211	
1	04	05	05	03		Assemble Electronics	21-Jul-08	16-Oct-08	AN_EE2	Hrs	120		13,611	13,611	20.0%	2,722	
1	04	05	05	03		Assemble Electronics	21-Jul-08	16-Oct-08	AN_CT2	Hrs	320		21,309	21,309	20.0%	4,262	
1	04	05	05	03		Package Electronics	17-Oct-08	21-Oct-08	AN_ME2	Hrs	16		1,882	1,882	20.0%	376	
1	04	05	05	03		Package Electronics	17-Oct-08	21-Oct-08	AN_EE2	Hrs	16		1,882	1,882	20.0%	376	
1	04	05	05	03		Package Electronics	17-Oct-08	21-Oct-08	AN_CT2	Hrs	16		1,105	1,105	20.0%	221	
1	04	05	05	03		Ship Electronics	22-Oct-08	29-Oct-08	AN_ME2	Hrs	8		941	941	20.0%	188	
1	04	05	05	03		QA Production Lot	23-May-08	30-May-08	AN_MFMS2	Hrs	16		1,747	1,747	20.0%	349	
1	04	05	05	03		QA Production Lot	23-May-08	30-May-08	AN_EE2	Hrs	16		1,801	1,801	20.0%	360	
1	04	05	05	03		QA Production Lot	23-May-08	30-May-08	AN_CT2	Hrs	16		1,057	1,057	20.0%	211	
1	04	05	05	03		Braze (2) - LТУ + Grp A	1-Feb-08	29-Feb-08	AN_MSEG2	\$\$		900		942	20.0%	188	
1	04	05	05	03		Braze (2) - LТУ + Grp A	1-Feb-08	29-Feb-08	AN_ME2	Hrs	3		281	281	20.0%	56	
1	04	05	05	03		BPM Windows (Development)	1-Feb-08	29-Feb-08	AN_MSEQ2	\$\$		1,000		1,047	20.0%	209	
1	04	05	05	03		BPM Windows (Mach Fab)	1-Feb-08	29-Feb-08	AN_TMUW2	Hrs	15		1,637	1,637	20.0%	327	
1	04	05	05	03		BPM Windows (Mach Fab)	1-Feb-08	29-Feb-08	AN_MFMS2	Hrs	15		1,637	1,637	20.0%	327	

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WBS Level						LCLB Description - New Rates	Early Start	Early Finish	Res Code	Units	Work Rem. Bud. Qty		Work Rem. Full Burd and Escltd Cost			Contingency %	Contingency \$
2	3	4	5	6	Hours						\$\$	Labor	M&S	Total			
1						BPM Windows (Transition Development)	1-Feb-08	29-Feb-08	AN_MSSC2	\$\$		3,000		3,140	3,140	20.0%	628
1	04	05	05	03		Cold Test (2) - LTU + Grp A	3-Mar-08	4-Mar-08	AN_MFAT2	Hrs	13		846		846	20.0%	169
1	04	05	05	03		Cold Test (2) - LTU + Grp A	3-Mar-08	4-Mar-08	AN_EE2	Hrs	6		720		720	20.0%	144
1	04	05	05	03		Clean (2) - LTU + Grp A	5-Mar-08	5-Mar-08	AN_MFAT2	Hrs	8		529		529	20.0%	106
1	04	05	05	03		Clean (2) - LTU + Grp A	5-Mar-08	5-Mar-08	AN_ME2	Hrs	4		450		450	20.0%	90
1	04	05	05	03		Leak Test - Bake (2) - LTU + Grp A	6-Mar-08	10-Mar-08	AN_MFAT2	Hrs	16		1,057		1,057	20.0%	211
1	04	05	05	03		Leak Test - Bake (2) - LTU + Grp A	6-Mar-08	10-Mar-08	AN_ME2	Hrs	8		900		900	20.0%	180
1	04	05	05	03		Cold Test (2) - LTU + Grp A	11-Mar-08	12-Mar-08	AN_MFAT2	Hrs	16		1,057		1,057	20.0%	211
1	04	05	05	03		Cold Test (2) - LTU + Grp A	11-Mar-08	12-Mar-08	AN_EE2	Hrs	8		900		900	20.0%	180
1	04	05	05	03		Prepare for Ship (2) - LTU + Grp A	13-Mar-08	14-Mar-08	AN_MFAT2	Hrs	8		529		529	20.0%	106
1	04	05	05	03		Prepare for Ship (2) - LTU + Grp A	13-Mar-08	14-Mar-08	AN_ME2	Hrs	4		450		450	20.0%	90
1	04	05	05	03		Receive Cavity Parts (11) - B	1-Feb-08	29-Feb-08	AN_MFMS2	Hrs	-		-		-	20.0%	0
1	04	05	05	03		Receive Cavity Parts (11) - B	1-Feb-08	29-Feb-08	AN_ME2	Hrs	-		-		-	20.0%	0
1	04	05	05	03		Receive Cavity Parts (11) - B	1-Feb-08	29-Feb-08	AN_EE2	Hrs	-		-		-	20.0%	0
1	04	05	05	03		Receive Cavity Parts (11) - B	1-Feb-08	29-Feb-08	AA_MSEG2	\$\$		-		-	-	20.0%	0
1	04	05	05	03		Cold Test (11) - B	3-Mar-08	7-Mar-08	AN_MFAT2	Hrs	40		2,643		2,643	20.0%	529
1	04	05	05	03		Cold Test (11) - B	3-Mar-08	7-Mar-08	AN_EE2	Hrs	16		1,801		1,801	20.0%	360
1	04	05	05	03		Braze (11) - B	10-Mar-08	21-Mar-08	AN_ME2	Hrs	8		900		900	20.0%	180
1	04	05	05	03		Braze (11) - B	10-Mar-08	21-Mar-08	AA_MSEG2	\$\$		16,500		17,268	17,268	20.0%	3,454
1	04	05	05	03		Cold Test (11) - B	24-Mar-08	28-Mar-08	AN_MFAT2	Hrs	40		2,643		2,643	20.0%	529
1	04	05	05	03		Cold Test (11) - B	24-Mar-08	28-Mar-08	AN_EE2	Hrs	16		1,801		1,801	20.0%	360
1	04	05	05	03		Clean (11) - B	31-Mar-08	31-Mar-08	AN_MFAT2	Hrs	8		529		529	20.0%	106
1	04	05	05	03		Clean (11) - B	31-Mar-08	31-Mar-08	AN_ME2	Hrs	4		450		450	20.0%	90
1	04	05	05	03		Leak Test - Bake (11) - B	1-Apr-08	3-Apr-08	AN_MFAT2	Hrs	80		5,286		5,286	20.0%	1,057
1	04	05	05	03		Leak Test - Bake (11) - B	1-Apr-08	3-Apr-08	AN_ME2	Hrs	16		1,801		1,801	20.0%	360
1	04	05	05	03		Cold Test (11) - B	4-Apr-08	10-Apr-08	AN_MFAT2	Hrs	40		2,643		2,643	20.0%	529
1	04	05	05	03		Cold Test (11) - B	4-Apr-08	10-Apr-08	AN_EE2	Hrs	16		1,801		1,801	20.0%	360
1	04	05	05	03		Prepare for Ship (11) - B	11-Apr-08	14-Apr-08	AN_MFAT2	Hrs	16		1,057		1,057	20.0%	211
1	04	05	05	03		Prepare for Ship (11) - B	11-Apr-08	14-Apr-08	AN_ME2	Hrs	8		900		900	20.0%	180
1	04	05	05	03		Receive Cavity Parts (11) - C	3-Mar-08	4-Mar-08	AN_MFMS2	Hrs	14		1,572		1,572	20.0%	314
1	04	05	05	03		Receive Cavity Parts (11) - C	3-Mar-08	4-Mar-08	AN_ME2	Hrs	3		324		324	20.0%	65
1	04	05	05	03		Receive Cavity Parts (11) - C	3-Mar-08	4-Mar-08	AN_EE2	Hrs	3		324		324	20.0%	65
1	04	05	05	03		Receive Cavity Parts (11) - C	3-Mar-08	4-Mar-08	AA_MSEG2	\$\$		32,314		33,817	33,817	20.0%	6,763
1	04	05	05	03		Cold Test (11) - C	5-Mar-08	11-Mar-08	AN_MFAT2	Hrs	40		2,643		2,643	20.0%	529
1	04	05	05	03		Cold Test (11) - C	5-Mar-08	11-Mar-08	AN_EE2	Hrs	16		1,801		1,801	20.0%	360
1	04	05	05	03		Braze (11) - C	12-Mar-08	25-Mar-08	AN_ME2	Hrs	8		900		900	20.0%	180
1	04	05	05	03		Braze (11) - C	12-Mar-08	25-Mar-08	AA_MSEG2	\$\$		16,500		17,268	17,268	20.0%	3,454
1	04	05	05	03		Cold Test (11) - C	26-Mar-08	1-Apr-08	AN_MFAT2	Hrs	40		2,643		2,643	20.0%	529
1	04	05	05	03		Cold Test (11) - C	26-Mar-08	1-Apr-08	AN_EE2	Hrs	16		1,801		1,801	20.0%	360
1	04	05	05	03		Clean (11) - C	2-Apr-08	2-Apr-08	AN_MFAT2	Hrs	8		529		529	20.0%	106
1	04	05	05	03		Clean (11) - C	2-Apr-08	2-Apr-08	AN_ME2	Hrs	4		450		450	20.0%	90
1	04	05	05	03		Leak Test - Bake (11) - C	3-Apr-08	7-Apr-08	AN_MFAT2	Hrs	80		5,286		5,286	20.0%	1,057
1	04	05	05	03		Leak Test - Bake (11) - C	3-Apr-08	7-Apr-08	AN_ME2	Hrs	16		1,801		1,801	20.0%	360
1	04	05	05	03		Cold Test (11) - C	8-Apr-08	14-Apr-08	AN_MFAT2	Hrs	40		2,643		2,643	20.0%	529
1	04	05	05	03		Cold Test (11) - C	8-Apr-08	14-Apr-08	AN_EE2	Hrs	16		1,801		1,801	20.0%	360
1	04	05	05	03		Prepare for Ship (11) - C	15-Apr-08	16-Apr-08	AN_MFAT2	Hrs	16		1,057		1,057	20.0%	211
1	04	05	05	03		Prepare for Ship (11) - C	15-Apr-08	16-Apr-08	AN_ME2	Hrs	8		900		900	20.0%	180
1	04	05	05	03		Receive Cavity Parts (11) - D	5-Mar-08	11-Mar-08	AN_MFMS2	Hrs	40		4,367		4,367	20.0%	873
1	04	05	05	03		Receive Cavity Parts (11) - D	5-Mar-08	11-Mar-08	AN_ME2	Hrs	8		900		900	20.0%	180

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WBS Level						LCLB Description - New Rates	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	05	05	03		Receive Cavity Parts (11) - D	5-Mar-08	11-Mar-08	AN_EE2	Hrs	8		900	900	20.0%	180	
1	04	05	05	03		Receive Cavity Parts (11) - D	5-Mar-08	11-Mar-08	AA_MSEG2	\$\$		89,760	93,936	93,936	20.0%	18,787	
1	04	05	05	03		Cold Test (11) - D	12-Mar-08	18-Mar-08	AN_MFAT2	Hrs	40		2,643	2,643	20.0%	529	
1	04	05	05	03		Cold Test (11) - D	12-Mar-08	18-Mar-08	AN_EE2	Hrs	16		1,801	1,801	20.0%	360	
1	04	05	05	03		Braze (11) - D	19-Mar-08	1-Apr-08	AN_ME2	Hrs	8		900	900	20.0%	180	
1	04	05	05	03		Braze (11) - D	19-Mar-08	1-Apr-08	AA_MSEG2	\$\$		16,500	17,268	17,268	20.0%	3,454	
1	04	05	05	03		Cold Test (11) - D	2-Apr-08	8-Apr-08	AN_MFAT2	Hrs	40		2,643	2,643	20.0%	529	
1	04	05	05	03		Cold Test (11) - D	2-Apr-08	8-Apr-08	AN_EE2	Hrs	16		1,801	1,801	20.0%	360	
1	04	05	05	03		Clean (11) - D	9-Apr-08	9-Apr-08	AN_MFAT2	Hrs	8		529	529	20.0%	106	
1	04	05	05	03		Clean (11) - D	9-Apr-08	9-Apr-08	AN_ME2	Hrs	4		450	450	20.0%	90	
1	04	05	05	03		Leak Test - Bake (11) - D	10-Apr-08	14-Apr-08	AN_MFAT2	Hrs	80		5,286	5,286	20.0%	1,057	
1	04	05	05	03		Leak Test - Bake (11) - D	10-Apr-08	14-Apr-08	AN_ME2	Hrs	16		1,801	1,801	20.0%	360	
1	04	05	05	03		Cold Test (11) - D	15-Apr-08	21-Apr-08	AN_MFAT2	Hrs	40		2,643	2,643	20.0%	529	
1	04	05	05	03		Cold Test (11) - D	15-Apr-08	21-Apr-08	AN_EE2	Hrs	16		1,801	1,801	20.0%	360	
1	04	05	05	03		Prepare for Ship (11) - D	22-Apr-08	23-Apr-08	AN_MFAT2	Hrs	16		1,057	1,057	20.0%	211	
1	04	05	05	03		Prepare for Ship (11) - D	22-Apr-08	23-Apr-08	AN_ME2	Hrs	8		900	900	20.0%	180	
1	04	05	05	03		RCV: Cavity Support Parts (40)	1-Feb-08	29-Feb-08	AN_MSEG2	\$\$		-	-	-	20.0%	0	
1	04	05	05	03		Inspect Cavity Support Parts	1-Feb-08	29-Feb-08	AN_MFMS2	Hrs	-		-	-	20.0%	0	
1	04	05	05	03		Inspect Cavity Support Parts	1-Feb-08	29-Feb-08	AN_ME2	Hrs	-		-	-	20.0%	0	
1	04	05	05	03		Preliminary Alignment Cavity Support	3-Mar-08	1-Apr-08	AN_MFAT2	Hrs	-		-	-	20.0%	0	
1	04	05	05	03		Preliminary Alignment Cavity Support	3-Mar-08	1-Apr-08	AN_ME2	Hrs	-		-	-	20.0%	0	
1	04	05	05	03		Package Cavity Support	2-Apr-08	8-Apr-08	AN_MFAT2	Hrs	4		264	264	20.0%	53	
1	04	05	05	03		Package Cavity Support	2-Apr-08	8-Apr-08	AN_ME2	Hrs	2		225	225	20.0%	45	
1	04	05	05	03		Ship Cavity Support	9-Apr-08	18-Apr-08	AN_ME2	Hrs	2		225	225	20.0%	45	
1	04	05	05	03		RCV: Waveguide Parts	16-Apr-08	1-May-08	AA_MSEG2	\$\$		127,300	133,223	133,223	20.0%	26,645	
1	04	05	05	03		Inspect Waveguide Parts	2-May-08	8-May-08	AN_MFMS2	Hrs	40		4,367	4,367	20.0%	873	
1	04	05	05	03		Inspect Waveguide Parts	2-May-08	8-May-08	AN_ME2	Hrs	8		900	900	20.0%	180	
1	04	05	05	03		Inspect Waveguide Parts	2-May-08	8-May-08	AN_EE2	Hrs	8		900	900	20.0%	180	
1	04	05	05	03		Package Waveguide Parts	9-May-08	13-May-08	AN_MFAT2	Hrs	16		1,057	1,057	20.0%	211	
1	04	05	05	03		Package Waveguide Parts	9-May-08	13-May-08	AN_ME2	Hrs	8		900	900	20.0%	180	
1	04	05	05	03		Ship Waveguide Parts	14-May-08	23-May-08	AN_ME2	Hrs	8		900	900	20.0%	180	
1	04	05	06			Beam Finder Wire					717	44,740	65,161	46,821	111,982		16,940
1	04	05	06			Inspect BFW Support Parts	1-Feb-08	18-Feb-08	AN_ME2	Hrs	-		-	-	20.0%	0	
1	04	05	06			Inspect BFW Support Parts	1-Feb-08	18-Feb-08	AN_MDD2	Hrs	-		-	-	20.0%	0	
1	04	05	06			Preliminary Alignment BFW Support	1-Feb-08	21-Mar-08	AN_ME2	Hrs	4		450	450	20.0%	90	
1	04	05	06			Preliminary Alignment BFW Support	1-Feb-08	21-Mar-08	AN_MDD2	Hrs	4		264	264	20.0%	53	
1	04	05	06			Package BFW Support	24-Mar-08	25-Mar-08	AN_ME2	Hrs	6		675	675	20.0%	135	
1	04	05	06			Package BFW Support	24-Mar-08	25-Mar-08	AN_MDD2	Hrs	6		396	396	20.0%	79	
1	04	05	06			Ship BFW Support	26-Mar-08	4-Apr-08	AN_ME2	Hrs	6		675	675	20.0%	135	
1	04	05	06			Ship BFW Support	26-Mar-08	4-Apr-08	AN_MDD2	Hrs	6		396	396	20.0%	79	
1	04	05	06			Beam Finder Wire Production Effort	1-Feb-08	31-Mar-08	AN_MFAT2	Hrs	8		496	496	15.0%	74	
1	04	05	06			Beam Finder Wire Production Effort	1-Feb-08	31-Mar-08	AN_MES2	Hrs	11		1,182	1,182	15.0%	177	
1	04	05	06			Beam Finder Wire Production Effort	1-Feb-08	31-Mar-08	AN_ME2	Hrs	5		506	506	15.0%	76	
1	04	05	06			Beam Finder Wire Production Effort	1-Feb-08	31-Mar-08	AN_MDD2	Hrs	2		99	99	15.0%	15	
1	04	05	06			Beam Finder Wire Production Effort (addl.)	1-Feb-08	31-Mar-08	AN_MFAT2	Hrs	8		545	545	15.0%	82	
1	04	05	06			Beam Finder Wire Production Effort (addl.)	1-Feb-08	31-Mar-08	AN_MES2	Hrs	8		844	844	15.0%	127	
1	04	05	06			Beam Finder Wire Production Effort (addl.)	1-Feb-08	31-Mar-08	AN_ME2	Hrs	61		6,837	6,837	15.0%	1,026	
1	04	05	06			Beam Finder Wire Production Effort (addl.)	1-Feb-08	31-Mar-08	AN_MDD2	Hrs	17		1,090	1,090	15.0%	164	
1	04	05	06			Send Beam Finder Wire Documents to SLAC	1-Apr-08	7-Apr-08	AN_ME2	Hrs	4		450	450	15.0%	68	

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WBS Level						LCLB Description - New Rates	Early Start	Early Finish	Res Code	Units	Work Rem. Bud. Qty		Work Rem. Full Burd and Escldt Cost			Contingency %	Contingency \$
1	2	3	4	5	6						Hours	\$\$	Labor	M&S	Total		
1	04	05	06			Send Beam Finder Wire Documents to SLAC	1-Apr-08	7-Apr-08	AN_MDD2	Hrs	8		529		529	15.0%	79
1	04	05	06			Clean-Bake-Leak Check BFW Lot #1 (3)	1-Feb-08	29-Feb-08	AN_MFAT2	Hrs	7		476		476	15.0%	71
1	04	05	06			Clean-Bake-Leak Check BFW Lot #1 (3)	1-Feb-08	29-Feb-08	AN_ME2	Hrs	7		810		810	15.0%	122
1	04	05	06			Assemble/Test BFW Lot #1 (3)	1-Feb-08	29-Feb-08	AN_MFAT2	Hrs	14		952		952	15.0%	143
1	04	05	06			Assemble/Test BFW Lot #1 (3)	1-Feb-08	29-Feb-08	AN_ME2	Hrs	17		1,891		1,891	15.0%	284
1	04	05	06			Pack-Ship Lot #1 of BFW to SLAC (3)	3-Mar-08	10-Mar-08	AN_MSEG2	\$\$		1,020		1,067	1,067	15.0%	160
1	04	05	06			Pack-Ship Lot #1 of BFW to SLAC (3)	3-Mar-08	10-Mar-08	AN_MFAT2	Hrs	4		264		264	15.0%	40
1	04	05	06			Pack-Ship Lot #1 of BFW to SLAC (3)	3-Mar-08	10-Mar-08	AN_ME2	Hrs	4		450		450	15.0%	68
1	04	05	06			Assemble/Test BFW Lot #2 (10)	1-Feb-08	20-Feb-08	AN_MFAT2	Hrs	48		3,172		3,172	15.0%	476
1	04	05	06			Assemble/Test BFW Lot #2 (10)	1-Feb-08	20-Feb-08	AN_ME2	Hrs	48		5,402		5,402	15.0%	810
1	04	05	06			Pack-Ship to SLAC BFW Lot #2 (10)	21-Feb-08	27-Feb-08	AN_MSEG2	\$\$		3,400		3,558	3,558	15.0%	534
1	04	05	06			Pack-Ship to SLAC BFW Lot #2 (10)	21-Feb-08	27-Feb-08	AN_MFAT2	Hrs	8		529		529	15.0%	79
1	04	05	06			Pack-Ship to SLAC BFW Lot #2 (10)	21-Feb-08	27-Feb-08	AN_ME2	Hrs	8		900		900	15.0%	135
1	04	05	06			Receive BFW Lot #3 (10)	1-Feb-08	15-Feb-08	AN_MSEG2	\$\$		23,943		25,057	25,057	15.0%	3,758
1	04	05	06			Clean-Bake-Leak Check BFW Lot #3 (10)	18-Feb-08	7-Mar-08	AN_MFAT2	Hrs	56		3,700		3,700	15.0%	555
1	04	05	06			Clean-Bake-Leak Check BFW Lot #3 (10)	18-Feb-08	7-Mar-08	AN_ME2	Hrs	56		6,303		6,303	15.0%	945
1	04	05	06			Assemble/Test BFW Lot #3 (10)	10-Mar-08	2-Apr-08	AN_MFAT2	Hrs	32		2,115		2,115	15.0%	317
1	04	05	06			Assemble/Test BFW Lot #3 (10)	10-Mar-08	2-Apr-08	AN_ME2	Hrs	36		4,052		4,052	15.0%	608
1	04	05	06			Pack-Ship to SLAC BFW Lot #3 (10)	3-Apr-08	9-Apr-08	AN_MSEG2	\$\$		3,400		3,558	3,558	15.0%	534
1	04	05	06			Pack-Ship to SLAC BFW Lot #3 (10)	3-Apr-08	9-Apr-08	AN_MFAT2	Hrs	8		529		529	15.0%	79
1	04	05	06			Pack-Ship to SLAC BFW Lot #3 (10)	3-Apr-08	9-Apr-08	AN_ME2	Hrs	8		900		900	15.0%	135
1	04	05	06			Receive BFW Lot #4 (14)	15-Feb-08	17-Mar-08	AN_MSEG2	\$\$		9,577		10,023	10,023	15.0%	1,503
1	04	05	06			Clean-Bake-Leak Check BFW Lot #4 (14)	18-Mar-08	3-Apr-08	AN_MFAT2	Hrs	50		3,304		3,304	15.0%	496
1	04	05	06			Clean-Bake-Leak Check BFW Lot #4 (14)	18-Mar-08	3-Apr-08	AN_ME2	Hrs	40		4,502		4,502	15.0%	675
1	04	05	06			Assemble/Test BFW Lot #4 (14)	4-Apr-08	29-Apr-08	AN_MFAT2	Hrs	40		2,643		2,643	15.0%	396
1	04	05	06			Assemble/Test BFW Lot #4 (14)	4-Apr-08	29-Apr-08	AN_ME2	Hrs	40		4,502		4,502	15.0%	675
1	04	05	06			Pack-Shipment to SLAC BFW Lot #4 (14)	30-Apr-08	19-May-08	AN_MSEG2	\$\$		3,400		3,558	3,558	15.0%	534
1	04	05	06			Pack-Shipment to SLAC BFW Lot #4 (14)	30-Apr-08	19-May-08	AN_MFAT2	Hrs	8		529		529	15.0%	79
1	04	05	06			Pack-Shipment to SLAC BFW Lot #4 (14)	30-Apr-08	19-May-08	AN_ME2	Hrs	16		1,801		1,801	15.0%	270
1	04	05	08			Beam Loss Monitoring					800	200,000	66,618	214,120	280,738		84,221
1	04	05	08			Design Production BLM	1-Jul-08	26-Aug-08	AN_PHS2	Hrs	10		1,125		1,125	30.0%	338
1	04	05	08			Design Production BLM	1-Jul-08	26-Aug-08	AN_MFAT2	Hrs	488		32,246		32,246	30.0%	9,674
1	04	05	08			Design Production BLM	1-Jul-08	26-Aug-08	AN_MDD2	Hrs	16		1,057		1,057	30.0%	317
1	04	05	08			Design Production BLM	1-Jul-08	26-Aug-08	AN_EE2	Hrs	286		32,189		32,189	30.0%	9,657
1	04	05	08			Construct Production BLM	1-May-09	25-Jun-09	AN_MSEG2	\$\$		200,000		214,120	214,120	30.0%	64,236
1	04	06				Undulator System Installation and Alignment					13,230	699,705	1,110,020	757,643	1,867,664		421,356
1	04	06	06			2008 Undulator System Installation					13,230	699,705	1,110,020	757,643	1,867,664		421,356
1	04	06	06			Network & Monumentation- Undulator Hall & BD	1-Feb-08	12-Feb-09	SL_MSSY2	\$\$		5,867		5,867	5,867	25.0%	1,467
1	04	06	06			Network & Monumentation- Undulator Hall & BD	1-Feb-08	12-Feb-09	SL_MES2	Hrs	1,803		148,829		148,829	25.0%	37,207
1	04	06	06			Hole template layout - Undulator Hall & BD	1-Feb-08	6-Feb-08	SL_MES2	Hrs	80		6,511		6,511	25.0%	1,628
1	04	06	06			Core drill holes: Und & Dump	1-Feb-08	2-Jul-08	SL_UTR2	Hrs	144		15,500		15,500	20.0%	3,100
1	04	06	06			Core drill holes: Und & Dump	1-Feb-08	2-Jul-08	SL_MSDB2	\$\$		81,000		88,431	88,431	20.0%	17,686
1	04	06	06			Install, align & grout supports: Und Hall	3-Jul-08	14-Aug-08	SL_UTR2	Hrs	240		25,833		25,833	20.0%	5,167
1	04	06	06			Install, align & grout supports: Und Hall	3-Jul-08	14-Aug-08	SL_MSEG2	\$\$		50,000		54,587	54,587	20.0%	10,917
1	04	06	06			Install, align & grout supports: Und Hall	3-Jul-08	14-Aug-08	SL_MSDB2	\$\$		60,534		66,087	66,087	20.0%	13,217
1	04	06	06			Install, align & grout supports: Und Hall	3-Jul-08	14-Aug-08	SL_MFAT2	Hrs	424		37,041		37,041	20.0%	7,408
1	04	06	06			Install, align & grout supports: Und Hall	3-Jul-08	14-Aug-08	SL_MES2	Hrs	600		48,833		48,833	20.0%	9,767
1	04	06	06			Install Racks & cable plant Und (2.3 & 3.1)	3-Apr-08	29-Jul-08	SL_PCUT2	Hrs	392		42,194		42,194	15.0%	6,329
1	04	06	06			Install Racks & cable plant Und (2.3 & 3.1)	3-Apr-08	29-Jul-08	SL_PCDT2	Hrs	3,332		209,003		209,003	15.0%	31,350

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WBS Level						LCLB Description - New Rates	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	06	06			Install Racks & cable plant Und (2.3 & 3.1)	3-Apr-08	29-Jul-08	SL_MSDB2	\$\$		440,020		480,387	480,387	15.0%	72,058
1	04	06	06			Install Racks & cable plant Und (2.3 & 3.1)	3-Apr-08	29-Jul-08	SL_CE2	Hrs	636		72,871		72,871	15.0%	10,931
1	04	06	06			Install Undulator Girders 1-10	15-Aug-08	28-Aug-08	SL_UTR2	Hrs	80		8,611		8,611	35.0%	3,014
1	04	06	06			Install Undulator Girders 1-10	15-Aug-08	28-Aug-08	SL_MVE2	Hrs	24		2,583		2,583	35.0%	904
1	04	06	06			Install Undulator Girders 1-10	15-Aug-08	28-Aug-08	SL_MSSY2	\$\$		18,851		18,851	18,851	35.0%	6,598
1	04	06	06			Install Undulator Girders 1-10	15-Aug-08	28-Aug-08	SL_MFAT2	Hrs	197		17,210		17,210	35.0%	6,023
1	04	06	06			Install Undulator Girders 1-10	15-Aug-08	28-Aug-08	SL_MES2	Hrs	296		24,091		24,091	35.0%	8,432
1	04	06	06			Install Undulator Girders 1-10	15-Aug-08	28-Aug-08	SL_LSEE2	Hrs	19		2,045		2,045	35.0%	716
1	04	06	06			Install Undulator Girders 1-10	15-Aug-08	28-Aug-08	SL_EE2	Hrs	10		945		945	35.0%	331
1	04	06	06			Install Undulator Girders 1-10	15-Aug-08	28-Aug-08	AN_SEE2	Hrs	6		675		675	35.0%	236
1	04	06	06			Install Undulator Girders 1-10	15-Aug-08	28-Aug-08	AN_MVE2	Hrs	6		675		675	35.0%	236
1	04	06	06			Install Undulator Girders 11-20	24-Sep-08	3-Oct-08	SL_UTR2	Hrs	64		6,950		6,950	35.0%	2,433
1	04	06	06			Install Undulator Girders 11-20	24-Sep-08	3-Oct-08	SL_MVE2	Hrs	24		2,606		2,606	35.0%	912
1	04	06	06			Install Undulator Girders 11-20	24-Sep-08	3-Oct-08	SL_MSSY2	\$\$		18,851		18,851	18,851	35.0%	6,598
1	04	06	06			Install Undulator Girders 11-20	24-Sep-08	3-Oct-08	SL_MFAT2	Hrs	197		17,363		17,363	35.0%	6,077
1	04	06	06			Install Undulator Girders 11-20	24-Sep-08	3-Oct-08	SL_MES2	Hrs	296		24,305		24,305	35.0%	8,507
1	04	06	06			Install Undulator Girders 11-20	24-Sep-08	3-Oct-08	SL_LSEE2	Hrs	19		2,063		2,063	35.0%	722
1	04	06	06			Install Undulator Girders 11-20	24-Sep-08	3-Oct-08	SL_EE2	Hrs	10		953		953	35.0%	334
1	04	06	06			Install Undulator Girders 11-20	24-Sep-08	3-Oct-08	AN_SEE2	Hrs	6		682		682	35.0%	239
1	04	06	06			Install Undulator Girders 11-20	24-Sep-08	3-Oct-08	AN_MVE2	Hrs	6		682		682	35.0%	239
1	04	06	06			Install Undulator Girders 21-30	5-Nov-08	14-Nov-08	SL_UTR2	Hrs	64		7,164		7,164	35.0%	2,508
1	04	06	06			Install Undulator Girders 21-30	5-Nov-08	14-Nov-08	SL_MVE2	Hrs	24		2,687		2,687	35.0%	940
1	04	06	06			Install Undulator Girders 21-30	5-Nov-08	14-Nov-08	SL_MSSY2	\$\$		18,851		18,851	18,851	35.0%	6,598
1	04	06	06			Install Undulator Girders 21-30	5-Nov-08	14-Nov-08	SL_MFAT2	Hrs	197		17,898		17,898	35.0%	6,264
1	04	06	06			Install Undulator Girders 21-30	5-Nov-08	14-Nov-08	SL_MES2	Hrs	296		25,054		25,054	35.0%	8,769
1	04	06	06			Install Undulator Girders 21-30	5-Nov-08	14-Nov-08	SL_LSEE2	Hrs	19		2,127		2,127	35.0%	744
1	04	06	06			Install Undulator Girders 21-30	5-Nov-08	14-Nov-08	SL_EE2	Hrs	10		983		983	35.0%	344
1	04	06	06			Install Undulator Girders 21-30	5-Nov-08	14-Nov-08	AN_SEE2	Hrs	6		706		706	35.0%	247
1	04	06	06			Install Undulator Girders 21-30	5-Nov-08	14-Nov-08	AN_MVE2	Hrs	6		706		706	35.0%	247
1	04	06	06			Install Undulator Girders 31-33	18-Nov-08	1-Dec-08	SL_UTR2	Hrs	64		7,164		7,164	35.0%	2,508
1	04	06	06			Install Undulator Girders 31-33	18-Nov-08	1-Dec-08	SL_MVE2	Hrs	7		784		784	35.0%	274
1	04	06	06			Install Undulator Girders 31-33	18-Nov-08	1-Dec-08	SL_MSSY2	\$\$		5,731		5,731	5,731	35.0%	2,006
1	04	06	06			Install Undulator Girders 31-33	18-Nov-08	1-Dec-08	SL_MFAT2	Hrs	59		5,360		5,360	35.0%	1,876
1	04	06	06			Install Undulator Girders 31-33	18-Nov-08	1-Dec-08	SL_MES2	Hrs	89		7,533		7,533	35.0%	2,637
1	04	06	06			Install Undulator Girders 31-33	18-Nov-08	1-Dec-08	SL_LSEE2	Hrs	6		672		672	35.0%	235
1	04	06	06			Install Undulator Girders 31-33	18-Nov-08	1-Dec-08	SL_EE2	Hrs	3		295		295	35.0%	103
1	04	06	06			Install Undulator Girders 31-33	18-Nov-08	1-Dec-08	AN_SEE2	Hrs	2		235		235	35.0%	82
1	04	06	06			Install Undulator Girders 31-33	18-Nov-08	1-Dec-08	AN_MVE2	Hrs	2		235		235	35.0%	82
1	04	06	06			Install Undulators	2-Dec-08	30-Dec-08	SL_CT2	Hrs	264		17,222		17,222	25.0%	4,306
1	04	06	06			Install Undulators	2-Dec-08	30-Dec-08	SL_CE2	Hrs	264		31,457		31,457	25.0%	7,864
1	04	06	06			Checkout Undulator System	16-Jan-09	12-Feb-09	SL_MFAT2	Hrs	280		25,439		25,439	35.0%	8,904
1	04	06	06			Checkout Undulator System	16-Jan-09	12-Feb-09	SL_MES2	Hrs	1,088		92,092		92,092	35.0%	32,232
1	04	06	06			Checkout Undulator System	16-Jan-09	12-Feb-09	SL_LSEE2	Hrs	60		6,717		6,717	35.0%	2,351
1	04	06	06			Checkout Undulator System	16-Jan-09	12-Feb-09	SL_EE2	Hrs	360		35,378		35,378	35.0%	12,382
1	04	06	06			Checkout Undulator System	16-Jan-09	12-Feb-09	SL_CT2	Hrs	592		38,619		38,619	35.0%	13,517
1	04	06	06			Checkout Undulator System	16-Jan-09	12-Feb-09	SL_CE2	Hrs	312		37,177		37,177	35.0%	13,012
1	04	06	06			Checkout Undulator System	16-Jan-09	12-Feb-09	AN_SEE2	Hrs	80		9,409		9,409	35.0%	3,293
1	04	06	06			Checkout Undulator System	16-Jan-09	12-Feb-09	AN_MVE2	Hrs	13		1,529		1,529	35.0%	535
1	04	06	06			Checkout Undulator System	16-Jan-09	12-Feb-09	AN_MDD2	Hrs	32		2,210		2,210	35.0%	773

WBS Level						LCLB Description - New Rates	Early Start	Early Finish	Res Code	Units	Work Rem. Bud. Qty		Work Rem. Full Burd and Escldt Cost			Contingency %	Contingency \$
1	2	3	4	5	6						Hours	\$	Labor	M&S	Total		
1	04	06	06			Checkout Undulator System	16-Jan-09	12-Feb-09	AN_CE2	Hrs	120		14,114		14,114	35.0%	4,940
1	05					X-RAY TRANSPORT & DIAGNOSTICS SYSTEMS					29,631	3,760,220	4,641,154	4,228,088	8,869,242		1,731,472
1	05	01				System Management & Integration					2,720	193,191	283,804	226,884	510,688		56,322
1	05	01	01			Management					2,720	193,191	283,804	226,884	510,688		56,322
1	05	01	01	01		XTOD Management - Technical					380	52,175	80,455	62,027	142,482		14,248
1	05	01	01	01		Management & Oversight - Feb08 thru Mar08	1-Feb-08	31-Mar-08	LL_SEE2	Hrs	21		2,343		2,343	10.0%	234
1	05	01	01	01		Management & Oversight - Feb08 thru Mar08	1-Feb-08	31-Mar-08	LL_PHSS2	Hrs	37		11,629		11,629	10.0%	1,163
1	05	01	01	01		Management & Oversight - Feb08 thru Mar08	1-Feb-08	31-Mar-08	LL_MESR2	Hrs	37		10,508		10,508	10.0%	1,051
1	05	01	01	01		Management & Oversight - Apr08 thru Sep08	1-Apr-08	30-Sep-08	LL_SEE2	Hrs	128		14,629		14,629	10.0%	1,463
1	05	01	01	01		Management & Oversight - Oct08	1-Oct-08	31-Oct-08	LL_SEE2	Hrs	39		4,636		4,636	10.0%	464
1	05	01	01	01		Management & Oversight - Oct08	1-Oct-08	31-Oct-08	LL_PHSS2	Hrs	59		19,285		19,285	10.0%	1,928
1	05	01	01	01		Management & Oversight - Oct08	1-Oct-08	31-Oct-08	LL_MSTR2	\$\$		1,754		2,235	2,235	10.0%	223
1	05	01	01	01		Management & Oversight - Oct08	1-Oct-08	31-Oct-08	LL_MESR2	Hrs	59		17,426		17,426	10.0%	1,743
1	05	01	01	01		Facility Usage Charge thru FY08	1-Feb-08	30-Sep-08	LL_MSEQ2	\$\$		19,189		22,291	22,291	10.0%	2,229
1	05	01	01	01		Facility Usage Charge FY09/FY10	1-Oct-08	30-Jul-10	LL_MSEQ2	\$\$		31,232		37,502	37,502	10.0%	3,750
1	05	01	01	02		LLNL Project Support					2,340	141,016	203,349	164,857	368,206		42,074
1	05	01	01	02		Administrative/Database Support thru FY08	1-Feb-08	30-Sep-08	LL_PCS2	Hrs	220		46,310		46,310	10.0%	4,631
1	05	01	01	02		Administrative/Database Support thru FY08	1-Feb-08	30-Sep-08	LL_ADMN2	Hrs	499		35,341		35,341	10.0%	3,534
1	05	01	01	02		Project Support M&S thru FY08	1-Feb-08	30-Sep-08	LL_MSTR2	\$\$		10,544		13,131	13,131	10.0%	1,313
1	05	01	01	02		Project Support M&S thru FY08	1-Feb-08	30-Sep-08	LL_MSCS2	\$\$		13,278		15,424	15,424	10.0%	1,542
1	05	01	01	02		Administrative/Database Support FY09/FY10	1-Oct-08	30-Jul-10	LL_ADMN2	Hrs	1,622		121,697		121,697	10.0%	12,170
1	05	01	01	02		Teleconference/Comp FY09/FY10	1-Oct-08	30-Jul-10	LL_MSPS2	\$\$		16,948		20,350	20,350	10.0%	2,035
1	05	01	01	02		Project Support M&S FY09/FY10	1-Oct-08	30-Jul-10	LL_MSCS2	\$\$		33,896		40,700	40,700	10.0%	4,070
1	05	01	01	02		Shipping Cost - Wall 1 & 2	6-Nov-08	12-Nov-08	LL_MSPS2	\$\$		1,600		1,901	1,901	25.0%	475
1	05	01	01	02		FEE/NEH Shipping M&S (LLNL to SLAC)	16-Jul-08	8-Oct-08	LL_MSPS2	\$\$		36,250		42,190	42,190	20.0%	8,438
1	05	01	01	02		TUN/FEH Shipping M&S (LLNL to SLAC)	12-Mar-09	3-Jun-09	LL_MSPS2	\$\$		3,900		4,635	4,635	20.0%	927
1	05	01	01	02		Shipping Cost - Shadow Wall	31-Oct-08	6-Nov-08	LL_MSPS2	\$\$		1,600		1,901	1,901	25.0%	475
1	05	01	01	02		SLAC Indirects on LLNL Contract - FY08	1-Feb-08	29-Feb-08	SL_MSXX2	\$\$		-		-	-	10.0%	0
1	05	01	01	02		SLAC Indirects on LLNL Contract - FY09	29-Dec-08	27-Apr-09	SL_MSXX2	\$\$		23,000		24,624	24,624	10.0%	2,462
1	05	02				Controls					5,049	512,531	825,275	579,583	1,404,858		181,404
1	05	02	01			Controls					5,049	512,531	825,275	579,583	1,404,858		181,404
1	05	02	01			Design/Layout Engrng/Management - BA	1-Feb-08	30-Sep-08	LL_CTS2	Hrs	1,178		232,182		232,182	10.0%	23,218
1	05	02	01			Design/Layout Support	1-Feb-08	30-Sep-08	LL_MDD2	Hrs	886		119,419		119,419	10.0%	11,942
1	05	02	01			Design/Layout Support	1-Feb-08	30-Sep-08	LL_CT2	Hrs	884		128,771		128,771	10.0%	12,877
1	05	02	01			Misc Controls Equipment Procurements	1-Feb-08	30-Sep-08	LL_MSEQ2	\$\$		43,860		50,950	50,950	10.0%	5,095
1	05	02	01			Misc Controls Equipment Procurements (Liens)	1-Feb-08	31-Mar-08	LL_MSEQ2	\$\$		7,237		8,407	8,407	1.0%	84
1	05	02	01			Design/Layout Management (120hrs/mo) - SAL	1-Feb-08	30-Sep-08	SL_MSPS2	\$\$		93,224		101,777	101,777	10.0%	10,178
1	05	02	01			Design/Layout Management (120hrs/mo) - SAL	1-Oct-08	31-Mar-09	SL_MSPS2	\$\$		80,734		90,168	90,168	10.0%	9,017
1	05	02	01			Design/Layout Management (100hrs/mo) - EA	1-Feb-08	30-Sep-08	SL_MSPS2	\$\$		93,224		101,777	101,777	10.0%	10,178
1	05	02	01			Design/Layout Management (50hrs/mo) - EA	1-Oct-08	31-Mar-09	SL_MSPS2	\$\$		40,367		45,084	45,084	10.0%	4,508
1	05	02	01			Rack/Component Assembly - FEE/EBD Vacuum	1-Feb-08	31-Mar-08	LL_CT2	Hrs	149		21,638		21,638	20.0%	4,328
1	05	02	01			Cabling/Network - FEE/EBD Vacuum	1-Feb-08	30-Apr-08	LL_CT2	Hrs	116		16,830		16,830	20.0%	3,366
1	05	02	01			Controls Development - FEE Attenuator	1-Feb-08	31-Mar-08	LL_EE2	Hrs	84		16,896		16,896	20.0%	3,379
1	05	02	01			Integrate/Test @ LLNL - FEE Attenuator	30-May-08	17-Jul-08	LL_EE2	Hrs	507		101,978		101,978	20.0%	20,396
1	05	02	01			Rack/Component Assembly - FEE Direct Imager	1-Feb-08	14-Mar-08	LL_CT2	Hrs	-		-		-	20.0%	0
1	05	02	01			Cabling/Network - FEE Direct Imager	1-Feb-08	15-Apr-08	LL_CT2	Hrs	27		3,861		3,861	20.0%	772
1	05	02	01			Rack/Component Assembly - FEE Total Energy Monit	1-Feb-08	8-Feb-08	LL_CT2	Hrs	-		-		-	20.0%	0
1	05	02	01			Cabling/Network - FEE Total Energy Monit	1-Feb-08	7-Mar-08	LL_CT2	Hrs	13		1,931		1,931	20.0%	386
1	05	02	01			Rack/Component Assembly - FEE SOMS	2-Oct-08	8-Oct-08	LL_CT2	Hrs	114		17,275		17,275	20.0%	3,455

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WBS Level						LCLB Description - New Rates	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	05	02	01			Rack/Component Assembly - FEE HOMs	2-Oct-08	8-Oct-08	LL_CT2	Hrs	100		15,154		15,154	20.0%	3,031
1	05	02	01			Rack/Component Assembly - FEE Pop-Ins	2-Oct-08	8-Oct-08	LL_CT2	Hrs	92		13,942		13,942	20.0%	2,788
1	05	02	01			Procure: NEH Vacuum Components	14-Oct-08	24-Nov-08	LL_PCS2	Hrs	13		2,851		2,851	12.0%	342
1	05	02	01			Procure: NEH Vacuum Components	14-Oct-08	24-Nov-08	LL_MSEG2	\$\$		31,893		37,901	37,901	12.0%	4,548
1	05	02	01			Procure: NEH Vacuum Components	14-Oct-08	24-Nov-08	LL_CT2	Hrs	16		2,425		2,425	12.0%	291
1	05	02	01			Rack/Component Assembly - NEH Vacuum	25-Nov-08	3-Dec-08	LL_CT2	Hrs	41		6,213		6,213	20.0%	1,243
1	05	02	01			Unit Testing - NEH Vacuum	4-Dec-08	10-Dec-08	LL_CT2	Hrs	22		3,334		3,334	20.0%	667
1	05	02	01			Integrate/Test @ LLNL - NEH Vacuum	16-Dec-08	30-Dec-08	LL_CT2	Hrs	65		9,850		9,850	20.0%	1,970
1	05	02	01			Detailed Hardware Layout - NEH Pop-Ins	30-Oct-08	26-Nov-08	LL_MDD2	Hrs	37		5,189		5,189	20.0%	1,038
1	05	02	01			Procure: NEH Pop-Ins Components	15-Dec-08	27-Jan-09	LL_PCS2	Hrs	11		2,412		2,412	15.0%	362
1	05	02	01			Procure: NEH Pop-Ins Components	15-Dec-08	27-Jan-09	LL_MSEG2	\$\$		30,565		36,322	36,322	15.0%	5,448
1	05	02	01			Procure: NEH Pop-Ins Components	15-Dec-08	27-Jan-09	LL_CT2	Hrs	13		1,970		1,970	15.0%	295
1	05	02	01			Rack/Component Assembly - NEH Pop-Ins	18-Feb-09	24-Feb-09	LL_CT2	Hrs	35		5,304		5,304	20.0%	1,061
1	05	02	01			Unit Testing - NEH Pop-Ins	25-Feb-09	3-Mar-09	LL_CT2	Hrs	18		2,728		2,728	20.0%	546
1	05	02	01			Integrate/Test @ LLNL - NEH Pop-Ins	4-Mar-09	24-Mar-09	LL_CT2	Hrs	55		8,335		8,335	20.0%	1,667
1	05	02	01			Procure: TUN Vacuum Components	2-Oct-08	12-Nov-08	LL_PCS2	Hrs	24		5,263		5,263	15.0%	789
1	05	02	01			Procure: TUN Vacuum Components	2-Oct-08	12-Nov-08	LL_MSEG2	\$\$		59,880		71,159	71,159	15.0%	10,674
1	05	02	01			Procure: TUN Vacuum Components	2-Oct-08	12-Nov-08	LL_CT2	Hrs	29		4,395		4,395	15.0%	659
1	05	02	01			Rack/Component Assembly - TUN Vacuum	1-Dec-08	12-Dec-08	LL_CT2	Hrs	188		28,489		28,489	20.0%	5,698
1	05	02	01			Unit Testing - TUN Vacuum	15-Dec-08	29-Dec-08	LL_CT2	Hrs	40		6,062		6,062	20.0%	1,212
1	05	02	01			Integrate/Test @ LLNL - TUN Vacuum	12-Feb-09	4-Mar-09	LL_CT2	Hrs	60		9,092		9,092	20.0%	1,818
1	05	02	01			Detailed Hardware Layout - FEH Vacuum	30-Oct-08	26-Nov-08	LL_MDD2	Hrs	80		11,220		11,220	20.0%	2,244
1	05	02	01			Procure: FEH Vacuum Components	15-Dec-08	27-Jan-09	LL_PCS2	Hrs	6		1,316		1,316	15.0%	197
1	05	02	01			Procure: FEH Vacuum Components	15-Dec-08	27-Jan-09	LL_MSEG2	\$\$		16,547		19,664	19,664	15.0%	2,950
1	05	02	01			Procure: FEH Vacuum Components	15-Dec-08	27-Jan-09	LL_CT2	Hrs	7		1,061		1,061	15.0%	159
1	05	02	01			Rack/Component Assembly - FEH Vacuum	28-Jan-09	24-Feb-09	LL_CT2	Hrs	19		2,879		2,879	20.0%	576
1	05	02	01			Unit Testing - FEH Vacuum	25-Feb-09	10-Mar-09	LL_CT2	Hrs	8		1,212		1,212	20.0%	242
1	05	02	01			Integrate/Test @ LLNL - FEH Vacuum	23-Mar-09	3-Apr-09	LL_CT2	Hrs	20		3,031		3,031	20.0%	606
1	05	02	01			SLAC Development - FEE Gas Detector	1-Feb-08	29-Feb-08	SL_CE2	Hrs	1		92		92	25.0%	23
1	05	02	01			SLAC Development - FEE Direct Imager	1-Feb-08	29-Feb-08	SL_CE2	Hrs	1		137		137	25.0%	34
1	05	02	01			SLAC Development - FEE K-Measurement	1-Feb-08	4-Apr-08	SL_CE2	Hrs	8		917		917	25.0%	229
1	05	02	01			SLAC Development - FEE Pop-Ins	1-Apr-08	3-Jun-08	SL_CE2	Hrs	80		9,166		9,166	25.0%	2,291
1	05	02	01			Procure: NEH Racks (by SLAC)	1-Feb-08	29-Apr-08	SL_PPCE2	Hrs	4		458		458	15.0%	69
1	05	02	01			Procure: NEH Racks (by SLAC)	1-Feb-08	29-Apr-08	SL_MSEG2	\$\$		15,000		16,376	16,376	15.0%	2,456
1	05	03				Mechanical & Vacuum Subsystem					4,523	1,352,545	723,288	1,513,153	2,236,442		468,185
1	05	03	01			Vacuum Systems Engineering					2,276	99,351	350,665	113,171	463,835		92,582
1	05	03	01			Configuration Drawing Mgt	1-Feb-08	30-Sep-08	LL_MDS2	Hrs	590		99,414		99,414	20.0%	19,883
1	05	03	01			Material Mgt	1-Feb-08	30-Sep-08	LL_MFAT2	Hrs	863		138,040		138,040	20.0%	27,608
1	05	03	01			Design Support	1-Feb-08	30-Jun-08	LL_MDD2	Hrs	724		97,590		97,590	20.0%	19,518
1	05	03	01			RCV: Valve Pressure Manifolds	3-Mar-08	3-Mar-08	LL_MSEQ2	\$\$		49,351		57,328	57,328	20.0%	11,466
1	05	03	01			Bid Prep/Award Rem. Valve Pressure RCVR HRDWR	2-Sep-08	8-Sep-08	LL_MFAT2	Hrs	10		1,600		1,600	12.0%	192
1	05	03	01			Bid Prep/Award Rem. Valve Pressure RCVR HRDWR	2-Sep-08	8-Sep-08	LL_ADMN2	Hrs	10		709		709	12.0%	85
1	05	03	01			AWARD: Rem. Valve Pressure RCVR HRDWR	9-Sep-08	9-Sep-08	SL_AWFY2	\$\$		58,000		58,000	58,000	20.0%	11,600
1	05	03	01			RCV: Rem. Valve Pressure RCVR HRDWR	22-Oct-08	22-Oct-08	SL_MSEQ2	\$\$		50,000		55,842	55,842	20.0%	11,168
1	05	03	01			Assemble/Test Rem. Valve Pressure RCVR HRDWR	23-Oct-08	5-Nov-08	LL_MFAT2	Hrs	80		13,312		13,312	20.0%	2,662
1	05	03	02			Mech/Vac Front End					1,167	579,195	190,556	647,227	837,783		176,486
1	05	03	02			FEE Mech/Vac Early Procurements (Liens)	1-Feb-08	31-Mar-08	LL_MSEQ2	\$\$		7,895		9,171	9,171	1.0%	92
1	05	03	02			Preliminary Engineering/Design - FEE Mech/Vac	1-Feb-08	11-Apr-08	LL_MDS2	Hrs	128		21,557		21,557	20.0%	4,311
1	05	03	02			Final Engineering/Design - FEE Mech/Vac	14-Apr-08	9-Jun-08	LL_MDS2	Hrs	112		18,880		18,880	20.0%	3,776

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WBS Level						LCLB Description - New Rates	Early Start	Early Finish	Res Code	Units	Work Rem. Bud. Qty		Work Rem. Full Burd and Escltd Cost			Contingency %	Contingency \$
2	3	4	5	6	Hours						\$	Labor	M&S	Total			
1	05	03	02			Final Design Review - FEE Mech/Vac	10-Jun-08	23-Jun-08	LL_MDD2	Hrs	31		4,181		4,181	20.0%	836
1	05	03	02			Bid Prep/RFP/Award - FEE Mech/Vac	10-Jun-08	8-Jul-08	LL_ADMN2	Hrs	40		2,834		2,834	20.0%	567
1	05	03	02			AWARD: FEE Mech/Vac	1-Aug-08	1-Aug-08	SL_AWARD	\$\$		464,667		464,667	464,667	20.0%	92,933
1	05	03	02			Fab/Deliver - FEE Mech/Vac	4-Aug-08	10-Oct-08	LL_MDD2	Hrs	20		2,712		2,712	20.0%	542
1	05	03	02			RCV: FEE Mech/Vac	13-Oct-08	13-Oct-08	SA_MSEQ2	\$\$		426,300		476,113	476,113	20.0%	95,223
1	05	03	02			Test @ LLNL - FEE Mech/Vac	14-Oct-08	10-Nov-08	LL_MFAT2	Hrs	160		26,624		26,624	20.0%	5,325
1	05	03	02			Test @ LLNL - FEE Mech/Vac	14-Oct-08	10-Nov-08	LL_MDD2	Hrs	80		11,220		11,220	20.0%	2,244
1	05	03	02			Readiness Review - FEE Mech/Vac	11-Nov-08	24-Nov-08	LL_MFAT2	Hrs	10		1,664		1,664	20.0%	333
1	05	03	02			Readiness Review - FEE Mech/Vac	11-Nov-08	24-Nov-08	LL_ME2	Hrs	40		8,367		8,367	20.0%	1,673
1	05	03	02			Ship to SLAC - FEE Mech/Vac	25-Nov-08	10-Dec-08	LL_MFAT2	Hrs	20		3,328		3,328	20.0%	666
1	05	03	02			Ship to SLAC - FEE Mech/Vac	25-Nov-08	10-Dec-08	LL_ME2	Hrs	4		837		837	20.0%	167
1	05	03	02			Ship to SLAC - FEE Mech/Vac	25-Nov-08	10-Dec-08	LL_ADMN2	Hrs	8		590		590	20.0%	118
1	05	03	02			Bid Prep/RFP - Wall 1 & 2	1-Aug-08	12-Sep-08	LL_ADMN2	Hrs	20		1,417		1,417	25.0%	354
1	05	03	02			AWARD: Wall 1 & 2	2-Oct-08	2-Oct-08	SL_AWARD	\$\$		103,550		103,550	103,550	25.0%	25,888
1	05	03	02			Fab/Deliver - Wall 1	3-Oct-08	29-Oct-08	LL_ME2	Hrs	10		2,092		2,092	25.0%	523
1	05	03	02			RCV: Wall 1	30-Oct-08	30-Oct-08	SA_MSEQ2	\$\$		35,000		39,090	39,090	25.0%	9,772
1	05	03	02			Assemble @ LLNL - Wall 1	31-Oct-08	3-Nov-08	LL_MFAT2	Hrs	12		1,997		1,997	25.0%	499
1	05	03	02			Assemble @ LLNL - Wall 1	31-Oct-08	3-Nov-08	LL_ME2	Hrs	8		1,673		1,673	25.0%	418
1	05	03	02			Readiness Review - Wall 1	4-Nov-08	5-Nov-08	LL_MFAT2	Hrs	8		1,331		1,331	20.0%	266
1	05	03	02			Readiness Review - Wall 1	4-Nov-08	5-Nov-08	LL_ME2	Hrs	8		1,673		1,673	20.0%	335
1	05	03	02			Ship to SLAC - Wall 1	6-Nov-08	12-Nov-08	LL_MFAT2	Hrs	40		6,656		6,656	20.0%	1,331
1	05	03	02			Ship to SLAC - Wall 1	6-Nov-08	12-Nov-08	LL_ME2	Hrs	4		837		837	20.0%	167
1	05	03	02			Ship to SLAC - Wall 1	6-Nov-08	12-Nov-08	LL_ADMN2	Hrs	8		590		590	20.0%	118
1	05	03	02			Fab/Deliver - Wall 2	3-Oct-08	26-Nov-08	LL_ME2	Hrs	20		4,184		4,184	25.0%	1,046
1	05	03	02			RCV: Wall 2	1-Dec-08	1-Dec-08	SA_MSEQ2	\$\$		60,000		67,011	67,011	25.0%	16,753
1	05	03	02			Assemble @ LLNL - Wall 2	2-Dec-08	8-Dec-08	LL_MFAT2	Hrs	32		5,325		5,325	25.0%	1,331
1	05	03	02			Assemble @ LLNL - Wall 2	2-Dec-08	8-Dec-08	LL_ME2	Hrs	8		1,673		1,673	25.0%	418
1	05	03	02			Readiness Review - Wall 2	9-Dec-08	15-Dec-08	LL_MFAT2	Hrs	24		3,994		3,994	20.0%	799
1	05	03	02			Readiness Review - Wall 2	9-Dec-08	15-Dec-08	LL_ME2	Hrs	24		5,020		5,020	20.0%	1,004
1	05	03	02			Ship to SLAC - Wall 2	16-Dec-08	2-Jan-09	LL_MFAT2	Hrs	40		6,656		6,656	20.0%	1,331
1	05	03	02			Ship to SLAC - Wall 2	16-Dec-08	2-Jan-09	LL_ME2	Hrs	4		837		837	20.0%	167
1	05	03	02			Ship to SLAC - Wall 2	16-Dec-08	2-Jan-09	LL_ADMN2	Hrs	8		590		590	20.0%	118
1	05	03	02			Concept/Prelim Engr/Design - Shadow Wall	17-Mar-08	25-Apr-08	LL_ME2	Hrs	40		8,046		8,046	25.0%	2,011
1	05	03	02			Prepare Safety Note - Shadow Wall	5-May-08	16-May-08	LL_ME2	Hrs	20		4,023		4,023	25.0%	1,006
1	05	03	02			Bid Prep/RFP/Award - Shadow Wall	24-Jun-08	5-Aug-08	LL_ADMN2	Hrs	20		1,417		1,417	25.0%	354
1	05	03	02			AWARD: Shadow Wall	6-Aug-08	6-Aug-08	SL_AWFY2	\$\$		54,500		54,500	54,500	25.0%	13,625
1	05	03	02			Fab/Deliver - Shadow Wall	7-Aug-08	15-Oct-08	LL_ME2	Hrs	8		1,622		1,622	25.0%	406
1	05	03	02			RCV: Shadow Wall	16-Oct-08	16-Oct-08	SA_MSEQ2	\$\$		50,000		55,842	55,842	25.0%	13,961
1	05	03	02			Assemble @ LLNL - Shadow Wall	17-Oct-08	23-Oct-08	LL_MFAT2	Hrs	32		5,325		5,325	25.0%	1,331
1	05	03	02			Assemble @ LLNL - Shadow Wall	17-Oct-08	23-Oct-08	LL_ME2	Hrs	8		1,673		1,673	25.0%	418
1	05	03	02			Readiness Review - Shadow Wall	24-Oct-08	30-Oct-08	LL_MFAT2	Hrs	16		2,662		2,662	25.0%	666
1	05	03	02			Readiness Review - Shadow Wall	24-Oct-08	30-Oct-08	LL_ME2	Hrs	40		8,367		8,367	25.0%	2,092
1	05	03	02			Transport Labor to Ship to SLAC - Shadow Wall	31-Oct-08	6-Nov-08	LL_MFAT2	Hrs	40		6,656		6,656	20.0%	1,331
1	05	03	02			Transport Labor to Ship to SLAC - Shadow Wall	31-Oct-08	6-Nov-08	LL_ME2	Hrs	4		837		837	20.0%	167
1	05	03	02			Transport Labor to Ship to SLAC - Shadow Wall	31-Oct-08	6-Nov-08	LL_ADMN2	Hrs	8		590		590	20.0%	118
1	05	03	03			Mech/Vac Near Hall					395	209,000	64,442	233,421	297,863		71,725
1	05	03	03	01		Mech/Vac Near Hall					395	209,000	64,442	233,421	297,863		71,725
1	05	03	03	01		Prepare ESD - NEH Mech/Vac	14-Apr-08	10-Jun-08	LL_ME2	Hrs	14		2,816		2,816	20.0%	563
1	05	03	03	01		Preliminary Engineering/Design - NEH Mech/Vac	14-Apr-08	10-Jun-08	LL_MDS2	Hrs	56		9,440		9,440	20.0%	1,888

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WBS Level						LCLB Description - New Rates	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	05	03	03	01		Preliminary Design Review - NEH Mech/Vac	11-Jun-08	24-Jun-08	LL_ME2	Hrs	20		4,023		4,023	20.0%	805
1	05	03	03	01		Final Engineering/Design - NEH Mech/Vac	11-Jun-08	11-Jul-08	LL_ME2	Hrs	5		1,006		1,006	20.0%	201
1	05	03	03	01		Final Engineering/Design - NEH Mech/Vac	11-Jun-08	11-Jul-08	LL_MDS2	Hrs	30		5,057		5,057	20.0%	1,011
1	05	03	03	01		Final Design Review - NEH Mech/Vac	14-Jul-08	25-Jul-08	LL_ME2	Hrs	20		4,023		4,023	20.0%	805
1	05	03	03	01		Bid Prep/RFP/Award - NEH Mech/Vac	2-Sep-08	29-Sep-08	LL_ADMN2	Hrs	40		2,834		2,834	20.0%	567
1	05	03	03	01		AWARD: NEH Mech/Vac	2-Oct-08	2-Oct-08	SL_AWFY2	\$\$		227,810		227,810	227,810	25.0%	56,953
1	05	03	03	01		Fab/Deliver - NEH Mech/Vac	3-Oct-08	12-Dec-08	LL_ME2	Hrs	34		7,112		7,112	25.0%	1,778
1	05	03	03	01		Fab/Deliver - NEH Mech/Vac	3-Oct-08	12-Dec-08	LL_ADMN2	Hrs	34		2,506		2,506	25.0%	626
1	05	03	03	01		RCV: NEH Mech/Vac	15-Dec-08	15-Dec-08	SA_MSEQ2	\$\$		209,000		233,421	233,421	25.0%	58,355
1	05	03	03	01		Test @ LLNL - NEH Mech/Vac	16-Dec-08	9-Jan-09	LL_MFAT2	Hrs	40		6,656		6,656	20.0%	1,331
1	05	03	03	01		Test @ LLNL - NEH Mech/Vac	16-Dec-08	9-Jan-09	LL_ME2	Hrs	20		4,184		4,184	20.0%	837
1	05	03	03	01		Readiness Review - NEH Mech/Vac	12-Jan-09	23-Jan-09	LL_MFAT2	Hrs	10		1,664		1,664	20.0%	333
1	05	03	03	01		Readiness Review - NEH Mech/Vac	12-Jan-09	23-Jan-09	LL_ME2	Hrs	40		8,367		8,367	20.0%	1,673
1	05	03	03	01		Ship to SLAC - NEH Mech/Vac	26-Jan-09	6-Feb-09	LL_MFAT2	Hrs	20		3,328		3,328	20.0%	666
1	05	03	03	01		Ship to SLAC - NEH Mech/Vac	26-Jan-09	6-Feb-09	LL_ME2	Hrs	4		837		837	20.0%	167
1	05	03	03	01		Ship to SLAC - NEH Mech/Vac	26-Jan-09	6-Feb-09	LL_ADMN2	Hrs	8		590		590	20.0%	118
1	05	03	04			Mech/Vac Tunnel					508	400,000	90,062	446,740	536,802		107,360
1	05	03	04			Prepare acceptance test plan/proced - Tunnel Mec	2-Oct-08	12-Dec-08	LL_ME2	Hrs	40		8,367		8,367	20.0%	1,673
1	05	03	04			Prepare acceptance test plan/proced - Tunnel Mec	2-Oct-08	12-Dec-08	LL_EE2	Hrs	40		8,367		8,367	20.0%	1,673
1	05	03	04			Prepare oper/maint proced - Tunnel Mech/Vac	2-Oct-08	12-Dec-08	LL_ME2	Hrs	40		8,367		8,367	20.0%	1,673
1	05	03	04			Prepare oper/maint proced - Tunnel Mech/Vac	2-Oct-08	12-Dec-08	LL_EE2	Hrs	40		8,367		8,367	20.0%	1,673
1	05	03	04			Bid Prep/RFP/Award - Tunnel Mech/Vac	2-Oct-08	12-Nov-08	LL_ME2	Hrs	24		5,020		5,020	20.0%	1,004
1	05	03	04			Bid Prep/RFP/Award - Tunnel Mech/Vac	2-Oct-08	12-Nov-08	LL_MDD2	Hrs	13		1,823		1,823	20.0%	365
1	05	03	04			Bid Prep/RFP/Award - Tunnel Mech/Vac	2-Oct-08	12-Nov-08	LL_EE2	Hrs	24		5,020		5,020	20.0%	1,004
1	05	03	04			Bid Prep/RFP/Award - Tunnel Mech/Vac	2-Oct-08	12-Nov-08	LL_ADMN2	Hrs	40		2,948		2,948	20.0%	590
1	05	03	04			AWARD: Tunnel Mech/Vac	13-Nov-08	13-Nov-08	SL_AWFY2	\$\$		436,000		436,000	436,000	20.0%	87,200
1	05	03	04			Fab/Deliver - Tunnel Mech/Vac	14-Nov-08	10-Feb-09	LL_ME2	Hrs	40		8,367		8,367	20.0%	1,673
1	05	03	04			Fab/Deliver - Tunnel Mech/Vac	14-Nov-08	10-Feb-09	LL_ADMN2	Hrs	40		2,948		2,948	20.0%	590
1	05	03	04			RCV: Tunnel Mech/Vac	11-Feb-09	11-Feb-09	SA_MSEQ2	\$\$		400,000		446,740	446,740	20.0%	89,348
1	05	03	04			Test @ LLNL - Tunnel Mech/Vac	12-Feb-09	25-Feb-09	LL_MFAT2	Hrs	20		3,328		3,328	20.0%	666
1	05	03	04			Test @ LLNL - Tunnel Mech/Vac	12-Feb-09	25-Feb-09	LL_ME2	Hrs	5		1,046		1,046	20.0%	209
1	05	03	04			Readiness Review - Tunnel Mech/Vac	26-Feb-09	11-Mar-09	LL_MFAT2	Hrs	10		1,664		1,664	20.0%	333
1	05	03	04			Readiness Review - Tunnel Mech/Vac	26-Feb-09	11-Mar-09	LL_ME2	Hrs	40		8,367		8,367	20.0%	1,673
1	05	03	04			Readiness Review - Tunnel Mech/Vac	26-Feb-09	11-Mar-09	LL_MDD2	Hrs	10		1,403		1,403	20.0%	281
1	05	03	04			Readiness Review - Tunnel Mech/Vac	26-Feb-09	11-Mar-09	LL_EE2	Hrs	40		8,367		8,367	20.0%	1,673
1	05	03	04			Ship to SLAC - Tunnel Mech/Vac	12-Mar-09	25-Mar-09	LL_MFAT2	Hrs	14		2,330		2,330	20.0%	466
1	05	03	04			Ship to SLAC - Tunnel Mech/Vac	12-Mar-09	25-Mar-09	LL_ME2	Hrs	14		2,929		2,929	20.0%	586
1	05	03	04			Ship to SLAC - Tunnel Mech/Vac	12-Mar-09	25-Mar-09	LL_ADMN2	Hrs	14		1,032		1,032	20.0%	206
1	05	03	05			Mech/Vac Far Hall					177	65,000	27,563	72,595	100,158		20,032
1	05	03	05			Final Engineering/Design - FEH Mech/Vac	2-Oct-08	22-Oct-08	LL_ME2	Hrs	20		4,184		4,184	20.0%	837
1	05	03	05			Final Engineering/Design - FEH Mech/Vac	2-Oct-08	22-Oct-08	LL_MDD2	Hrs	40		5,610		5,610	20.0%	1,122
1	05	03	05			Final Design Review - FEH Mech/Vac	23-Oct-08	29-Oct-08	LL_ME2	Hrs	10		2,092		2,092	20.0%	418
1	05	03	05			Final Design Review - FEH Mech/Vac	23-Oct-08	29-Oct-08	LL_MDD2	Hrs	10		1,403		1,403	20.0%	281
1	05	03	05			Bid Prep/RFP/Award - FEH Mech/Vac	30-Oct-08	12-Dec-08	LL_ME2	Hrs	10		2,092		2,092	20.0%	418
1	05	03	05			Bid Prep/RFP/Award - FEH Mech/Vac	30-Oct-08	12-Dec-08	LL_MDD2	Hrs	10		1,403		1,403	20.0%	281
1	05	03	05			Bid Prep/RFP/Award - FEH Mech/Vac	30-Oct-08	12-Dec-08	LL_ADMN2	Hrs	15		1,105		1,105	20.0%	221
1	05	03	05			AWARD: FEH Mech/Vac	15-Dec-08	15-Dec-08	SL_AWFY2	\$\$		70,850		70,850	70,850	20.0%	14,170
1	05	03	05			Fab/Deliver - FEH Mech/Vac	16-Dec-08	19-Mar-09	LL_ME2	Hrs	10		2,092		2,092	20.0%	418
1	05	03	05			Fab/Deliver - FEH Mech/Vac	16-Dec-08	19-Mar-09	LL_ADMN2	Hrs	10		737		737	20.0%	147

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WBS Level						LCLB Description - New Rates	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	05	03	05			RCV: FEH Mech/Vac	20-Mar-09	20-Mar-09	SA_MSEQ2	\$\$		65,000		72,595	72,595	20.0%	14,519
1	05	03	05			Readiness Review - FEH Mech/Vac	23-Mar-09	3-Apr-09	LL_MFAT2	Hrs	10		1,664		1,664	20.0%	333
1	05	03	05			Readiness Review - FEH Mech/Vac	23-Mar-09	3-Apr-09	LL_ME2	Hrs	10		2,092		2,092	20.0%	418
1	05	03	05			Ship to SLAC - FEH Mech/Vac	6-Apr-09	17-Apr-09	LL_MFAT2	Hrs	10		1,664		1,664	20.0%	333
1	05	03	05			Ship to SLAC - FEH Mech/Vac	6-Apr-09	17-Apr-09	LL_ME2	Hrs	4		837		837	20.0%	167
1	05	03	05			Ship to SLAC - FEH Mech/Vac	6-Apr-09	17-Apr-09	LL_ADMN2	Hrs	8		590		590	20.0%	118
1	05	04				Optical Subsystem					3,563	605,622	693,482	693,819	1,387,302		323,218
1	05	04	02			Facility Optics					3,563	605,622	693,482	693,819	1,387,302		323,218
1	05	04	02	02		Fixed Mask					96	-	14,833	-	14,833		2,477
1	05	04	02	02		RCV: Fixed Mask (Liens)	1-Feb-08	22-Feb-08	LL_MSEQ2	\$\$		-		-	-	0.0%	0
1	05	04	02	02		Readiness Review - Fixed Mask	2-Oct-08	15-Oct-08	LL_ME2	Hrs	20		4,184		4,184	15.0%	628
1	05	04	02	02		Readiness Review - Fixed Mask	2-Oct-08	15-Oct-08	LL_MDD2	Hrs	40		5,610		5,610	15.0%	842
1	05	04	02	02		Ship to SLAC - Fixed Mask	16-Oct-08	29-Oct-08	LL_MFAT2	Hrs	20		3,328		3,328	20.0%	666
1	05	04	02	02		Ship to SLAC - Fixed Mask	16-Oct-08	29-Oct-08	LL_MDD2	Hrs	8		1,122		1,122	20.0%	224
1	05	04	02	02		Ship to SLAC - Fixed Mask	16-Oct-08	29-Oct-08	LL_ADMN2	Hrs	8		590		590	20.0%	118
1	05	04	02	03		Slit					66	32,456	11,177	37,702	48,880		2,333
1	05	04	02	03		RCV: Slit	17-Mar-08	17-Mar-08	LL_MSEQ2	\$\$		32,456		37,702	37,702	1.0%	377
1	05	04	02	03		Slit Block Brazing - Slit	1-Feb-08	7-Feb-08	LL_MFAT2	Hrs	-		-		-	15.0%	0
1	05	04	02	03		Readiness Review - Slit	2-Oct-08	15-Oct-08	LL_ME2	Hrs	20		4,184		4,184	15.0%	628
1	05	04	02	03		Readiness Review - Slit	2-Oct-08	15-Oct-08	LL_MDD2	Hrs	10		1,403		1,403	15.0%	210
1	05	04	02	03		Ship to SLAC - Slit	16-Oct-08	29-Oct-08	LL_MFAT2	Hrs	20		3,328		3,328	20.0%	666
1	05	04	02	03		Ship to SLAC - Slit	16-Oct-08	29-Oct-08	LL_ME2	Hrs	8		1,673		1,673	20.0%	335
1	05	04	02	03		Ship to SLAC - Slit	16-Oct-08	29-Oct-08	LL_ADMN2	Hrs	8		590		590	20.0%	118
1	05	04	02	05		Gas/Solid Attenuator					504	124,745	82,439	135,067	217,506		36,165
1	05	04	02	05		Design revisions - Gas/Solid Attenuator	1-Feb-08	29-Feb-08	LL_MFAT2	Hrs	16		2,496		2,496	15.0%	374
1	05	04	02	05		Design revisions - Gas/Solid Attenuator	1-Feb-08	29-Feb-08	LL_MDS2	Hrs	17		2,883		2,883	15.0%	432
1	05	04	02	05		RCV: Gas/Solid Attenuator	3-Mar-08	30-Apr-08	LL_MSEQ2	\$\$		63,860		74,182	74,182	15.0%	11,127
1	05	04	02	05		Assembly @ LLNL - Gas/Solid Attenuator	1-May-08	29-May-08	LL_MFAT2	Hrs	229		36,640		36,640	20.0%	7,328
1	05	04	02	05		Assembly @ LLNL - Gas/Solid Attenuator	1-May-08	29-May-08	LL_MFAT2	Hrs	168		26,880		26,880	20.0%	5,376
1	05	04	02	05		Readiness Review - Gas/Solid Attenuator	2-Oct-08	15-Oct-08	LL_ME2	Hrs	20		4,184		4,184	15.0%	628
1	05	04	02	05		Readiness Review - Gas/Solid Attenuator	2-Oct-08	15-Oct-08	LL_EE2	Hrs	10		2,092		2,092	15.0%	314
1	05	04	02	05		Ship to SLAC - Gas/Solid Attenuator	16-Oct-08	22-Oct-08	LL_MFAT2	Hrs	20		3,328		3,328	20.0%	666
1	05	04	02	05		Ship to SLAC - Gas/Solid Attenuator	16-Oct-08	22-Oct-08	LL_ME2	Hrs	8		1,673		1,673	20.0%	335
1	05	04	02	05		Ship to SLAC - Gas/Solid Attenuator	16-Oct-08	22-Oct-08	LL_EE2	Hrs	8		1,673		1,673	20.0%	335
1	05	04	02	05		Ship to SLAC - Gas/Solid Attenuator	16-Oct-08	22-Oct-08	LL_ADMN2	Hrs	8		590		590	20.0%	118
1	05	04	02	05		SLAC Engr/Assembly Suppt - Gas/Solid Att. (Shen)	1-May-08	18-Jul-08	SL_MSPY2	\$\$		60,885		60,885	60,885	15.0%	9,133
1	05	04	02	07		FEL Offset Mirrors					2,897	448,421	585,033	521,050	1,106,082		282,243
1	05	04	02	07		Final Engineering/Design - SOMS Mech	1-Feb-08	6-Jun-08	LL_MFAT2	Hrs	98		15,725		15,725	25.0%	3,931
1	05	04	02	07		Final Engineering/Design - SOMS Mech	1-Feb-08	6-Jun-08	LL_MESR2	Hrs	192		54,571		54,571	25.0%	13,643
1	05	04	02	07		Final Engineering/Design - SOMS Mech	1-Feb-08	6-Jun-08	LL_MDS2	Hrs	320		53,949		53,949	25.0%	13,487
1	05	04	02	07		AWARD: SOMS Mount/Tank System	8-Aug-08	8-Aug-08	SL_AWFY2	\$\$		155,990		155,990	155,990	30.0%	46,797
1	05	04	02	07		RCV: SOMS Mount & Tank System	7-Oct-08	7-Oct-08	LA_MSEQ2	\$\$		134,474		159,804	159,804	30.0%	47,941
1	05	04	02	07		Assembly @ LLNL - SOMS	8-Oct-08	4-Nov-08	LL_MFAT2	Hrs	180		29,952		29,952	25.0%	7,488
1	05	04	02	07		Assembly @ LLNL - SOMS	8-Oct-08	4-Nov-08	LL_ME2	Hrs	240		50,205		50,205	25.0%	12,551
1	05	04	02	07		Integrated Test @ LLNL - SOMS	5-Nov-08	4-Dec-08	LL_MFAT2	Hrs	180		29,952		29,952	20.0%	5,990
1	05	04	02	07		Integrated Test @ LLNL - SOMS	5-Nov-08	4-Dec-08	LL_ME2	Hrs	240		50,205		50,205	20.0%	10,041
1	05	04	02	07		Readiness Review - SOMS	5-Dec-08	18-Dec-08	LL_MFAT2	Hrs	10		1,664		1,664	20.0%	333
1	05	04	02	07		Readiness Review - SOMS	5-Dec-08	18-Dec-08	LL_ME2	Hrs	20		4,184		4,184	20.0%	837
1	05	04	02	07		Ship to SLAC - SOMS	19-Dec-08	14-Jan-09	LL_MFAT2	Hrs	20		3,328		3,328	25.0%	832

LCLS Estimate to Complete

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WBS Level						LCLB Description - New Rates	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	05	04	02	07		Ship to SLAC - SOMS	19-Dec-08	14-Jan-09	LL_ME2	Hrs	20		4,184		4,184	25.0%	1,046
1	05	04	02	07		Ship to SLAC - SOMS	19-Dec-08	14-Jan-09	LL_ADMN2	Hrs	8		590		590	25.0%	147
1	05	04	02	07		AWARD: HOMS Mount/Tank System	8-Aug-08	8-Aug-08	SL_AWFY2	\$\$		87,200		87,200	30.0%	26,160	
1	05	04	02	07		RCV: HOMS Mount & Tank System	7-Oct-08	7-Oct-08	SA_MSEQ2	\$\$		80,000		89,348	30.0%	26,804	
1	05	04	02	07		Assembly @ LLNL - HOMS	8-Oct-08	4-Nov-08	LL_PHS2	Hrs	80		20,681		20,681	25.0%	5,170
1	05	04	02	07		Assembly @ LLNL - HOMS	8-Oct-08	4-Nov-08	LL_MFAT2	Hrs	160		26,624		26,624	25.0%	6,656
1	05	04	02	07		Assembly @ LLNL - HOMS	8-Oct-08	4-Nov-08	LL_ME2	Hrs	80		16,735		16,735	25.0%	4,184
1	05	04	02	07		Assembly @ LLNL - HOMS	8-Oct-08	4-Nov-08	LL_EE2	Hrs	16		3,347		3,347	25.0%	837
1	05	04	02	07		Integrated Test Mount @ LLNL - HOMS	5-Nov-08	4-Dec-08	LL_PHS2	Hrs	80		20,681		20,681	30.0%	6,204
1	05	04	02	07		Integrated Test Mount @ LLNL - HOMS	5-Nov-08	4-Dec-08	LL_MFAT2	Hrs	160		26,624		26,624	30.0%	7,987
1	05	04	02	07		Integrated Test Mount @ LLNL - HOMS	5-Nov-08	4-Dec-08	LL_ME2	Hrs	80		16,735		16,735	30.0%	5,020
1	05	04	02	07		Integrated Test Mount @ LLNL - HOMS	5-Nov-08	4-Dec-08	LL_EE2	Hrs	16		3,347		3,347	30.0%	1,004
1	05	04	02	07		Readiness Review - HOMS	5-Dec-08	18-Dec-08	LL_PHS2	Hrs	20		5,170		5,170	20.0%	1,034
1	05	04	02	07		Readiness Review - HOMS	5-Dec-08	18-Dec-08	LL_MFAT2	Hrs	10		1,664		1,664	20.0%	333
1	05	04	02	07		Readiness Review - HOMS	5-Dec-08	18-Dec-08	LL_ME2	Hrs	20		4,184		4,184	20.0%	837
1	05	04	02	07		Readiness Review - HOMS	5-Dec-08	18-Dec-08	LL_EE2	Hrs	4		837		837	20.0%	167
1	05	04	02	07		Ship to SLAC - HOMS	19-Dec-08	14-Jan-09	LL_MFAT2	Hrs	20		3,328		3,328	25.0%	832
1	05	04	02	07		Ship to SLAC - HOMS	19-Dec-08	14-Jan-09	LL_ME2	Hrs	20		4,184		4,184	25.0%	1,046
1	05	04	02	07		RCV: SOMS Substrate	19-Feb-08	19-Feb-08	LL_MSEQ2	\$\$		131,579		152,848	15.0%	22,927	
1	05	04	02	07		Surface Metr/Prep - SOMS Substrate	20-Feb-08	4-Mar-08	LL_PHS2	Hrs	50		12,429		12,429	25.0%	3,107
1	05	04	02	07		Surface Metr/Prep - SOMS Substrate	20-Feb-08	4-Mar-08	LL_MFAT2	Hrs	38		6,080		6,080	25.0%	1,520
1	05	04	02	07		Surface Metr/Prep - SOMS Substrate	20-Feb-08	4-Mar-08	LL_CTS2	Hrs	38		7,491		7,491	25.0%	1,873
1	05	04	02	07		Deposit Coating - SOMS Substrate	5-Mar-08	18-Mar-08	LL_PHS2	Hrs	38		9,446		9,446	25.0%	2,361
1	05	04	02	07		Deposit Coating - SOMS Substrate	5-Mar-08	18-Mar-08	LL_MFAT2	Hrs	44		7,040		7,040	25.0%	1,760
1	05	04	02	07		Deposit Coating - SOMS Substrate	5-Mar-08	18-Mar-08	LL_CTS2	Hrs	38		7,491		7,491	25.0%	1,873
1	05	04	02	07		AWARD: HOMS Substrate	1-Feb-08	1-Feb-08	LL_AWARD	\$\$		111,000		111,000	30.0%	33,300	
1	05	04	02	07		Fab/Deliver - HOMS Substrate	4-Feb-08	18-Sep-08	LL_PHS2	Hrs	40		9,943		9,943	30.0%	2,983
1	05	04	02	07		Fab/Deliver - HOMS Substrate	4-Feb-08	18-Sep-08	LL_ADMN2	Hrs	15		1,063		1,063	30.0%	319
1	05	04	02	07		RCV: HOMS Substrate	19-Sep-08	19-Sep-08	LA_MSEQ2	\$\$		97,368		113,107	30.0%	33,932	
1	05	04	02	07		Surface Metr/Prep - HOMS Substrate	2-Oct-08	15-Oct-08	LL_PHSS2	Hrs	48		15,689		15,689	30.0%	4,707
1	05	04	02	07		Surface Metr/Prep - HOMS Substrate	2-Oct-08	15-Oct-08	LL_MFAT2	Hrs	48		7,987		7,987	30.0%	2,396
1	05	04	02	07		Surface Metr/Prep - HOMS Substrate	2-Oct-08	15-Oct-08	LL_EE2	Hrs	40		8,367		8,367	30.0%	2,510
1	05	04	02	07		Surface Metr/Prep - HOMS Substrate	2-Oct-08	15-Oct-08	LL_CTS2	Hrs	38		7,791		7,791	30.0%	2,337
1	05	04	02	07		Deposit Coatings - HOMS Substrate	16-Oct-08	5-Nov-08	LL_PHSS2	Hrs	64		20,919		20,919	30.0%	6,276
1	05	04	02	07		Deposit Coatings - HOMS Substrate	16-Oct-08	5-Nov-08	LL_MSCS2	\$\$		5,000		5,942	30.0%	1,783	
1	05	04	02	07		Deposit Coatings - HOMS Substrate	16-Oct-08	5-Nov-08	LL_MFAT2	Hrs	64		10,650		10,650	30.0%	3,195
1	05	05				Diagnostics Subsystem					3,832	671,427	781,846	752,605	1,534,451		355,386
1	05	05	03			Facility Diagnostics					813	143,930	165,986	167,196	333,182		56,580
1	05	05	03	01		Direct Imager					529	104,386	100,251	121,259	221,510		40,677
1	05	05	03	01		Design revisions - Direct Imager	1-Feb-08	29-Feb-08	LL_MDS2	Hrs	17		2,899		2,899	20.0%	580
1	05	05	03	01		RCV: Direct Imager (1)	3-Mar-08	30-Apr-08	LL_MSEQ2	\$\$		34,211		39,741	1.0%	397	
1	05	05	03	01		AWARD: Direct Imager (2)	10-Mar-08	10-Mar-08	LL_AWARD	\$\$		80,000		80,000	20.0%	16,000	
1	05	05	03	01		RCV: Direct Imager (2)	22-Apr-08	22-Apr-08	LA_MSEQ2	\$\$		70,175		81,519	20.0%	16,304	
1	05	05	03	01		Assembly @ LLNL - Direct Imager	1-May-08	14-May-08	LL_MFAT2	Hrs	337		53,920		53,920	25.0%	13,480
1	05	05	03	01		Test @ LLNL - Direct Imager	15-May-08	12-Jun-08	LL_EES2	Hrs	109		30,956		30,956	25.0%	7,739
1	05	05	03	01		Readiness Review - Direct Imager	2-Oct-08	15-Oct-08	LL_MFAT2	Hrs	10		1,664		1,664	15.0%	250
1	05	05	03	01		Readiness Review - Direct Imager	2-Oct-08	15-Oct-08	LL_MDS2	Hrs	10		1,753		1,753	15.0%	263
1	05	05	03	01		Readiness Review - Direct Imager	2-Oct-08	15-Oct-08	LL_EES2	Hrs	10		2,954		2,954	15.0%	443
1	05	05	03	01		Ship to SLAC - Direct Imager	16-Oct-08	29-Oct-08	LL_PC2	Hrs	8		894		894	20.0%	179

WBS Level						LCLB Description - New Rates	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	05	05	03	01		Ship to SLAC - Direct Imager	16-Oct-08	29-Oct-08	LL_MFAT2	Hrs	20		3,328		3,328	20.0%	666
1	05	05	03	01		Ship to SLAC - Direct Imager	16-Oct-08	29-Oct-08	LL_MDS2	Hrs	4		701		701	20.0%	140
1	05	05	03	01		Ship to SLAC - Direct Imager	16-Oct-08	29-Oct-08	LL_EES2	Hrs	4		1,181		1,181	20.0%	236
1	05	05	03	01		Jacek K. (Liens) - Direct Imager	1-Feb-08	29-Feb-08	SL_MS2	\$\$		-		-		20.0%	0
1	05	05	03	06		Gas Detector					284	39,544	65,736	45,936	111,672		15,903
1	05	05	03	06		Matlab I/F Devel. - Gas Detector	1-Feb-08	14-Mar-08	LL_PHS2	Hrs	41		10,067		10,067	20.0%	2,013
1	05	05	03	06		RCV: Gas Detector	1-Feb-08	14-Mar-08	LL_MSE2	\$\$		39,544		45,936	45,936	6.0%	2,756
1	05	05	03	06		Test @ LLNL - Gas Detector	30-May-08	17-Jul-08	LL_PHS2	Hrs	163		40,517		40,517	20.0%	8,103
1	05	05	03	06		Readiness Review - Gas Detector	2-Oct-08	15-Oct-08	LL_PHS2	Hrs	8		2,068		2,068	20.0%	414
1	05	05	03	06		Readiness Review - Gas Detector	2-Oct-08	15-Oct-08	LL_MFAT2	Hrs	8		1,331		1,331	20.0%	266
1	05	05	03	06		Readiness Review - Gas Detector	2-Oct-08	15-Oct-08	LL_ME2	Hrs	8		1,673		1,673	20.0%	335
1	05	05	03	06		Readiness Review - Gas Detector	2-Oct-08	15-Oct-08	LL_EE2	Hrs	20		4,184		4,184	20.0%	837
1	05	05	03	06		Ship to SLAC - Gas Detector	16-Oct-08	29-Oct-08	LL_PC2	Hrs	8		894		894	20.0%	179
1	05	05	03	06		Ship to SLAC - Gas Detector	16-Oct-08	29-Oct-08	LL_MFAT2	Hrs	20		3,328		3,328	20.0%	666
1	05	05	03	06		Ship to SLAC - Gas Detector	16-Oct-08	29-Oct-08	LL_EE2	Hrs	8		1,673		1,673	20.0%	335
1	05	05	04			Commissioning Diagnostics					3,019	527,497	615,859	585,409	1,201,269		298,806
1	05	05	04	02		Total Energy Measurement					1,103	72,605	205,147	84,342	289,489		70,862
1	05	05	04	02		Final Sensor Layout - Total Energy Measurement	1-Feb-08	14-Mar-08	LL_PHS2	Hrs	161		40,020		40,020	25.0%	10,005
1	05	05	04	02		Design/DAQ Testing - Total Energy Measurement	1-Feb-08	7-Mar-08	LL_MDD2	Hrs	32		4,316		4,316	20.0%	863
1	05	05	04	02		Design/DAQ Testing - Total Energy Measurement	1-Feb-08	7-Mar-08	LL_EE2	Hrs	35		7,000		7,000	20.0%	1,400
1	05	05	04	02		Matlab I/F Devel - Total Energy Measurement	1-Feb-08	29-Feb-08	LL_EE2	Hrs	147		29,507		29,507	25.0%	7,377
1	05	05	04	02		RCV: Total Energy Measurement	1-Feb-08	25-Apr-08	LL_MSE2	\$\$		72,605		84,342	84,342	25.0%	21,085
1	05	05	04	02		Assembly @ LLNL - Total Energy Measurement	28-Apr-08	9-May-08	LL_MFAT2	Hrs	303		48,528		48,528	25.0%	12,132
1	05	05	04	02		Test @ LLNL - Total Energy Measurement	12-May-08	9-Jun-08	LL_PHS2	Hrs	167		41,511		41,511	25.0%	10,378
1	05	05	04	02		Test @ LLNL - Total Energy Measurement	12-May-08	9-Jun-08	LL_PHPD2	Hrs	166		15,367		15,367	25.0%	3,842
1	05	05	04	02		Readiness Review - Total Energy Measurement	2-Oct-08	15-Oct-08	LL_PHS2	Hrs	20		5,170		5,170	20.0%	1,034
1	05	05	04	02		Readiness Review - Total Energy Measurement	2-Oct-08	15-Oct-08	LL_ME2	Hrs	20		4,184		4,184	20.0%	837
1	05	05	04	02		Readiness Review - Total Energy Measurement	2-Oct-08	15-Oct-08	LL_EE2	Hrs	8		1,673		1,673	20.0%	335
1	05	05	04	02		Ship to SLAC - Total Energy Measurement	16-Oct-08	29-Oct-08	LL_PHS2	Hrs	10		2,585		2,585	20.0%	517
1	05	05	04	02		Ship to SLAC - Total Energy Measurement	16-Oct-08	29-Oct-08	LL_MFAT2	Hrs	30		4,992		4,992	20.0%	998
1	05	05	04	02		Ship to SLAC - Total Energy Measurement	16-Oct-08	29-Oct-08	LL_ADMN2	Hrs	4		295		295	20.0%	59
1	05	05	04	05		Popup Cameras					1,175	300,000	255,800	335,055	590,854		147,714
1	05	05	04	05		Conceptual Engr/Design - Popup Cameras	1-Feb-08	14-Mar-08	LL_MESR2	Hrs	99		28,116		28,116	25.0%	7,029
1	05	05	04	05		Conceptual Engr/Design - Popup Cameras	1-Feb-08	14-Mar-08	LL_MDS2	Hrs	54		9,103		9,103	25.0%	2,276
1	05	05	04	05		Conceptual Design Review - Popup Cameras	17-Mar-08	28-Mar-08	LL_MESR2	Hrs	37		10,508		10,508	25.0%	2,627
1	05	05	04	05		Conceptual Design Review - Popup Cameras	17-Mar-08	28-Mar-08	LL_MDS2	Hrs	20		3,371		3,371	25.0%	843
1	05	05	04	05		Preliminary Engineering/Design - Popup Cameras	31-Mar-08	9-May-08	LL_MESR2	Hrs	110		31,240		31,240	25.0%	7,810
1	05	05	04	05		Preliminary Engineering/Design - Popup Cameras	31-Mar-08	9-May-08	LL_MDS2	Hrs	60		10,114		10,114	25.0%	2,529
1	05	05	04	05		Preliminary Design Review - Popup Cameras	12-May-08	23-May-08	LL_MESR2	Hrs	37		10,508		10,508	25.0%	2,627
1	05	05	04	05		Preliminary Design Review - Popup Cameras	12-May-08	23-May-08	LL_MDS2	Hrs	20		3,371		3,371	25.0%	843
1	05	05	04	05		Final Engineering/Design - Popup Cameras	27-May-08	15-Jul-08	LL_MESR2	Hrs	128		36,352		36,352	25.0%	9,088
1	05	05	04	05		Final Engineering/Design - Popup Cameras	27-May-08	15-Jul-08	LL_MDS2	Hrs	70		11,800		11,800	25.0%	2,950
1	05	05	04	05		Final Design Review - Popup Cameras	16-Jul-08	29-Jul-08	LL_MESR2	Hrs	37		10,508		10,508	25.0%	2,627
1	05	05	04	05		Final Design Review - Popup Cameras	16-Jul-08	29-Jul-08	LL_MDS2	Hrs	20		3,371		3,371	25.0%	843
1	05	05	04	05		AWARD: Popup Cameras	11-Aug-08	11-Aug-08	SL_AWFY2	\$\$		327,000		327,000	327,000	25.0%	81,750
1	05	05	04	05		Fab/Deliver - Popup Cameras	12-Aug-08	7-Oct-08	LL_ME2	Hrs	11		2,222		2,222	25.0%	556
1	05	05	04	05		Fab/Deliver - Popup Cameras	12-Aug-08	7-Oct-08	LL_MDD2	Hrs	12		1,625		1,625	25.0%	406
1	05	05	04	05		RCV: Popup Cameras	8-Oct-08	8-Oct-08	SA_MSE2	\$\$		300,000		335,055	335,055	25.0%	83,764
1	05	05	04	05		Assembly @ LLNL - Popup Cameras	9-Oct-08	29-Oct-08	LL_MFAT2	Hrs	120		19,968		19,968	25.0%	4,992

LCLS Estimate to Complete

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WBS Level						LCLB Description - New Rates	Early Start	Early Finish	Res Code	Units	Work Rem. Bud. Qty		Work Rem. Full Burd and Escltd Cost			Contingency %	Contingency \$
2	3	4	5	6	Hours						\$\$	Labor	M&S	Total			
1	05	05	04	05		Assembly @ LLNL - Popup Cameras	9-Oct-08	29-Oct-08	LL_ME2	Hrs	40		8,367		8,367	25.0%	2,092
1	05	05	04	05		Assembly @ LLNL - Popup Cameras	9-Oct-08	29-Oct-08	LL_EE2	Hrs	40		8,367		8,367	25.0%	2,092
1	05	05	04	05		Test @ LLNL - Popup Cameras	30-Oct-08	26-Nov-08	LL_MFAT2	Hrs	120		19,968		19,968	25.0%	4,992
1	05	05	04	05		Test @ LLNL - Popup Cameras	30-Oct-08	26-Nov-08	LL_ME2	Hrs	40		8,367		8,367	25.0%	2,092
1	05	05	04	05		Test @ LLNL - Popup Cameras	30-Oct-08	26-Nov-08	LL_EE2	Hrs	40		8,367		8,367	25.0%	2,092
1	05	05	04	05		Readiness Review - Popup Cameras	1-Dec-08	12-Dec-08	LL_MFAT2	Hrs	10		1,664		1,664	25.0%	416
1	05	05	04	05		Readiness Review - Popup Cameras	1-Dec-08	12-Dec-08	LL_ME2	Hrs	4		837		837	25.0%	209
1	05	05	04	05		Readiness Review - Popup Cameras	1-Dec-08	12-Dec-08	LL_EE2	Hrs	10		2,092		2,092	25.0%	523
1	05	05	04	05		Ship to SLAC - Popup Cameras	15-Dec-08	8-Jan-09	LL_MFAT2	Hrs	20		3,328		3,328	25.0%	832
1	05	05	04	05		Ship to SLAC - Popup Cameras	15-Dec-08	8-Jan-09	LL_ME2	Hrs	4		837		837	25.0%	209
1	05	05	04	05		Ship to SLAC - Popup Cameras	15-Dec-08	8-Jan-09	LL_EE2	Hrs	4		837		837	25.0%	209
1	05	05	04	05		Ship to SLAC - Popup Cameras	15-Dec-08	8-Jan-09	LL_ADMN2	Hrs	8		590		590	25.0%	147
1	05	05	04	06		K Measurement System					741	154,892	154,912	166,013	320,925		80,231
1	05	05	04	06		Preliminary Design - K Meas.	1-Feb-08	31-Mar-08	LL_MESR2	Hrs	11		3,124		3,124	25.0%	781
1	05	05	04	06		Preliminary Design - K Meas.	1-Feb-08	31-Mar-08	LL_MDS2	Hrs	28		4,762		4,762	25.0%	1,191
1	05	05	04	06		Preliminary Design Review - K Meas.	1-Apr-08	14-Apr-08	LL_MESR2	Hrs	11		3,124		3,124	25.0%	781
1	05	05	04	06		Preliminary Design Review - K Meas.	1-Apr-08	14-Apr-08	LL_MDS2	Hrs	28		4,720		4,720	25.0%	1,180
1	05	05	04	06		Final Design - K Meas.	15-Apr-08	30-May-08	LL_MESR2	Hrs	40		11,360		11,360	25.0%	2,840
1	05	05	04	06		Final Design - K Meas.	15-Apr-08	30-May-08	LL_MDS2	Hrs	110		18,543		18,543	25.0%	4,636
1	05	05	04	06		Final Design Review - K Meas.	2-Jun-08	13-Jun-08	LL_MESR2	Hrs	11		3,124		3,124	25.0%	781
1	05	05	04	06		Final Design Review - K Meas.	2-Jun-08	13-Jun-08	LL_MDS2	Hrs	28		4,720		4,720	25.0%	1,180
1	05	05	04	06		Prepare Bid Docs - K Measurement	13-May-08	9-Jul-08	LL_MESR2	Hrs	12		3,408		3,408	25.0%	852
1	05	05	04	06		Prepare Bid Docs - K Measurement	13-May-08	9-Jul-08	LL_MDS2	Hrs	12		2,023		2,023	25.0%	506
1	05	05	04	06		Bid and Award - K Measurement	10-Jul-08	6-Aug-08	LL_MESR2	Hrs	6		1,704		1,704	25.0%	426
1	05	05	04	06		Bid and Award - K Measurement	10-Jul-08	6-Aug-08	LL_MDS2	Hrs	6		1,011		1,011	25.0%	253
1	05	05	04	06		AWARD: K Measurement	11-Aug-08	11-Aug-08	SL_AWARD	\$\$		103,741		103,741	103,741	25.0%	25,935
1	05	05	04	06		Fab/Deliver - K Measurement	18-Aug-08	10-Oct-08	LL_MESR2	Hrs	6		1,716		1,716	25.0%	429
1	05	05	04	06		Fab/Deliver - K Measurement	18-Aug-08	10-Oct-08	LL_MDS2	Hrs	6		1,018		1,018	25.0%	255
1	05	05	04	06		RCV: K Measurement	13-Oct-08	13-Oct-08	SA_MSEQ2	\$\$		95,175		106,296	106,296	25.0%	26,574
1	05	05	04	06		SLAC Engr/Assembly Support - K Meas. -JK	1-Feb-08	30-Sep-08	SL_MSPY2	\$\$		59,717		59,717	59,717	25.0%	14,929
1	05	05	04	06		Test @ LLNL - K Measurement	11-Nov-08	10-Dec-08	LL_MFAT2	Hrs	30		4,992		4,992	25.0%	1,248
1	05	05	04	06		Test @ LLNL - K Measurement	11-Nov-08	10-Dec-08	LL_MESR2	Hrs	30		8,861		8,861	25.0%	2,215
1	05	05	04	06		Test @ LLNL - K Measurement	11-Nov-08	10-Dec-08	LL_EE2	Hrs	120		25,102		25,102	25.0%	6,276
1	05	05	04	06		Readiness Review - K Measurement	11-Dec-08	24-Dec-08	LL_MFAT2	Hrs	10		1,664		1,664	25.0%	416
1	05	05	04	06		Readiness Review - K Measurement	11-Dec-08	24-Dec-08	LL_MESR2	Hrs	10		2,954		2,954	25.0%	738
1	05	05	04	06		Readiness Review - K Measurement	11-Dec-08	24-Dec-08	LL_EE2	Hrs	10		2,092		2,092	25.0%	523
1	05	05	04	06		Ship to SLAC - K Measurement	2-Jan-09	15-Jan-09	LL_MFAT2	Hrs	20		3,328		3,328	25.0%	832
1	05	05	04	06		Ship to SLAC - K Measurement	2-Jan-09	15-Jan-09	LL_MESR2	Hrs	4		1,181		1,181	25.0%	295
1	05	05	04	06		Ship to SLAC - K Measurement	2-Jan-09	15-Jan-09	LL_EE2	Hrs	4		837		837	25.0%	209
1	05	05	04	06		Ship to SLAC - K Measurement	2-Jan-09	15-Jan-09	LL_ADMN2	Hrs	8		590		590	25.0%	147
1	05	05	04	06		Assemble - K Meas.	14-Oct-08	10-Nov-08	LL_MFAT2	Hrs	30		4,992		4,992	25.0%	1,248
1	05	05	04	06		Assemble - K Meas.	14-Oct-08	10-Nov-08	LL_MESR2	Hrs	30		8,861		8,861	25.0%	2,215
1	05	05	04	06		Assemble - K Meas.	14-Oct-08	10-Nov-08	LL_EE2	Hrs	120		25,102		25,102	25.0%	6,276
1	05	05	04	06		Jacek K. (Liens) - K Measurement	1-Feb-08	29-Feb-08	SL_MSPS2	\$\$		-		-	-	25.0%	0
1	05	06				X-Ray Transport System Installation & Alignment					9,944	424,904	1,333,458	462,043	1,795,501		346,957
1	05	06	01			FEE Install					6,716	305,392	952,525	333,505	1,286,030		245,822
1	05	06	01	01		FEE Cable Installation					1,430	128,750	93,073	141,114	234,187		35,128
1	05	06	01	01		Install cable plant FEE - Ph5 (PCD)	8-Jul-08	30-Sep-08	SL_MSDB2	\$\$		106,750		116,543	116,543	15.0%	17,481
1	05	06	01	01		Terminate cable plant FEE - Ph5 (PCD)	30-Dec-08	13-Jan-09	SL_MSDB2	\$\$		22,000		24,571	24,571	15.0%	3,686

LCLS Estimate to Complete

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WBS Level						LCLB Description - New Rates	Early Start	Early Finish	Res Code	Units	Work Rem. Bud. Qty		Work Rem. Full Burd and Escltd Cost			Contingency %	Contingency \$
2	3	4	5	6	Hours						\$	Labor	M&S	Total			
1	05	06	01	01		Terminate cable plant FEE - Ph5 (PCD)	30-Dec-08	13-Jan-09	LL_CT2	Hrs	38		5,758		5,758	15.0%	864
1	05	06	01	01		ED&I cable plant FEE - Ph5 (PCD)	1-Feb-08	30-Sep-08	SL_PCDT2	Hrs	1,392		87,314		87,314	15.0%	13,097
1	05	06	01	02		FEE Install - All excluding cable install					5,286	176,642	859,452	192,391	1,051,843		210,694
1	05	06	01	02		Network & Monumentation- FEE	22-Apr-08	28-Apr-08	SL_MES2	Hrs	144		11,720		11,720	20.0%	2,344
1	05	06	01	02		Hole template layout (1) - FEE	29-Apr-08	1-May-08	SL_MES2	Hrs	60		4,883		4,883	20.0%	977
1	05	06	01	02		Hole template layout (2) - FEE	1-Oct-08	3-Oct-08	SL_MES2	Hrs	60		5,079		5,079	20.0%	1,016
1	05	06	01	02		Core drill holes (1): FEE	1-Oct-08	7-Oct-08	SL_MSDB2	\$\$		3,695		4,127	4,127	20.0%	825
1	05	06	01	02		Core drill holes (2): FEE	8-Oct-08	14-Oct-08	SL_MSDB2	\$\$		3,695		4,127	4,127	20.0%	825
1	05	06	01	02		Install, align & grout supports: FEE	24-Feb-09	26-Feb-09	SL_MSDB2	\$\$		7,390		8,254	8,254	20.0%	1,651
1	05	06	01	02		Install cable plant FEE - Ph6 (PCD)	29-Oct-08	5-Jan-09	SL_MSDB2	\$\$		90,000		100,516	100,516	20.0%	20,103
1	05	06	01	02		Install FEE Phase 1 - F. Mask thru Gas Atten	13-Nov-08	5-Dec-08	SL_MSSY2	\$\$		10,347		10,347	10,347	20.0%	2,069
1	05	06	01	02		Install FEE Phase 1 - F. Mask thru Gas Atten	13-Nov-08	5-Dec-08	SL_MFVE2	Hrs	1		112		112	20.0%	22
1	05	06	01	02		Install FEE Phase 1 - F. Mask thru Gas Atten	13-Nov-08	5-Dec-08	SL_MFAT2	Hrs	236		21,442		21,442	20.0%	4,288
1	05	06	01	02		Install FEE Phase 1 - F. Mask thru Gas Atten	13-Nov-08	5-Dec-08	SL_MES2	Hrs	72		6,094		6,094	20.0%	1,219
1	05	06	01	02		Install FEE Phase 1 - F. Mask thru Gas Atten	13-Nov-08	5-Dec-08	LL_PHS2	Hrs	57		14,735		14,735	20.0%	2,947
1	05	06	01	02		Install FEE Phase 1 - F. Mask thru Gas Atten	13-Nov-08	5-Dec-08	LL_ME2	Hrs	102		21,337		21,337	20.0%	4,267
1	05	06	01	02		Install FEE Phase 1 - F. Mask thru Gas Atten	13-Nov-08	5-Dec-08	LL_EE2	Hrs	13		2,719		2,719	20.0%	544
1	05	06	01	02		Install FEE Phase 1 - F. Mask thru Gas Atten	13-Nov-08	5-Dec-08	LL_CE2	Hrs	65		19,198		19,198	20.0%	3,840
1	05	06	01	02		Install FEE Phase 2 - Total E thru D. Imager	8-Dec-08	29-Dec-08	SL_MSSY2	\$\$		10,347		10,347	10,347	20.0%	2,069
1	05	06	01	02		Install FEE Phase 2 - Total E thru D. Imager	8-Dec-08	29-Dec-08	SL_MFVE2	Hrs	1		112		112	20.0%	22
1	05	06	01	02		Install FEE Phase 2 - Total E thru D. Imager	8-Dec-08	29-Dec-08	SL_MFAT2	Hrs	236		21,442		21,442	20.0%	4,288
1	05	06	01	02		Install FEE Phase 2 - Total E thru D. Imager	8-Dec-08	29-Dec-08	SL_MES2	Hrs	72		6,094		6,094	20.0%	1,219
1	05	06	01	02		Install FEE Phase 2 - Total E thru D. Imager	8-Dec-08	29-Dec-08	LL_PHS2	Hrs	57		14,735		14,735	20.0%	2,947
1	05	06	01	02		Install FEE Phase 2 - Total E thru D. Imager	8-Dec-08	29-Dec-08	LL_ME2	Hrs	102		21,337		21,337	20.0%	4,267
1	05	06	01	02		Install FEE Phase 2 - Total E thru D. Imager	8-Dec-08	29-Dec-08	LL_EE2	Hrs	13		2,719		2,719	20.0%	544
1	05	06	01	02		Install FEE Phase 2 - Total E thru D. Imager	8-Dec-08	29-Dec-08	LL_CE2	Hrs	65		19,198		19,198	20.0%	3,840
1	05	06	01	02		Install FEE Phase 3 - SOMS, etc.	16-Jan-09	5-Feb-09	SL_MSSY2	\$\$		10,584		10,584	10,584	20.0%	2,117
1	05	06	01	02		Install FEE Phase 3 - SOMS, etc.	16-Jan-09	5-Feb-09	SL_MFVE2	Hrs	1		112		112	20.0%	22
1	05	06	01	02		Install FEE Phase 3 - SOMS, etc.	16-Jan-09	5-Feb-09	SL_MFAT2	Hrs	236		21,442		21,442	20.0%	4,288
1	05	06	01	02		Install FEE Phase 3 - SOMS, etc.	16-Jan-09	5-Feb-09	SL_MES2	Hrs	72		6,094		6,094	20.0%	1,219
1	05	06	01	02		Install FEE Phase 3 - SOMS, etc.	16-Jan-09	5-Feb-09	LL_PHS2	Hrs	57		14,735		14,735	20.0%	2,947
1	05	06	01	02		Install FEE Phase 3 - SOMS, etc.	16-Jan-09	5-Feb-09	LL_ME2	Hrs	102		21,337		21,337	20.0%	4,267
1	05	06	01	02		Install FEE Phase 3 - SOMS, etc.	16-Jan-09	5-Feb-09	LL_EE2	Hrs	13		2,719		2,719	20.0%	544
1	05	06	01	02		Install FEE Phase 3 - SOMS, etc.	16-Jan-09	5-Feb-09	LL_CE2	Hrs	65		19,198		19,198	20.0%	3,840
1	05	06	01	02		Install FEE Phase 4 - HOMS	6-Feb-09	26-Feb-09	SL_MSSY2	\$\$		10,584		10,584	10,584	20.0%	2,117
1	05	06	01	02		Install FEE Phase 4 - HOMS	6-Feb-09	26-Feb-09	SL_MFVE2	Hrs	1		112		112	20.0%	22
1	05	06	01	02		Install FEE Phase 4 - HOMS	6-Feb-09	26-Feb-09	SL_MFAT2	Hrs	236		21,442		21,442	20.0%	4,288
1	05	06	01	02		Install FEE Phase 4 - HOMS	6-Feb-09	26-Feb-09	SL_MES2	Hrs	72		6,094		6,094	20.0%	1,219
1	05	06	01	02		Install FEE Phase 4 - HOMS	6-Feb-09	26-Feb-09	LL_PHS2	Hrs	57		14,735		14,735	20.0%	2,947
1	05	06	01	02		Install FEE Phase 4 - HOMS	6-Feb-09	26-Feb-09	LL_ME2	Hrs	102		21,337		21,337	20.0%	4,267
1	05	06	01	02		Install FEE Phase 4 - HOMS	6-Feb-09	26-Feb-09	LL_EE2	Hrs	13		2,719		2,719	20.0%	544
1	05	06	01	02		Install FEE Phase 4 - HOMS	6-Feb-09	26-Feb-09	LL_CE2	Hrs	65		19,198		19,198	20.0%	3,840
1	05	06	01	02		Terminate cable plant FEE - Ph6 (PCD)	27-Feb-09	24-Mar-09	SL_MSDB2	\$\$		30,000		33,505	33,505	20.0%	6,701
1	05	06	01	02		Terminate cable plant FEE - Ph6 (PCD)	27-Feb-09	24-Mar-09	LL_CT2	Hrs	38		5,758		5,758	20.0%	1,152
1	05	06	01	02		Checkout FEE System (1) - XT	14-Jan-09	10-Feb-09	SL_PCEF2	Hrs	80		5,219		5,219	20.0%	1,044
1	05	06	01	02		Checkout FEE System (1) - XT	14-Jan-09	10-Feb-09	SL_MVE2	Hrs	160		17,911		17,911	20.0%	3,582
1	05	06	01	02		Checkout FEE System (1) - XT	14-Jan-09	10-Feb-09	SL_MFAT2	Hrs	240		21,805		21,805	20.0%	4,361
1	05	06	01	02		Checkout FEE System (1) - XT	14-Jan-09	10-Feb-09	LL_PHS2	Hrs	160		41,362		41,362	20.0%	8,272
1	05	06	01	02		Checkout FEE System (1) - XT	14-Jan-09	10-Feb-09	LL_ME2	Hrs	160		33,470		33,470	20.0%	6,694

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WBS Level						LCLB Description - New Rates	Early Start	Early Finish	Res Code	Units	Work Rem. Bud. Qty		Work Rem. Full Burd and Escldtd Cost			Contingency %	Contingency \$
1	2	3	4	5	6						Hours	\$\$	Labor	M&S	Total		
1	05	06	01	02		Checkout FEE System (1) - XT	14-Jan-09	10-Feb-09	LL_EE2	Hrs	240		50,205		50,205	20.0%	10,041
1	05	06	01	02		Checkout FEE System (1) - XT	14-Jan-09	10-Feb-09	LL_CT2	Hrs	160		24,246		24,246	20.0%	4,849
1	05	06	01	02		Checkout FEE System (1) - XT	14-Jan-09	10-Feb-09	LL_CE2	Hrs	160		47,258		47,258	20.0%	9,452
1	05	06	01	02		Checkout FEE System (2) - XT	25-Mar-09	21-Apr-09	SL_PCEF2	Hrs	80		5,219		5,219	20.0%	1,044
1	05	06	01	02		Checkout FEE System (2) - XT	25-Mar-09	21-Apr-09	SL_MVE2	Hrs	160		17,911		17,911	20.0%	3,582
1	05	06	01	02		Checkout FEE System (2) - XT	25-Mar-09	21-Apr-09	SL_MFAT2	Hrs	240		21,805		21,805	20.0%	4,361
1	05	06	01	02		Checkout FEE System (2) - XT	25-Mar-09	21-Apr-09	LL_PHS2	Hrs	160		41,362		41,362	20.0%	8,272
1	05	06	01	02		Checkout FEE System (2) - XT	25-Mar-09	21-Apr-09	LL_ME2	Hrs	160		33,470		33,470	20.0%	6,694
1	05	06	01	02		Checkout FEE System (2) - XT	25-Mar-09	21-Apr-09	LL_EE2	Hrs	240		50,205		50,205	20.0%	10,041
1	05	06	01	02		Checkout FEE System (2) - XT	25-Mar-09	21-Apr-09	LL_CT2	Hrs	160		24,246		24,246	20.0%	4,849
1	05	06	01	02		Checkout FEE System (2) - XT	25-Mar-09	21-Apr-09	LL_CE2	Hrs	160		47,258		47,258	20.0%	9,452
1	05	06	01	02		SLAC Metrology - Wall 1 & 2	29-Apr-08	5-May-08	SL_MES2	Hrs	80		6,511		6,511	25.0%	1,628
1	05	06	02			Near Hall Install					1,184	28,592	135,878	30,343	166,221		33,244
1	05	06	02			Network & Monumentation- NEH	22-Apr-08	28-Apr-08	SL_MES2	Hrs	144		11,720		11,720	20.0%	2,344
1	05	06	02			Hole template layout - NEH	2-Oct-08	7-Oct-08	SL_MES2	Hrs	96		8,126		8,126	20.0%	1,625
1	05	06	02			Core drill holes: NEH	8-Oct-08	14-Oct-08	SL_MSDB2	\$\$		5,912		6,603	6,603	20.0%	1,321
1	05	06	02			Install NEH components - XT	9-Feb-09	20-Mar-09	SL_MSSY2	\$\$		13,608		13,608	13,608	20.0%	2,722
1	05	06	02			Install NEH components - XT	9-Feb-09	20-Mar-09	SL_MFVE2	Hrs	40		4,478		4,478	20.0%	896
1	05	06	02			Install NEH components - XT	9-Feb-09	20-Mar-09	SL_MFAT2	Hrs	448		40,703		40,703	20.0%	8,141
1	05	06	02			Install NEH components - XT	9-Feb-09	20-Mar-09	SL_MES2	Hrs	112		9,480		9,480	20.0%	1,896
1	05	06	02			Install NEH components - XT	9-Feb-09	20-Mar-09	LL_PHS2	Hrs	20		5,170		5,170	20.0%	1,034
1	05	06	02			Install NEH components - XT	9-Feb-09	20-Mar-09	LL_ME2	Hrs	104		21,755		21,755	20.0%	4,351
1	05	06	02			Terminate cable plant NEH - XT	1-Apr-09	28-Apr-09	SL_MSDB2	\$\$		9,072		10,132	10,132	20.0%	2,026
1	05	06	02			Checkout NEH System - XT	29-Apr-09	5-May-09	SL_PCEF2	Hrs	20		1,305		1,305	20.0%	261
1	05	06	02			Checkout NEH System - XT	29-Apr-09	5-May-09	SL_MFVE2	Hrs	40		4,478		4,478	20.0%	896
1	05	06	02			Checkout NEH System - XT	29-Apr-09	5-May-09	SL_MFAT2	Hrs	60		5,451		5,451	20.0%	1,090
1	05	06	02			Checkout NEH System - XT	29-Apr-09	5-May-09	LL_EE2	Hrs	40		8,367		8,367	20.0%	1,673
1	05	06	02			Checkout NEH System - XT	29-Apr-09	5-May-09	LL_CT2	Hrs	20		3,031		3,031	20.0%	606
1	05	06	02			Checkout NEH System - XT	29-Apr-09	5-May-09	LL_CE2	Hrs	40		11,814		11,814	20.0%	2,363
1	05	06	03			Tunnel Install					1,160	56,212	139,609	60,837	200,446		40,089
1	05	06	03			Network & Monumentation- X-ray tunnel	2-Oct-08	15-Oct-08	SL_MES2	Hrs	144		12,189		12,189	20.0%	2,438
1	05	06	03			Hole template layout - X-ray tunnel	16-Oct-08	22-Oct-08	SL_MES2	Hrs	144		12,189		12,189	20.0%	2,438
1	05	06	03			Core drill holes: X-Ray tunnel	23-Oct-08	5-Nov-08	SL_MSDB2	\$\$		4,536		5,066	5,066	20.0%	1,013
1	05	06	03			Install Racks & cable plant X-Ray	8-Dec-08	3-Mar-09	SL_MSDB2	\$\$		35,044		39,139	39,139	20.0%	7,828
1	05	06	03			Install X-ray tunnel components - XT	26-Mar-09	6-May-09	SL_MSSY2	\$\$		16,632		16,632	16,632	20.0%	3,326
1	05	06	03			Install X-ray tunnel components - XT	26-Mar-09	6-May-09	SL_MFAT2	Hrs	280		25,439		25,439	20.0%	5,088
1	05	06	03			Install X-ray tunnel components - XT	26-Mar-09	6-May-09	SL_MES2	Hrs	96		8,126		8,126	20.0%	1,625
1	05	06	03			Install X-ray tunnel components - XT	26-Mar-09	6-May-09	LL_ME2	Hrs	56		11,714		11,714	20.0%	2,343
1	05	06	03			Checkout X-Ray tunnel systems - XT	23-Sep-09	6-Oct-09	SL_PCEF2	Hrs	40		2,650		2,650	20.0%	530
1	05	06	03			Checkout X-Ray tunnel systems - XT	23-Sep-09	6-Oct-09	SL_MVE2	Hrs	80		9,093		9,093	20.0%	1,819
1	05	06	03			Checkout X-Ray tunnel systems - XT	23-Sep-09	6-Oct-09	SL_MFAT2	Hrs	120		11,070		11,070	20.0%	2,214
1	05	06	03			Checkout X-Ray tunnel systems - XT	23-Sep-09	6-Oct-09	LL_EE2	Hrs	80		16,992		16,992	20.0%	3,398
1	05	06	03			Checkout X-Ray tunnel systems - XT	23-Sep-09	6-Oct-09	LL_CT2	Hrs	40		6,155		6,155	20.0%	1,231
1	05	06	03			Checkout X-Ray tunnel systems - XT	23-Sep-09	6-Oct-09	LL_CE2	Hrs	80		23,992		23,992	20.0%	4,798
1	05	06	04			Far Hall Install					788	31,752	93,214	34,402	127,616		25,523
1	05	06	04			Network & Monumentation- FEH	16-Oct-08	22-Oct-08	SL_MES2	Hrs	144		12,189		12,189	20.0%	2,438
1	05	06	04			Hole template layout - FEH	23-Oct-08	24-Oct-08	SL_MES2	Hrs	96		8,126		8,126	20.0%	1,625
1	05	06	04			Core drill holes: FEH	27-Oct-08	31-Oct-08	SL_MSDB2	\$\$		6,048		6,755	6,755	20.0%	1,351
1	05	06	04			Install Racks & cable plant FEH	10-Nov-08	23-Apr-09	SL_MSDB2	\$\$		16,632		18,575	18,575	20.0%	3,715

WBS Level						LCLB Description - New Rates	Early Start	Early Finish	Res Code	Units	Work Rem. Bud. Qty		Work Rem. Full Burd and Escldt Cost			Contingency %	Contingency \$
1	2	3	4	5	6						Hours	\$\$	Labor	M&S	Total		
1	05	06	04			Install FEH components - XT	17-Jul-09	6-Aug-09	SL_MSSY2	\$\$		9,072		9,072	9,072	20.0%	1,814
1	05	06	04			Install FEH components - XT	17-Jul-09	6-Aug-09	SL_MFAT2	Hrs	216		19,625		19,625	20.0%	3,925
1	05	06	04			Install FEH components - XT	17-Jul-09	6-Aug-09	SL_MES2	Hrs	48		4,063		4,063	20.0%	813
1	05	06	04			Install FEH components - XT	17-Jul-09	6-Aug-09	LL_ME2	Hrs	64		13,388		13,388	20.0%	2,678
1	05	06	04			Checkout Far Hall systems - XT	21-Oct-09	27-Oct-09	SL_PCEF2	Hrs	20		1,357		1,357	20.0%	271
1	05	06	04			Checkout Far Hall systems - XT	21-Oct-09	27-Oct-09	SL_MFVE2	Hrs	40		4,657		4,657	20.0%	931
1	05	06	04			Checkout Far Hall systems - XT	21-Oct-09	27-Oct-09	SL_MFAT2	Hrs	60		5,669		5,669	20.0%	1,134
1	05	06	04			Checkout Far Hall systems - XT	21-Oct-09	27-Oct-09	LL_EE2	Hrs	40		8,702		8,702	20.0%	1,740
1	05	06	04			Checkout Far Hall systems - XT	21-Oct-09	27-Oct-09	LL_CT2	Hrs	20		3,152		3,152	20.0%	630
1	05	06	04			Checkout Far Hall systems - XT	21-Oct-09	27-Oct-09	LL_CE2	Hrs	40		12,287		12,287	20.0%	2,457
1	05	06	05			Electron Dump Enclosure Install					96	2,956	12,232	2,956	15,188		2,278
1	05	06	05			Install Dump components - XT	13-Nov-08	26-Nov-08	SL_MSSY2	\$\$		2,956		2,956	15.0%	443	
1	05	06	05			Install Dump components - XT	13-Nov-08	26-Nov-08	SL_MFVE2	Hrs	16		1,791		1,791	15.0%	269
1	05	06	05			Install Dump components - XT	13-Nov-08	26-Nov-08	SL_MFAT2	Hrs	48		4,361		4,361	15.0%	654
1	05	06	05			Install Dump components - XT	13-Nov-08	26-Nov-08	SL_MES2	Hrs	16		1,354		1,354	15.0%	203
1	05	06	05			Install Dump components - XT	13-Nov-08	26-Nov-08	LL_CE2	Hrs	16		4,726		4,726	15.0%	709
1	06					X-RAY END STATION SYSTEMS					59,439	7,757,512	5,560,578	8,634,674	14,195,252		3,888,989
1	06	01				System Management & Integration					1,208	20,784	115,423	26,167	141,590		28,318
1	06	01	01			Management					1,208	20,784	115,423	26,167	141,590		28,318
1	06	01	01			Management & Oversight - FY08	1-Feb-08	30-Sep-08	SL_EE2	Hrs	858		81,028		81,028	20.0%	16,206
1	06	01	01			Management & Oversight - Oct08 thru Aug09	1-Oct-08	29-Jul-09	SL_EE2	Hrs	350		34,395		34,395	20.0%	6,879
1	06	01	01			Travel & Misc Expenses - Feb08 thru Oct08	1-Feb-08	31-Oct-08	SL_MSTR2	\$\$		20,784		26,167	20.0%	5,233	
1	06	02				XES Controls					26,485	4,466,520	2,530,987	4,999,068	7,530,056		2,007,184
1	06	02	01			Controls Management					3,030	119,110	299,238	149,516	448,754		112,189
1	06	02	01			Management - FY08	1-Feb-08	30-Sep-08	SL_PPEE2	Hrs	715		67,531		67,531	25.0%	16,883
1	06	02	01			Management - FY09	1-Oct-08	30-Sep-09	SL_PPEE2	Hrs	1,245		122,349		122,349	25.0%	30,587
1	06	02	01			Management - FY10	1-Oct-09	30-Jul-10	SL_PPEE2	Hrs	1,070		109,358		109,358	25.0%	27,339
1	06	02	01			Travel - FY08	1-Feb-08	30-Sep-08	SL_MSTR2	\$\$		23,496		29,507	25.0%	7,377	
1	06	02	01			Travel - FY09	1-Oct-08	30-Sep-09	SL_MSTR2	\$\$		40,000		51,389	25.0%	12,847	
1	06	02	01			Travel - FY10	1-Oct-09	30-Jul-10	SL_MSTR2	\$\$		33,264		43,718	25.0%	10,929	
1	06	02	01			Misc. Test Equipment - FY08	1-Feb-08	30-Sep-08	SL_MSEG2	\$\$		2,350		2,565	25.0%	641	
1	06	02	01			Misc. Test Equipment - FY09	1-Oct-08	30-Sep-09	SL_MSEG2	\$\$		20,000		22,337	25.0%	5,584	
1	06	02	07			AMOS Experiment Controls X1					3,697	1,229,350	354,070	1,363,750	1,717,820		429,455
1	06	02	07	01		AMOS Requirements, Design, Setup					16	-	1,833	-	1,833		458
1	06	02	07	01		Prepare Requirements	1-Feb-08	3-Mar-08	SL_PPCE2	Hrs	1		69		69	25.0%	17
1	06	02	07	01		Prepare AMOS - Controls ICD	1-Feb-08	3-Mar-08	SL_PPCE2	Hrs	1		69		69	25.0%	17
1	06	02	07	01		Prepare Requirements	1-Feb-08	3-Mar-08	SL_PPCE2	Hrs	1		69		69	25.0%	17
1	06	02	07	01		Prepare Final Device List for Phase 1	1-Feb-08	3-Mar-08	SL_PPCE2	Hrs	1		69		69	25.0%	17
1	06	02	07	01		Prepare Final Device List for Phase 2	1-Feb-08	3-Mar-08	SL_PPCE2	Hrs	1		69		69	25.0%	17
1	06	02	07	01		Preliminary Design for AMOS	1-Feb-08	3-Mar-08	SL_PPCE2	Hrs	3		344		344	25.0%	86
1	06	02	07	01		Preliminary Design Review (PDR)	4-Mar-08	17-Mar-08	SL_PPCE2	Hrs	10		1,146		1,146	25.0%	286
1	06	02	07	07		Development Hardware & Software					354	154,700	40,513	163,528	204,042		51,010
1	06	02	07	07		Procure Hrdwr for Develop Test Setup - FY08	1-Feb-08	4-Aug-08	SL_MSEG2	\$\$		44,200		48,255	25.0%	12,064	
1	06	02	07	07		Develop Software for Test Setup - FY08 M&S	1-Feb-08	4-Aug-08	SL_MSPF2	\$\$		110,500		115,274	25.0%	28,818	
1	06	02	07	07		Develop Test Setup - FY08 L	1-Feb-08	4-Aug-08	SL_PPCE2	Hrs	354		40,513		40,513	25.0%	10,128
1	06	02	07	08		Beam Viewing System for Phase 1					495	92,000	41,043	102,750	143,793		35,948
1	06	02	07	08		Design Phase 1 Beam Viewing System	11-Jun-08	1-Dec-08	SL_PPCE2	Hrs	90		10,457		10,457	25.0%	2,614
1	06	02	07	08		Final Design Review Phase 1 Beam Viewing System	2-Dec-08	8-Dec-08	SL_PPCE2	Hrs	5		596		596	25.0%	149
1	06	02	07	08		Dev Software Phase 1 Beam Viewing System	9-Dec-08	10-Apr-09	SL_PPCT2	Hrs	160		10,438		10,438	25.0%	2,609

WBS Level						LCLB Description - New Rates	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	08		Dev Software Phase 1 Beam Viewing System	9-Dec-08	10-Apr-09	SL_PP2P2	Hrs	160		13,900		13,900	25.0%	3,475
1	06	02	07	08		Prepare Docs Phase 1 Beam Viewing System	9-Dec-08	10-Apr-09	SL_PP2P2	Hrs	20		1,738		1,738	25.0%	434
1	06	02	07	08		Fab/Delvr Phase 1 Beam Viewing System	2-Feb-09	24-Apr-09	SL_PP2T2	Hrs	60		3,914		3,914	25.0%	979
1	06	02	07	08		Fab/Delvr Phase 1 Beam Viewing System	2-Feb-09	24-Apr-09	SL_MSEG2	\$\$		92,000		102,750	102,750	25.0%	25,688
1	06	02	07	09		Beam Viewing System for Phase 2					460	70,000	45,877	78,179	124,056		31,014
1	06	02	07	09		Design Phase 2 Beam Viewing System	2-Oct-08	5-Feb-09	SL_PPCE2	Hrs	200		23,831		23,831	25.0%	5,958
1	06	02	07	09		Final Design Review Phase 2 Beam Viewing System	6-Feb-09	12-Feb-09	SL_PPCE2	Hrs	10		1,192		1,192	25.0%	298
1	06	02	07	09		Dev Software Phase 2 Beam Viewing System	13-Feb-09	4-Jun-09	SL_CP2	Hrs	200		17,375		17,375	25.0%	4,344
1	06	02	07	09		Prepare Docs Phase 2 Beam Viewing System	13-Feb-09	4-Jun-09	SL_PP2P2	Hrs	10		869		869	25.0%	217
1	06	02	07	09		Fab/Delvr Phase 2 Beam Viewing System	27-Mar-09	18-Jun-09	SL_PP2T2	Hrs	40		2,609		2,609	25.0%	652
1	06	02	07	09		Fab/Delvr Phase 2 Beam Viewing System	27-Mar-09	18-Jun-09	SL_MSEG2	\$\$		70,000		78,179	78,179	25.0%	19,545
1	06	02	07	12		Differential Pumping					185	95,000	17,127	106,101	123,227		30,807
1	06	02	07	12		Design Differential Pumping	11-Jun-08	1-Dec-08	SL_PPCE2	Hrs	60		6,971		6,971	25.0%	1,743
1	06	02	07	12		Final Design Review Differential Pumping	2-Dec-08	8-Dec-08	SL_PPCE2	Hrs	5		596		596	25.0%	149
1	06	02	07	12		Dev Software Differential Pumping	9-Dec-08	10-Apr-09	SL_CP2	Hrs	60		5,213		5,213	25.0%	1,303
1	06	02	07	12		Prepare Docs Differential Pumping	9-Dec-08	10-Apr-09	SL_PP2P2	Hrs	20		1,738		1,738	25.0%	434
1	06	02	07	12		Fab/Delvr Differential Pumping	2-Feb-09	24-Apr-09	SL_PP2T2	Hrs	40		2,609		2,609	25.0%	652
1	06	02	07	12		Fab/Delvr Differential Pumping	2-Feb-09	24-Apr-09	SL_MSEG2	\$\$		95,000		106,101	106,101	25.0%	26,525
1	06	02	07	14		Temperature Monitoring					228	6,550	21,675	7,315	28,990		7,248
1	06	02	07	14		Design Temperature Monitoring	11-Jun-08	1-Dec-08	SL_PPCE2	Hrs	80		9,295		9,295	25.0%	2,324
1	06	02	07	14		Final Design Review Temperature Monitori	2-Dec-08	3-Dec-08	SL_PPCE2	Hrs	12		1,430		1,430	25.0%	357
1	06	02	07	14		Dev Software Temperature Monitoring	4-Dec-08	7-Apr-09	SL_CP2	Hrs	80		6,950		6,950	25.0%	1,738
1	06	02	07	14		Prepare Docs Temperature Monitoring	4-Dec-08	7-Apr-09	SL_PP2P2	Hrs	16		1,390		1,390	25.0%	348
1	06	02	07	14		Fab/Delvr Temperature Monitoring	28-Jan-09	21-Apr-09	SL_PP2T2	Hrs	40		2,609		2,609	25.0%	652
1	06	02	07	14		Fab/Delvr Temperature Monitoring	28-Jan-09	21-Apr-09	SL_MSEG2	\$\$		6,550		7,315	7,315	25.0%	1,829
1	06	02	07	15		Gas Storage & Delivery System					128	12,000	11,239	13,402	24,641		6,160
1	06	02	07	15		Design Gas Stor/Delrvy System	11-Jun-08	1-Dec-08	SL_PPCE2	Hrs	10		1,162		1,162	25.0%	290
1	06	02	07	15		Final Design Review Gas Stor/Delrvy Syst	2-Dec-08	2-Dec-08	SL_PPCE2	Hrs	8		953		953	25.0%	238
1	06	02	07	15		Dev Software Gas Stor/Delrvy System	3-Dec-08	6-Apr-09	SL_PP2P2	Hrs	80		6,950		6,950	25.0%	1,738
1	06	02	07	15		Prepare Docs Gas Stor/Delrvy System	3-Dec-08	6-Apr-09	SL_PP2P2	Hrs	10		869		869	25.0%	217
1	06	02	07	15		Fab/Delvr Gas Stor/Delrvy System	27-Jan-09	20-Apr-09	SL_PP2T2	Hrs	20		1,305		1,305	25.0%	326
1	06	02	07	15		Fab/Delvr Gas Stor/Delrvy System	27-Jan-09	20-Apr-09	SL_MSEG2	\$\$		12,000		13,402	13,402	25.0%	3,351
1	06	02	07	16		High Field Physics Chamber					1,077	583,100	100,672	651,235	751,907		187,977
1	06	02	07	16		Design Vacuum & Motion	11-Jun-08	1-Dec-08	SL_PPCE2	Hrs	40		4,648		4,648	25.0%	1,162
1	06	02	07	16		Final Design Review Vacuum & Motion	2-Dec-08	4-Dec-08	SL_PPCE2	Hrs	5		596		596	25.0%	149
1	06	02	07	16		Dev Software Vacuum & Motion	5-Dec-08	8-Apr-09	SL_PP2P2	Hrs	80		6,950		6,950	25.0%	1,738
1	06	02	07	16		Prepare Docs Vacuum & Motion	5-Dec-08	8-Apr-09	SL_PP2P2	Hrs	16		1,390		1,390	25.0%	348
1	06	02	07	16		Fab/Delvr Vacuum & Motion	29-Jan-09	22-Apr-09	SL_PP2T2	Hrs	20		1,305		1,305	25.0%	326
1	06	02	07	16		Fab/Delvr Vacuum & Motion	29-Jan-09	22-Apr-09	SL_MSEG2	\$\$		80,100		89,460	89,460	25.0%	22,365
1	06	02	07	16		Design Gas Jet System	11-Jun-08	1-Dec-08	SL_PPCE2	Hrs	62		7,204		7,204	25.0%	1,801
1	06	02	07	16		Final Design Review Gas Jet System	2-Dec-08	8-Dec-08	SL_PPCE2	Hrs	5		596		596	25.0%	149
1	06	02	07	16		Dev Software Gas Jet System	9-Dec-08	10-Apr-09	SL_PP2P2	Hrs	100		8,688		8,688	25.0%	2,172
1	06	02	07	16		Prepare Docs Gas Jet System	9-Dec-08	10-Apr-09	SL_PP2P2	Hrs	20		1,738		1,738	25.0%	434
1	06	02	07	16		Fab/Delvr Gas Jet System	2-Feb-09	24-Apr-09	SL_PP2T2	Hrs	30		1,957		1,957	25.0%	489
1	06	02	07	16		Fab/Delvr Gas Jet System	2-Feb-09	24-Apr-09	SL_MSEG2	\$\$		48,000		53,609	53,609	25.0%	13,402
1	06	02	07	16		Design Electr. Spectrometers (5)	11-Jun-08	1-Dec-08	SL_PPCE2	Hrs	53		6,158		6,158	25.0%	1,540
1	06	02	07	16		Final Design Review Electr. Spectrometer	2-Dec-08	3-Dec-08	SL_PPCE2	Hrs	5		596		596	25.0%	149
1	06	02	07	16		Dev Software Electr. Spectrometers (5)	4-Dec-08	7-Apr-09	SL_PP2P2	Hrs	60		5,213		5,213	25.0%	1,303
1	06	02	07	16		Prepare Docs Electr. Spectrometers (5)	4-Dec-08	7-Apr-09	SL_PP2P2	Hrs	20		1,738		1,738	25.0%	434

LCLS Estimate to Complete

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WBS Level						LCLB Description - New Rates	Early Start	Early Finish	Res Code	Units	Work Rem. Bud. Qty		Work Rem. Full Burd and Escltd Cost			Contingency %	Contingency \$
2	3	4	5	6	Hours						\$	Labor	M&S	Total			
1	06	02	07	16		Fab/Delvr Electr. Spectrometers (5)	28-Jan-09	21-Apr-09	SL_PPCT2	Hrs	20		1,305		1,305	25.0%	326
1	06	02	07	16		Fab/Delvr Electr. Spectrometers (5)	28-Jan-09	21-Apr-09	SL_MSEG2	\$\$		230,000		256,875	256,875	25.0%	64,219
1	06	02	07	16		Design Ion Spectrometers (TOF)	11-Jun-08	1-Dec-08	SL_PPCE2	Hrs	66		7,669		7,669	25.0%	1,917
1	06	02	07	16		Final Design Review Ion Spectrometers (TOF)	2-Dec-08	3-Dec-08	SL_PPCE2	Hrs	10		1,192		1,192	25.0%	298
1	06	02	07	16		Dev Software Ion Spectrometers (TOF)	4-Dec-08	7-Apr-09	SL_PPCP2	Hrs	60		5,213		5,213	25.0%	1,303
1	06	02	07	16		Prepare Docs Ion Spectrometers (TOF)	4-Dec-08	7-Apr-09	SL_PPCP2	Hrs	20		1,738		1,738	25.0%	434
1	06	02	07	16		Fab/Delvr Ion Spectrometers (TOF)	28-Jan-09	21-Apr-09	SL_PPCT2	Hrs	20		1,305		1,305	25.0%	326
1	06	02	07	16		Fab/Delvr Ion Spectrometers (TOF)	28-Jan-09	21-Apr-09	SL_MSEG2	\$\$		84,000		93,815	93,815	25.0%	23,454
1	06	02	07	16		Design Ion Spectrometers (Img/Mom)	2-Oct-08	5-Feb-09	SL_PPCE2	Hrs	60		7,149		7,149	25.0%	1,787
1	06	02	07	16		Final Design Review Ion Spectrometers (Img/Mom)	6-Feb-09	9-Feb-09	SL_PPCE2	Hrs	10		1,192		1,192	25.0%	298
1	06	02	07	16		Dev Software Ion Spectrometers (Img/Mom)	10-Feb-09	1-Jun-09	SL_PPCP2	Hrs	100		8,688		8,688	25.0%	2,172
1	06	02	07	16		Prepare Docs Ion Spectrometers (Img/Mom)	10-Feb-09	1-Jun-09	SL_PPCP2	Hrs	10		869		869	25.0%	217
1	06	02	07	16		Fab/Delvr Ion Spectrometers (Img/Mom)	24-Mar-09	15-Jun-09	SL_PPCT2	Hrs	40		2,609		2,609	25.0%	652
1	06	02	07	16		Fab/Delvr Ion Spectrometers (Img/Mom)	24-Mar-09	15-Jun-09	SL_MSEG2	\$\$		59,000		65,894	65,894	25.0%	16,474
1	06	02	07	16		Design X-Ray Emission Spectr.	2-Oct-08	5-Feb-09	SL_PPCE2	Hrs	20		2,383		2,383	25.0%	596
1	06	02	07	16		Final Design Review X-Ray Emission Spect	6-Feb-09	9-Feb-09	SL_PPCE2	Hrs	5		596		596	25.0%	149
1	06	02	07	16		Dev Software X-Ray Emission Spectr.	10-Feb-09	1-Jun-09	SL_PPCP2	Hrs	80		6,950		6,950	25.0%	1,738
1	06	02	07	16		Prepare Docs X-Ray Emission Spectr.	10-Feb-09	1-Jun-09	SL_PPCP2	Hrs	20		1,738		1,738	25.0%	434
1	06	02	07	16		Fab/Delvr X-Ray Emission Spectr.	24-Mar-09	15-Jun-09	SL_PPCT2	Hrs	20		1,305		1,305	25.0%	326
1	06	02	07	16		Fab/Delvr X-Ray Emission Spectr.	24-Mar-09	15-Jun-09	SA_MSEG2	\$\$		82,000		91,582	91,582	25.0%	22,895
1	06	02	07	17		Diagnostics Chamber					426	171,000	40,173	190,981	231,154		57,789
1	06	02	07	17		Design Vacuum & Motion	11-Jun-08	1-Dec-08	SL_PPCE2	Hrs	20		2,324		2,324	25.0%	581
1	06	02	07	17		Final Design Review Vacuum & Motion	2-Dec-08	3-Dec-08	SL_PPCE2	Hrs	5		596		596	25.0%	149
1	06	02	07	17		Dev Software Vacuum & Motion	4-Dec-08	7-Apr-09	SL_CP2	Hrs	10		869		869	25.0%	217
1	06	02	07	17		Prepare Docs Vacuum & Motion	4-Dec-08	7-Apr-09	SL_PPCP2	Hrs	10		869		869	25.0%	217
1	06	02	07	17		Fab/Delvr Vacuum & Motion	28-Jan-09	21-Apr-09	SL_PPCT2	Hrs	10		652		652	25.0%	163
1	06	02	07	17		Fab/Delvr Vacuum & Motion	28-Jan-09	21-Apr-09	SL_MSEG2	\$\$		80,000		89,348	89,348	25.0%	22,337
1	06	02	07	17		Design Gas Jet System	11-Jun-08	1-Dec-08	SL_PPCE2	Hrs	10		1,162		1,162	25.0%	290
1	06	02	07	17		Final Design Review Gas Jet System	2-Dec-08	3-Dec-08	SL_PPCE2	Hrs	5		596		596	25.0%	149
1	06	02	07	17		Dev Software Gas Jet System	4-Dec-08	7-Apr-09	SL_CP2	Hrs	10		869		869	25.0%	217
1	06	02	07	17		Prepare Docs Gas Jet System	4-Dec-08	7-Apr-09	SL_PPCP2	Hrs	5		434		434	25.0%	109
1	06	02	07	17		Fab/Delvr Gas Jet System	28-Jan-09	21-Apr-09	SL_PPCT2	Hrs	20		1,305		1,305	25.0%	326
1	06	02	07	17		Fab/Delvr Gas Jet System	28-Jan-09	21-Apr-09	SL_MSEG2	\$\$		68,200		76,169	76,169	25.0%	19,042
1	06	02	07	17		Design Mag Bottle Elect Spectrometer	11-Jun-08	1-Dec-08	SL_PPCE2	Hrs	36		4,183		4,183	25.0%	1,046
1	06	02	07	17		Final Design Review Mag Bottle Elect Spectromet	2-Dec-08	3-Dec-08	SL_PPCE2	Hrs	5		596		596	25.0%	149
1	06	02	07	17		Dev Software Mag Bottle Elect Spectrometer	4-Dec-08	7-Apr-09	SL_CP2	Hrs	80		6,950		6,950	25.0%	1,738
1	06	02	07	17		Prepare Docs Mag Bottle Elect Spectrometer	4-Dec-08	7-Apr-09	SL_PPCP2	Hrs	10		869		869	25.0%	217
1	06	02	07	17		Fab/Delvr Mag Bottle Elect Spectrometer	28-Jan-09	21-Apr-09	SL_PPCT2	Hrs	20		1,305		1,305	25.0%	326
1	06	02	07	17		Fab/Delvr Mag Bottle Elect Spectrometer	28-Jan-09	21-Apr-09	SL_MSEG2	\$\$		10,000		11,168	11,168	25.0%	2,792
1	06	02	07	17		Design X-Ray Emission Spectrometer	2-Oct-08	5-Feb-09	SL_PPCE2	Hrs	60		7,149		7,149	25.0%	1,787
1	06	02	07	17		Final Design Review X-Ray Emission Spectrometer	6-Feb-09	12-Feb-09	SL_PPCE2	Hrs	10		1,192		1,192	25.0%	298
1	06	02	07	17		Dev Software X-Ray Emission Spectrometer	13-Feb-09	4-Jun-09	SL_CP2	Hrs	60		5,213		5,213	25.0%	1,303
1	06	02	07	17		Prepare Docs X-Ray Emission Spectrometer	13-Feb-09	4-Jun-09	SL_PPCP2	Hrs	20		1,738		1,738	25.0%	434
1	06	02	07	17		Fab/Delvr X-Ray Emission Spectrometer	27-Mar-09	18-Jun-09	SL_PPCT2	Hrs	20		1,305		1,305	25.0%	326
1	06	02	07	17		Fab/Delvr X-Ray Emission Spectrometer	27-Mar-09	18-Jun-09	SL_MSEG2	\$\$		12,800		14,296	14,296	25.0%	3,574
1	06	02	07	18		Total Power Measurement					328	45,000	33,919	50,258	84,177		21,044
1	06	02	07	18		Design Total Pwr Measurement	2-Oct-08	5-Feb-09	SL_PPCE2	Hrs	120		14,299		14,299	25.0%	3,575
1	06	02	07	18		Final Design Review Total Pwr Measurement	6-Feb-09	6-Feb-09	SL_PPCE2	Hrs	8		953		953	25.0%	238
1	06	02	07	18		Dev Software Total Pwr Measurement	9-Feb-09	29-May-09	SL_CP2	Hrs	120		10,425		10,425	25.0%	2,606

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WBS Level						LCLB Description - New Rates	Early Start	Early Finish	Res Code	Units	Work Rem. Bud. Qty		Work Rem. Full Burd and Escltd Cost			Contingency %	Contingency \$
2	3	4	5	6	Hours						\$	Labor	M&S	Total			
1	06	02	07	18		Prepare Docs Total Pwr Measurement	9-Feb-09	29-May-09	SL_PP2P2	Hrs	40		3,475		3,475	25.0%	869
1	06	02	07	18		Fab/Delvr Total Pwr Measurement	23-Mar-09	12-Jun-09	SL_PP2E2	Hrs	40		4,766		4,766	25.0%	1,192
1	06	02	07	18		Fab/Delvr Total Pwr Measurement	23-Mar-09	12-Jun-09	SL_MSEG2	\$\$		45,000	50,258	50,258	25.0%	12,565	
1	06	02	08			AMOS Particle Imaging Controls					1,582	-	146,032	-	146,032		36,508
1	06	02	08	01		AMOS Particle Imaging Controls					880	-	85,044	-	85,044		21,261
1	06	02	08	01		Develop AMOS Controls ICDs	3-Apr-08	8-Jul-08	SL_PP2P2	Hrs	40		3,341		3,341	25.0%	835
1	06	02	08	01		Controls AMOS Conceptual Design	16-Apr-08	6-Jun-08	SL_PP2P2	Hrs	40		3,341		3,341	25.0%	835
1	06	02	08	01		Conceptual Design Review (CDR)	9-Jun-08	21-Jul-08	SL_PP2P2	Hrs	40		3,341		3,341	25.0%	835
1	06	02	08	01		Controls AMOS Preliminary Design	22-Jul-08	30-Sep-08	SL_PP2P2	Hrs	400		33,414		33,414	25.0%	8,354
1	06	02	08	01		Preliminary Design Review (PDR)	1-Oct-08	28-Oct-08	SL_PP2P2	Hrs	40		3,475		3,475	25.0%	869
1	06	02	08	01		Controls AMOS Prototype Development	29-Oct-08	8-Jul-09	SL_PP2E2	Hrs	320		38,130		38,130	25.0%	9,533
1	06	02	08	02		AMOS Particle Imaging Software					702	-	60,988	-	60,988		15,247
1	06	02	08	02		X2 Particle Imaging Software	3-Oct-08	13-Apr-09	SL_PP2P2	Hrs	702		60,988		60,988	25.0%	15,247
1	06	02	10			Global Controls System					17,157	3,030,660	1,640,222	3,388,190	5,028,412		1,381,773
1	06	02	10	01		Network					708	944,000	68,785	1,059,741	1,128,525		230,284
1	06	02	10	01		Develop Controls Network ICDs	18-Mar-08	16-May-08	SL_PP2P2	Hrs	42		3,509		3,509	25.0%	877
1	06	02	10	01		Controls Network Conceptual Design	18-Mar-08	10-Jun-08	SL_PP2P2	Hrs	36		3,007		3,007	25.0%	752
1	06	02	10	01		Conceptual Design Review (CDR)	11-Jun-08	24-Jun-08	SL_PP2P2	Hrs	10		835		835	25.0%	209
1	06	02	10	01		Controls Network Preliminary Design	25-Jun-08	18-Sep-08	SL_PP2P2	Hrs	40		3,341		3,341	25.0%	835
1	06	02	10	01		Preliminary Design Review (PDR)	19-Sep-08	25-Sep-08	SL_PP2P2	Hrs	10		835		835	25.0%	209
1	06	02	10	01		Controls Network Final Design	26-Sep-08	30-Jan-09	SL_PP2P2	Hrs	80		6,940		6,940	25.0%	1,735
1	06	02	10	01		Final Design Review (FDR)	2-Feb-09	6-Feb-09	SL_PP2P2	Hrs	10		869		869	25.0%	217
1	06	02	10	01		Controls Network Software Development	9-Feb-09	3-Apr-09	SL_PP2P2	Hrs	240		20,851		20,851	25.0%	5,213
1	06	02	10	01		RCV: 6509 Switches/Routers - NEH	5-Jan-09	5-Jan-09	SL_MSEG2	\$\$		138,000	154,125	154,125	25.0%	38,531	
1	06	02	10	01		RCV: 6509 Switches/Routers - FEH	2-Apr-09	2-Apr-09	SL_MSEG2	\$\$		185,000	206,617	206,617	25.0%	51,654	
1	06	02	10	01		RCV: 6509 Switches/Routers (2) - NEH	26-Oct-09	26-Oct-09	SL_MSEG2	\$\$		158,000	180,521	180,521	25.0%	45,130	
1	06	02	10	01		RCV: Network Fibers (FEE/NEH)	28-Apr-08	28-Apr-08	SL_MSEG2	\$\$		160,000	174,678	174,678	15.0%	26,202	
1	06	02	10	01		RCV: Network Fibers (FEH)	9-Jan-09	9-Jan-09	SL_MSEG2	\$\$		93,000	103,867	103,867	15.0%	15,580	
1	06	02	10	01		Controls Network Hardware Development	9-Feb-09	10-Mar-09	SL_PP2E2	Hrs	240		28,598		28,598	25.0%	7,149
1	06	02	10	01		RCV: Network Fibers (2)(FEH)	26-Oct-09	26-Oct-09	SL_MSEG2	\$\$		210,000	239,933	239,933	15.0%	35,990	
1	06	02	10	02		Machine Protection System					361	28,000	34,581	31,272	65,853		23,049
1	06	02	10	02		Develop Controls MPS ICDs	1-Feb-08	4-Apr-08	SL_PP2P2	Hrs	13		1,044		1,044	35.0%	365
1	06	02	10	02		Controls MPS Preliminary Design	1-Feb-08	4-Apr-08	SL_PP2P2	Hrs	9		710		710	35.0%	249
1	06	02	10	02		Preliminary Design Review (PDR)	7-Apr-08	18-Apr-08	SL_PP2P2	Hrs	20		1,671		1,671	35.0%	585
1	06	02	10	02		Controls MPS Final Design	21-Apr-08	12-Aug-08	SL_PP2P2	Hrs	60		5,012		5,012	35.0%	1,754
1	06	02	10	02		Final Design Review (FDR)	13-Aug-08	26-Aug-08	SL_CP2	Hrs	20		1,671		1,671	35.0%	585
1	06	02	10	02		Controls MPS Software Development	27-Aug-08	22-Oct-08	SL_CP2	Hrs	120		10,175		10,175	35.0%	3,561
1	06	02	10	02		RCV: 4 Input Nodes	20-Nov-08	20-Nov-08	SL_MSEG2	\$\$		28,000	31,272	31,272	35.0%	10,945	
1	06	02	10	02		Hardware Network Development	21-Nov-08	2-Jan-09	SL_PP2E2	Hrs	120		14,299		14,299	35.0%	5,005
1	06	02	10	03		Personnel Protection System					2,274	208,200	220,623	232,528	453,151		113,288
1	06	02	10	03		Develop Controls PPS ICDs	1-Feb-08	1-May-08	SL_CP2	Hrs	5		451		451	25.0%	113
1	06	02	10	03		Controls PPS Preliminary Design	1-Feb-08	1-May-08	SL_CP2	Hrs	42		3,509		3,509	25.0%	877
1	06	02	10	03		Preliminary Design Review (PDR)	2-May-08	15-May-08	SL_CP2	Hrs	80		6,683		6,683	25.0%	1,671
1	06	02	10	03		Controls PPS Final Design	16-May-08	13-Jun-08	SL_CP2	Hrs	240		20,049		20,049	25.0%	5,012
1	06	02	10	03		Final Design Review (FDR)	16-Jun-08	14-Jul-08	SL_CP2	Hrs	160		13,366		13,366	25.0%	3,341
1	06	02	10	03		Controls PPS Software Development	16-May-08	12-Nov-08	SL_CP2	Hrs	907		76,474		76,474	25.0%	19,119
1	06	02	10	03		RCV: Near Hall Other cable	1-Oct-08	1-Oct-08	SL_MSEG2	\$\$		2,100	2,345	2,345	25.0%	586	
1	06	02	10	03		RCV: 12 Near Hall 36PR16AS cable	1-Oct-08	1-Oct-08	SL_MSEG2	\$\$		24,000	26,804	26,804	25.0%	6,701	
1	06	02	10	03		RCV: Near Hall Misc. hardware	1-Oct-08	1-Oct-08	SL_MSEG2	\$\$		13,000	14,519	14,519	25.0%	3,630	

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WBS Level						LCLB Description - New Rates	Early Start	Early Finish	Res Code	Units	Work Rem. Bud. Qty		Work Rem. Full Burd and Escltd Cost			Contingency %	Contingency \$
2	3	4	5	6	Hours						\$\$	Labor	M&S	Total			
1	06	02	10	03		RCV: Near Hall PLC Control Package	1-Oct-08	1-Oct-08	SL_MSEG2	\$\$		20,000	22,337	22,337	25.0%	5,584	
1	06	02	10	03		RCV: Near Hall BSOIC	22-Oct-08	22-Oct-08	SL_MSEG2	\$\$		67,500	75,387	75,387	25.0%	18,847	
1	06	02	10	03		RCV: Far Hall Other cable	28-Oct-08	28-Oct-08	SL_MSEG2	\$\$		2,100	2,345	2,345	25.0%	586	
1	06	02	10	03		RCV: Far Hall 36PR16AS cable	28-Oct-08	28-Oct-08	SL_MSEG2	\$\$		24,000	26,804	26,804	25.0%	6,701	
1	06	02	10	03		RCV: Far Hall Misc. hardware	28-Oct-08	28-Oct-08	SL_MSEG2	\$\$		13,000	14,519	14,519	25.0%	3,630	
1	06	02	10	03		RCV: Far Hall PLC Control Package	28-Oct-08	28-Oct-08	SL_MSEG2	\$\$		20,000	22,337	22,337	25.0%	5,584	
1	06	02	10	03		RCV: Far Hall BSOIC	8-Oct-08	8-Oct-08	SL_MSEG2	\$\$		22,500	25,129	25,129	25.0%	6,282	
1	06	02	10	03		PPS Hardware Development (NEH)	23-Oct-08	5-Dec-08	SL_CE2	Hrs	600		71,494	71,494	25.0%	17,874	
1	06	02	10	03		PPS Hardware Development (FEH)	29-Oct-08	27-May-09	SL_CE2	Hrs	240		28,598	28,598	25.0%	7,149	
1	06	02	10	04		Laser Safety System (LSS)					1,139	49,226	112,460	54,978	167,438		58,603
1	06	02	10	04		Develop Controls LSS ICDs	1-Feb-08	3-Mar-08	SL_CP2	Hrs	10		802	802	35.0%	281	
1	06	02	10	04		Controls LLS Conceptual Design	1-Feb-08	3-Mar-08	SL_CP2	Hrs	10		802	802	35.0%	281	
1	06	02	10	04		Conceptual Design Review (CDR)	4-Mar-08	24-Mar-08	SL_CP2	Hrs	120		10,024	10,024	35.0%	3,509	
1	06	02	10	04		Controls Laser LSS Preliminary Design	25-Mar-08	21-Apr-08	SL_CP2	Hrs	120		10,024	10,024	35.0%	3,509	
1	06	02	10	04		Preliminary Design Review (PDR)	22-Apr-08	5-May-08	SL_CP2	Hrs	40		3,341	3,341	35.0%	1,170	
1	06	02	10	04		Controls LSS Final Design	6-May-08	27-Aug-08	SL_CP2	Hrs	120		10,024	10,024	35.0%	3,509	
1	06	02	10	04		Final Design Review (FDR)	28-Aug-08	11-Sep-08	SL_CP2	Hrs	40		3,341	3,341	35.0%	1,170	
1	06	02	10	04		Controls LSS Software Development	12-Sep-08	9-Oct-08	SL_CP2	Hrs	200		16,905	16,905	35.0%	5,917	
1	06	02	10	04		RCV: Crate/CPU/EVR	19-Jan-09	19-Jan-09	SL_MSEG2	\$\$		9,000	10,052	10,052	35.0%	3,518	
1	06	02	10	04		RCV: 4PR16AS cable	7-Nov-08	7-Nov-08	SL_MSEG2	\$\$		680	759	759	35.0%	266	
1	06	02	10	04		RCV: 36PR16AS cable	7-Nov-08	7-Nov-08	SL_MSEG2	\$\$		6,000	6,701	6,701	35.0%	2,345	
1	06	02	10	04		RCV: Hookup wire	7-Nov-08	7-Nov-08	SL_MSEG2	\$\$		350	391	391	35.0%	137	
1	06	02	10	04		RCV: EO buttons	7-Nov-08	7-Nov-08	SL_MSEG2	\$\$		8,256	9,221	9,221	35.0%	3,227	
1	06	02	10	04		RCV: Laser Shutters & controllers	7-Nov-08	7-Nov-08	SL_MSEG2	\$\$		9,940	11,101	11,101	35.0%	3,886	
1	06	02	10	04		RCV: PLC Control Package	7-Nov-08	7-Nov-08	SL_MSEG2	\$\$		15,000	16,753	16,753	35.0%	5,863	
1	06	02	10	04		LSS Hardware Development	20-Jan-09	18-Feb-09	SL_CE2	Hrs	480		57,195	57,195	35.0%	20,018	
1	06	02	10	05		User Safeguards					696	50,000	70,357	55,842	126,199		44,170
1	06	02	10	05		Specification Near Hall - User Safeguards	1-Feb-08	23-Jun-08	SL_PHS2	Hrs	32		2,372	2,372	35.0%	830	
1	06	02	10	05		Design Near Hall - User Safeguards	24-Jun-08	19-Aug-08	SL_PPCE2	Hrs	40		4,583	4,583	35.0%	1,604	
1	06	02	10	05		Design Near Hall - User Safeguards	24-Jun-08	19-Aug-08	SL_PHS2	Hrs	40		2,965	2,965	35.0%	1,038	
1	06	02	10	05		Design Near Hall - User Safeguards	24-Jun-08	19-Aug-08	SL_ME2	Hrs	40		4,049	4,049	35.0%	1,417	
1	06	02	10	05		Design Near Hall - User Safeguards	24-Jun-08	19-Aug-08	SL_MDD2	Hrs	40		3,395	3,395	35.0%	1,188	
1	06	02	10	05		Safety Review Near Hall - User Safeguards	20-Aug-08	15-Oct-08	SL_PPCE2	Hrs	40		4,629	4,629	35.0%	1,620	
1	06	02	10	05		Safety Review Near Hall - User Safeguards	20-Aug-08	15-Oct-08	SL_PHS2	Hrs	40		2,995	2,995	35.0%	1,048	
1	06	02	10	05		Prep Bid Pkg Near Hall Alarms/Signs - User Safeg	16-Oct-08	29-Oct-08	SL_PPCE2	Hrs	40		4,766	4,766	35.0%	1,668	
1	06	02	10	05		Prep Bid Pkg NHall Interlock - User Safeguards	16-Oct-08	29-Oct-08	SL_PPCE2	Hrs	40		4,766	4,766	35.0%	1,668	
1	06	02	10	05		Prepare Near Hall Bid Pkg Detectors - User Safeg	16-Oct-08	29-Oct-08	SL_PPCE2	Hrs	40		4,766	4,766	35.0%	1,668	
1	06	02	10	05		AWARD: Contract Near Hall Alarms/Signs -User Sa	9-Jan-09	9-Jan-09	SL_AWARD	\$\$		5,450	5,450	5,450	35.0%	1,908	
1	06	02	10	05		AWARD: Contract NHall Interlock - User Safeguar	9-Jan-09	9-Jan-09	SL_AWARD	\$\$		5,450	5,450	5,450	35.0%	1,908	
1	06	02	10	05		AWARD: Contract Near Hall Detectors - User Safe	9-Jan-09	9-Jan-09	SL_AWARD	\$\$		16,350	16,350	16,350	35.0%	5,723	
1	06	02	10	05		Vendor Fab/Ship Near Hall Alarm/Sign - User Safe	12-Jan-09	6-Mar-09	SA_MSEQ2	\$\$		5,000	5,584	5,584	35.0%	1,954	
1	06	02	10	05		Vendor Ship Near Hall Intrlock-User Safeguards	12-Jan-09	6-Mar-09	SA_MSEQ2	\$\$		5,000	5,584	5,584	35.0%	1,954	
1	06	02	10	05		Vendor Fab/Ship Near Hall Detectors - User Safeg	12-Jan-09	6-Mar-09	SA_MSEQ2	\$\$		15,000	16,753	16,753	35.0%	5,863	
1	06	02	10	05		Specification Far Hall - User Safeguards	2-Oct-08	29-Oct-08	SL_PPCE2	Hrs	40		4,766	4,766	35.0%	1,668	
1	06	02	10	05		Design Far Hall - User Safeguards	30-Oct-08	8-Jan-09	SL_PPCE2	Hrs	40		4,766	4,766	35.0%	1,668	
1	06	02	10	05		Design Far Hall - User Safeguards	30-Oct-08	8-Jan-09	SL_PHS2	Hrs	40		3,084	3,084	35.0%	1,079	
1	06	02	10	05		Design Far Hall - User Safeguards	30-Oct-08	8-Jan-09	SL_ME2	Hrs	40		4,211	4,211	35.0%	1,474	
1	06	02	10	05		Design Far Hall - User Safeguards	30-Oct-08	8-Jan-09	SL_MDD2	Hrs	40		3,531	3,531	35.0%	1,236	
1	06	02	10	05		Safety Review Far Hall - User Safeguards	9-Jan-09	5-Mar-09	SL_PPCE2	Hrs	40		4,766	4,766	35.0%	1,668	

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WBS Level						LCLB Description - New Rates	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		Safety Review Far Hall - User Safeguards	9-Jan-09	5-Mar-09	SL_PHS2	Hrs	40		3,084		3,084	35.0%	1,079
1	06	02	10	05		Prep Bid Pkg Far Hall Alarms/Signs - User Safegu	6-Mar-09	19-Mar-09	SL_PPCE2	Hrs	8		953		953	35.0%	334
1	06	02	10	05		Prep Bid Pkg Far Hall Interlock - User Safeguard	6-Mar-09	19-Mar-09	SL_PPCE2	Hrs	8		953		953	35.0%	334
1	06	02	10	05		Prepare Far Hall Bid Pkg Detectors - User Safegu	6-Mar-09	19-Mar-09	SL_PPCE2	Hrs	8		953		953	35.0%	334
1	06	02	10	05		AWARD: Contract Far Hall Alarms/Signs -User Saf	15-May-09	15-May-09	SL_AWARD	\$\$		5,450		5,450	5,450	35.0%	1,908
1	06	02	10	05		AWARD: Contract Far Hall Interlock - User Safegu	15-May-09	15-May-09	SL_AWARD	\$\$		5,450		5,450	5,450	35.0%	1,908
1	06	02	10	05		AWARD: Contract Far Hall Detectors - User Safeg	15-May-09	15-May-09	SL_AWARD	\$\$		16,350		16,350	16,350	35.0%	5,723
1	06	02	10	05		Vendor Fab/Ship Far Hall Alarm/Sign - User Safeg	18-May-09	13-Jul-09	SA_MSEQ2	\$\$		5,000		5,584	5,584	35.0%	1,954
1	06	02	10	05		Vendor Ship Far Hall Contain/Intrck-User Safegu	18-May-09	13-Jul-09	SA_MSEQ2	\$\$		5,000		5,584	5,584	35.0%	1,954
1	06	02	10	05		Vendor Fab/Ship Far Hall Detectors - User Safegu	18-May-09	13-Jul-09	SA_MSEQ2	\$\$		15,000		16,753	16,753	35.0%	5,863
1	06	02	10	06		Timing System					739	30,000	73,383	33,505	106,888		26,722
1	06	02	10	06		Develop Controls Timing System ICDs	11-Jun-08	12-Aug-08	SL_PPCP2	Hrs	9		752		752	25.0%	188
1	06	02	10	06		Controls Timing System Preliminary Design	11-Jun-08	12-Aug-08	SL_PPCP2	Hrs	30		2,506		2,506	25.0%	627
1	06	02	10	06		Preliminary Design Review (PDR)	13-Aug-08	19-Aug-08	SL_PPCP2	Hrs	20		1,671		1,671	25.0%	418
1	06	02	10	06		Controls Timing System Final Design	20-Aug-08	17-Sep-08	SL_PPCP2	Hrs	60		5,012		5,012	25.0%	1,253
1	06	02	10	06		Final Design Review (FDR)	18-Sep-08	24-Sep-08	SL_PPCP2	Hrs	20		1,671		1,671	25.0%	418
1	06	02	10	06		Controls Timing System Software Development	25-Sep-08	26-Feb-09	SL_PPCP2	Hrs	300		26,024		26,024	25.0%	6,506
1	06	02	10	06		RCV: 2 Crate/CPU	16-Oct-08	16-Oct-08	SL_MSEG2	\$\$		18,000		20,103	20,103	25.0%	5,026
1	06	02	10	06		RCV: 4 EVRs	16-Oct-08	16-Oct-08	SL_MSEG2	\$\$		12,000		13,402	13,402	25.0%	3,351
1	06	02	10	06		Controls Timing System Hardware Development	17-Oct-08	20-Mar-09	SL_PPCE2	Hrs	300		35,747		35,747	25.0%	8,937
1	06	02	10	07		Data Management					4,165	374,000	382,412	418,836	801,248		280,437
1	06	02	10	07		Prepare Requirements	11-Jun-08	16-Jul-08	SL_PPCE2	Hrs	20		2,291		2,291	35.0%	802
1	06	02	10	07		Prepare Data Management ICD	11-Jun-08	16-Jul-08	SL_PPCE2	Hrs	40		4,583		4,583	35.0%	1,604
1	06	02	10	07		Prepare Requirements	11-Jun-08	16-Jul-08	SL_PPCE2	Hrs	10		1,146		1,146	35.0%	401
1	06	02	10	07		Prepare Final Computing Hardware List for Ph. 1	11-Jun-08	16-Jul-08	SL_PPCE2	Hrs	10		1,146		1,146	35.0%	401
1	06	02	10	07		Prepare Final Computing Hardware List for Ph. 2	11-Jun-08	16-Jul-08	SL_PPCE2	Hrs	10		1,146		1,146	35.0%	401
1	06	02	10	07		Preliminary Design for Data Management	17-Jul-08	11-Sep-08	SL_PPCE2	Hrs	40		4,583		4,583	35.0%	1,604
1	06	02	10	07		Preliminary Design Review (PDR)	12-Sep-08	18-Sep-08	SL_PPCE2	Hrs	10		1,146		1,146	35.0%	401
1	06	02	10	07		Procure Hrdwr for Develop Test Setup	17-Oct-08	2-Dec-08	SL_PPCE2	Hrs	40		4,766		4,766	35.0%	1,668
1	06	02	10	07		Procure Hrdwr for Develop Test Setup	17-Oct-08	2-Dec-08	SL_MSEG2	\$\$		64,000		71,478	71,478	35.0%	25,017
1	06	02	10	07		Develop Software for Develop Test Setup	19-Sep-08	15-Dec-08	SL_PPCP2	Hrs	160		13,827		13,827	35.0%	4,839
1	06	02	10	07		Design Data Storage	19-Sep-08	16-Oct-08	SL_PPCE2	Hrs	80		9,370		9,370	35.0%	3,279
1	06	02	10	07		Final Design Review Data Storage	17-Oct-08	23-Oct-08	SL_PPCE2	Hrs	20		2,383		2,383	35.0%	834
1	06	02	10	07		Dev Software Data Storage	24-Oct-08	27-Feb-09	SL_PPCP2	Hrs	220		19,113		19,113	35.0%	6,690
1	06	02	10	07		Prepare Docs Data Storage	24-Oct-08	27-Feb-09	SL_PPCP2	Hrs	40		3,475		3,475	35.0%	1,216
1	06	02	10	07		Fab/Delvr Data Storage	9-Feb-09	1-May-09	SL_PPCT2	Hrs	40		2,609		2,609	35.0%	913
1	06	02	10	07		Fab/Delvr Data Storage	9-Feb-09	1-May-09	SL_MSEG2	\$\$		75,000		83,764	83,764	35.0%	29,317
1	06	02	10	07		Performance Improvement Data Storage	4-May-09	10-Feb-10	SL_PPCP2	Hrs	600		53,102		53,102	35.0%	18,586
1	06	02	10	07		Fab/Delvr Data Storage (2)	14-Sep-09	6-Nov-09	SL_PPCT2	Hrs	40		2,680		2,680	35.0%	938
1	06	02	10	07		Fab/Delvr Data Storage (2)	14-Sep-09	6-Nov-09	SL_MSEG2	\$\$		65,000		73,729	73,729	35.0%	25,805
1	06	02	10	07		Design Data Movement	19-Sep-08	20-Mar-09	SL_SCE2	Hrs	100		11,885		11,885	35.0%	4,160
1	06	02	10	07		Final Design Review Data Movement	23-Mar-09	27-Mar-09	SL_SCE2	Hrs	20		2,383		2,383	35.0%	834
1	06	02	10	07		Dev Software Data Movement	30-Mar-09	20-Jul-09	SL_SCP2	Hrs	100		8,688		8,688	35.0%	3,041
1	06	02	10	07		Prepare Docs Data Movement	30-Mar-09	20-Jul-09	SL_SCP2	Hrs	40		3,475		3,475	35.0%	1,216
1	06	02	10	07		Fab/Delvr Data Movement	11-May-09	3-Aug-09	SL_SCT2	Hrs	20		1,305		1,305	35.0%	457
1	06	02	10	07		Fab/Delvr Data Movement	11-May-09	3-Aug-09	SL_MSEG2	\$\$		10,000		11,168	11,168	35.0%	3,909
1	06	02	10	07		Performance Improvement	4-Aug-09	12-May-10	SL_SCP2	Hrs	600		53,781		53,781	35.0%	18,823
1	06	02	10	07		Design Data Reduction	19-Sep-08	20-Mar-09	SL_PPCE2	Hrs	120		14,263		14,263	35.0%	4,992
1	06	02	10	07		Final Design Review Data Reductior	23-Mar-09	27-Mar-09	SL_PPCE2	Hrs	5		596		596	35.0%	209

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WBS Level						LCLB Description - New Rates	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	07		Dev Software Data Reduction	30-Mar-09	20-Jul-09	SL_PPCT2	Hrs	150		13,032		13,032	35.0%	4,561	
1	06	02	10	07		Prepare Docs Data Reduction	30-Mar-09	20-Jul-09	SL_PPCT2	Hrs	20		1,738		1,738	35.0%	608	
1	06	02	10	07		Fab/Delvr Data Reduction	11-May-09	3-Aug-09	SL_PPCT2	Hrs	40		2,609		2,609	35.0%	913	
1	06	02	10	07		Fab/Delvr Data Reduction	11-May-09	3-Aug-09	SL_MSEG2	\$\$		160,000		178,696		178,696	35.0%	62,544
1	06	02	10	07		Performance Improvement	4-Aug-09	12-May-10	SL_PPCT2	Hrs	600		53,781		53,781	35.0%	18,823	
1	06	02	10	07		Design Data Maintenance	19-Sep-08	23-Jan-09	SL_SCE2	Hrs	80		9,498		9,498	35.0%	3,324	
1	06	02	10	07		Final Design Review Data Maintenance	26-Jan-09	30-Jan-09	SL_SCE2	Hrs	10		1,192		1,192	35.0%	417	
1	06	02	10	07		Dev Software Data Maintenance	2-Feb-09	22-May-09	SL_SCP2	Hrs	200		17,375		17,375	35.0%	6,081	
1	06	02	10	07		Prepare Docs Data Maintenance	2-Feb-09	22-May-09	SL_SCP2	Hrs	40		3,475		3,475	35.0%	1,216	
1	06	02	10	07		Fab/Delvr Data Maintenance	16-Mar-09	5-Jun-09	SL_SCT2	Hrs	40		2,609		2,609	35.0%	913	
1	06	02	10	07		Performance Improvement	8-Jun-09	17-Mar-10	SL_SCP2	Hrs	600		53,361		53,361	35.0%	18,676	
1	06	02	10	08		Global Cabling & Racks					314	210,400	36,251	232,213	268,464		66,245	
1	06	02	10	08		Purchase: Development Rack	1-Feb-08	30-Jun-08	SL_PPCE2	Hrs	30		3,483		3,483			
1	06	02	10	08		RCV: Development Rack	15-Feb-08	29-Aug-08	SL_MSEG2	\$\$		110,400		120,528	120,528	25.0%	30,132	
1	06	02	10	08		Develop Cabling & Racks ICDs	11-Jun-08	12-Aug-08	SL_PPCE2	Hrs	42		4,812		4,812	25.0%	1,203	
1	06	02	10	08		Cabling & Racks Conceptual Design	11-Jun-08	12-Aug-08	SL_PPCE2	Hrs	42		4,812		4,812	25.0%	1,203	
1	06	02	10	08		Conceptual Design Review (CDR)	13-Aug-08	26-Aug-08	SL_PPCE2	Hrs	10		1,146		1,146	25.0%	286	
1	06	02	10	08		Cabling & Racks Preliminary Design	27-Aug-08	10-Sep-08	SL_PPCE2	Hrs	60		6,874		6,874	25.0%	1,719	
1	06	02	10	08		Preliminary Design Review (PDR)	11-Sep-08	17-Sep-08	SL_PPCE2	Hrs	20		2,291		2,291	25.0%	573	
1	06	02	10	08		Cabling & Racks Final Design	18-Sep-08	1-Oct-08	SL_PPCE2	Hrs	60		6,874		6,874	25.0%	1,719	
1	06	02	10	08		Final Design Review (FDR)	2-Oct-08	8-Oct-08	SL_PPCE2	Hrs	10		1,192		1,192	25.0%	298	
1	06	02	10	08		RCV: Racks/Remote terminal servers/ AC	30-Oct-08	30-Oct-08	SL_MSEG2	\$\$		100,000		111,685	111,685	25.0%	27,921	
1	06	02	10	08		Cabling & Racks Hardware Development	31-Oct-08	13-Nov-08	SL_PPCE2	Hrs	40		4,766		4,766	25.0%	1,192	
1	06	02	10	09		Laser Timing					-	833,434	-	930,820	930,820		232,705	
1	06	02	10	09		LBL Timing Procurement (FY09)	1-Oct-08	30-Sep-09	SL_MSSC2	\$\$		327,434		365,694	365,694	25.0%	91,424	
1	06	02	10	09		RCV: 4 Crate/CPU/EVR	1-Dec-08	1-Dec-08	SL_MSEG2	\$\$		46,000		51,375	51,375	25.0%	12,844	
1	06	02	10	09		RCV: 32 Fiber (1)	1-Dec-08	1-Dec-08	SL_MSEG2	\$\$		200,000		223,370	223,370	25.0%	55,842	
1	06	02	10	09		RCV: 32 Fiber (2)	28-Sep-09	28-Sep-09	SL_MSEG2	\$\$		260,000		290,381	290,381	25.0%	72,595	
1	06	02	10	11		Common Hutch Controls					1,400	207,400	135,045	231,634	366,680		91,670	
1	06	02	10	11		Design Workstation	11-Jun-08	4-Sep-08	SL_PPCE2	Hrs	70		8,020		8,020	25.0%	2,005	
1	06	02	10	11		Final Design Review Workstation	5-Sep-08	11-Sep-08	SL_PPCE2	Hrs	10		1,146		1,146	25.0%	286	
1	06	02	10	11		Dev Software Workstation	12-Sep-08	16-Jan-09	SL_PPCT2	Hrs	80		6,910		6,910	25.0%	1,727	
1	06	02	10	11		Prepare Docs Workstation	12-Sep-08	16-Jan-09	SL_PPCT2	Hrs	20		1,727		1,727	25.0%	432	
1	06	02	10	11		Fab/Delvr Workstation	24-Oct-08	29-Jan-09	SL_PPCT2	Hrs	20		1,305		1,305	25.0%	326	
1	06	02	10	11		RCV: Workstation	30-Jan-09	30-Jan-09	SL_MSEG2	\$\$		53,000		59,193	59,193	25.0%	14,798	
1	06	02	10	11		Design Photon Beam Control	11-Jun-08	4-Sep-08	SL_PPCE2	Hrs	70		8,020		8,020	25.0%	2,005	
1	06	02	10	11		Final Design Review Photon Beam Control	5-Sep-08	11-Sep-08	SL_PPCE2	Hrs	20		2,291		2,291	25.0%	573	
1	06	02	10	11		Dev Software Photon Beam Control	12-Sep-08	16-Jan-09	SL_PPCT2	Hrs	30		2,591		2,591	25.0%	648	
1	06	02	10	11		Prepare Docs Photon Beam Control	12-Sep-08	16-Jan-09	SL_PPCT2	Hrs	10		864		864	25.0%	216	
1	06	02	10	11		Fab/Delvr Photon Beam Control	24-Oct-08	29-Jan-09	SL_PPCT2	Hrs	5		326		326	25.0%	82	
1	06	02	10	11		RCV: Photon Beam Control	30-Jan-09	30-Jan-09	SL_MSEG2	\$\$		12,800		14,296	14,296	25.0%	3,574	
1	06	02	10	11		Design Beam Line Interface (120 Hz Data)	11-Jun-08	4-Sep-08	SL_PPCE2	Hrs	80		9,166		9,166	25.0%	2,291	
1	06	02	10	11		Final Design Review Beam Line Interface (120 Hz	5-Sep-08	11-Sep-08	SL_PPCE2	Hrs	10		1,146		1,146	25.0%	286	
1	06	02	10	11		Dev Software Beam Line Interface (120 Hz Data)	12-Sep-08	16-Jan-09	SL_PPCT2	Hrs	240		20,730		20,730	25.0%	5,182	
1	06	02	10	11		Prepare Docs Beam Line Interface (120 Hz Data)	12-Sep-08	16-Jan-09	SL_PPCT2	Hrs	20		1,727		1,727	25.0%	432	
1	06	02	10	11		Fab/Delvr Beam Line Interface (120 Hz Data)	24-Oct-08	29-Jan-09	SL_PPCT2	Hrs	10		652		652	25.0%	163	
1	06	02	10	11		RCV: Beam Line Interface (120 Hz Data)	30-Jan-09	30-Jan-09	SL_MSEG2	\$\$		12,800		14,296	14,296	25.0%	3,574	
1	06	02	10	11		Design Local Hutch Controls	11-Jun-08	4-Sep-08	SL_PPCE2	Hrs	60		6,874		6,874	25.0%	1,719	
1	06	02	10	11		Dev Software Local Hutch Controls	12-Sep-08	16-Jan-09	SL_PPCT2	Hrs	40		3,455		3,455	25.0%	864	

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WBS Level						LCLB Description - New Rates	Early Start	Early Finish	Res Code	Units	Work Rem. Bud. Qty		Work Rem. Full Burd and Escltd Cost			Contingency %	Contingency \$
2	3	4	5	6	Hours						\$	Labor	M&S	Total			
1	06	02	10	11		Prepare Docs Local Hutch Controls	12-Sep-08	16-Jan-09	SL_PP2P2	Hrs	20		1,727		1,727	25.0%	432
1	06	02	10	11		Fab/Delvr Local Hutch Controls	24-Oct-08	29-Jan-09	SL_PP2T2	Hrs	10		652		652	25.0%	163
1	06	02	10	11		RCV: Local Hutch Controls	30-Jan-09	30-Jan-09	SL_MSEG2	\$\$		12,800		14,296	14,296	25.0%	3,574
1	06	02	10	11		Design Pumping Section	14-Aug-08	8-Dec-08	SL_PP2E2	Hrs	30		3,518		3,518	25.0%	879
1	06	02	10	11		Final Design Review Pumping Section	9-Dec-08	15-Dec-08	SL_PP2E2	Hrs	10		1,192		1,192	25.0%	298
1	06	02	10	11		Dev Software Pumping Section	16-Dec-08	17-Apr-09	SL_PP2P2	Hrs	40		3,475		3,475	25.0%	869
1	06	02	10	11		Prepare Docs Pumping Section	16-Dec-08	17-Apr-09	SL_PP2P2	Hrs	10		869		869	25.0%	217
1	06	02	10	11		Fab/Delvr Pumping Section	9-Feb-09	30-Apr-09	SL_PP2T2	Hrs	10		652		652	25.0%	163
1	06	02	10	11		RCV: Pumping Section	1-May-09	1-May-09	SL_MSEG2	\$\$		97,000		108,334	108,334	25.0%	27,084
1	06	02	10	11		Design Focusing Optics	14-Aug-08	8-Dec-08	SL_PP2E2	Hrs	165		19,348		19,348	25.0%	4,837
1	06	02	10	11		Final Design Review Focusing Optics	9-Dec-08	15-Dec-08	SL_PP2E2	Hrs	5		596		596	25.0%	149
1	06	02	10	11		Dev Software Focusing Optics	16-Dec-08	17-Apr-09	SL_PP2P2	Hrs	280		24,326		24,326	25.0%	6,081
1	06	02	10	11		Prepare Docs Focusing Optics	16-Dec-08	17-Apr-09	SL_PP2P2	Hrs	5		434		434	25.0%	109
1	06	02	10	11		Fab/Delvr Focusing Optics	9-Feb-09	30-Apr-09	SL_PP2T2	Hrs	20		1,305		1,305	25.0%	326
1	06	02	10	11		RCV: Focusing Optics	1-May-09	1-May-09	SL_MSEG2	\$\$		19,000		21,220	21,220	25.0%	5,305
1	06	02	10	12		Data Acquisition (DAQ)					3,670	65,000	338,372	72,198	410,570		143,699
1	06	02	10	12		Prepare Requirements	11-Jun-08	9-Jul-08	SL_PP2E2	Hrs	20		2,291		2,291	35.0%	802
1	06	02	10	12		Prepare DAQ ICD	11-Jun-08	9-Jul-08	SL_PP2E2	Hrs	35		4,010		4,010	35.0%	1,404
1	06	02	10	12		Prepare Requirements	11-Jun-08	9-Jul-08	SL_PP2E2	Hrs	10		1,146		1,146	35.0%	401
1	06	02	10	12		Prepare Final Device List for Phase 1	11-Jun-08	9-Jul-08	SL_PP2E2	Hrs	5		573		573	35.0%	201
1	06	02	10	12		Prepare Final Device List for Phase 2	11-Jun-08	9-Jul-08	SL_PP2E2	Hrs	5		573		573	35.0%	201
1	06	02	10	12		Preliminary Design for DAQ	10-Jul-08	20-Aug-08	SL_PP2E2	Hrs	60		6,874		6,874	35.0%	2,406
1	06	02	10	12		Preliminary Design Review (PDR)	21-Aug-08	27-Aug-08	SL_PP2P2	Hrs	5		418		418	35.0%	146
1	06	02	10	12		Procure Hrdwr for Develop Test Setup	28-Aug-08	10-Oct-08	SL_PP2E2	Hrs	5		578		578	35.0%	202
1	06	02	10	12		Procure Hrdwr for Develop Test Setup	28-Aug-08	10-Oct-08	SL_MSEG2	\$\$		20,000		21,940	21,940	35.0%	7,679
1	06	02	10	12		Develop Software for Test Setup	28-Aug-08	20-Nov-08	SL_PP2T2	Hrs	100		6,422		6,422	35.0%	2,248
1	06	02	10	12		Develop Software for Test Setup	28-Aug-08	20-Nov-08	SL_PP2P2	Hrs	100		8,552		8,552	35.0%	2,993
1	06	02	10	12		Design DAQ Common	28-Aug-08	20-Nov-08	SL_PP2E2	Hrs	180		21,114		21,114	35.0%	7,390
1	06	02	10	12		Final Design Review DAQ Common	21-Nov-08	1-Dec-08	SL_PP2E2	Hrs	10		1,192		1,192	35.0%	417
1	06	02	10	12		Dev Software DAQ Common	2-Dec-08	23-Jan-09	SL_PP2P2	Hrs	160		13,900		13,900	35.0%	4,865
1	06	02	10	12		Prepare Docs DAQ Common	2-Dec-08	23-Jan-09	SL_PP2P2	Hrs	40		3,475		3,475	35.0%	1,216
1	06	02	10	12		Fab/Delvr DAQ Common	26-Jan-09	17-Apr-09	SL_PP2T2	Hrs	5		326		326	35.0%	114
1	06	02	10	12		Fab/Delvr DAQ Common	26-Jan-09	17-Apr-09	SL_MSEG2	\$\$		15,000		16,753	16,753	35.0%	5,863
1	06	02	10	12		Design CE	28-Aug-08	2-Jan-09	SL_PP2E2	Hrs	140		16,510		16,510	35.0%	5,779
1	06	02	10	12		Final Design Review CE	5-Jan-09	9-Jan-09	SL_PP2E2	Hrs	5		596		596	35.0%	209
1	06	02	10	12		Dev Software CE	12-Jan-09	1-May-09	SL_PP2P2	Hrs	1,920		166,805		166,805	35.0%	58,382
1	06	02	10	12		Prepare Docs CE	12-Jan-09	1-May-09	SL_PP2P2	Hrs	100		8,688		8,688	35.0%	3,041
1	06	02	10	12		Fab/Delvr CE	23-Feb-09	15-May-09	SL_PP2T2	Hrs	40		2,609		2,609	35.0%	913
1	06	02	10	12		Fab/Delvr CE	23-Feb-09	15-May-09	SL_MSEG2	\$\$		30,000		33,505	33,505	35.0%	11,727
1	06	02	10	12		Design CPCI	28-Aug-08	2-Jan-09	SL_PP2E2	Hrs	50		5,896		5,896	35.0%	2,064
1	06	02	10	12		Final Design Review CPCI	5-Jan-09	9-Jan-09	SL_PP2E2	Hrs	5		596		596	35.0%	209
1	06	02	10	12		Dev Software CPCI	12-Jan-09	20-Feb-09	SL_PP2P2	Hrs	50		4,344		4,344	35.0%	1,520
1	06	02	10	12		Prepare Docs CPCI	12-Jan-09	20-Feb-09	SL_PP2P2	Hrs	20		1,738		1,738	35.0%	608
1	06	02	10	12		Design 2D Detector	11-Jun-08	30-Oct-08	SL_PP2E2	Hrs	200		23,103		23,103	35.0%	8,086
1	06	02	10	12		Final Design Review 2D Detector	31-Oct-08	6-Nov-08	SL_PP2E2	Hrs	40		4,766		4,766	35.0%	1,668
1	06	02	10	12		Dev Software 2D Detector	7-Nov-08	13-Mar-09	SL_PP2P2	Hrs	320		27,801		27,801	35.0%	9,730
1	06	02	10	12		Prepare Docs 2D Detector	7-Nov-08	13-Mar-09	SL_PP2P2	Hrs	40		3,475		3,475	35.0%	1,216
1	06	02	10	13		Archives					831	-	84,251	-	84,251		29,488
1	06	02	10	13		Prepare Requirements	11-Jun-08	9-Jul-08	SL_SCE2	Hrs	20		2,291		2,291	35.0%	802

LCLS Estimate to Complete

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WBS Level						LCLB Description - New Rates	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	13		Prepare Archives ICD	11-Jun-08	9-Jul-08	SL_SCE2	Hrs	40		4,583		4,583	35.0%	1,604
1	06	02	10	13		Prepare Requirements	11-Jun-08	9-Jul-08	SL_SCE2	Hrs	20		2,291		2,291	35.0%	802
1	06	02	10	13		Prepare Final Device List for Phase 1	11-Jun-08	9-Jul-08	SL_PPCE2	Hrs	5		418		418	35.0%	146
1	06	02	10	13		Prepare Final Device List for Phase 2	11-Jun-08	9-Jul-08	SL_PPCE2	Hrs	5		418		418	35.0%	146
1	06	02	10	13		Preliminary Design for Archives	10-Jul-08	6-Aug-08	SL_SCE2	Hrs	164		18,790		18,790	35.0%	6,577
1	06	02	10	13		Preliminary Design Review (PDR)	7-Aug-08	13-Aug-08	SL_PPCE2	Hrs	8		917		917	35.0%	321
1	06	02	10	13		Develop Software for Test Setup	14-Aug-08	6-Nov-08	SL_PPCE2	Hrs	40		3,399		3,399	35.0%	1,190
1	06	02	10	13		Design DAQ Archive	14-Aug-08	6-Nov-08	SL_SCE2	Hrs	80		9,323		9,323	35.0%	3,263
1	06	02	10	13		Final Design Review DAQ Archive	7-Nov-08	13-Nov-08	SL_SCE2	Hrs	5		596		596	35.0%	209
1	06	02	10	13		Dev Software DAQ Archive	14-Nov-08	9-Jan-09	SL_SCP2	Hrs	100		8,688		8,688	35.0%	3,041
1	06	02	10	13		Prepare Docs DAQ Archive	14-Nov-08	9-Jan-09	SL_SCP2	Hrs	40		3,475		3,475	35.0%	1,216
1	06	02	10	13		Design 120 Hz Archive	14-Aug-08	6-Nov-08	SL_PPCE2	Hrs	40		4,662		4,662	35.0%	1,632
1	06	02	10	13		Final Design Review 120 Hz Archive	7-Nov-08	13-Nov-08	SL_PPCE2	Hrs	8		953		953	35.0%	334
1	06	02	10	13		Dev Software 120 Hz Archive	14-Nov-08	9-Jan-09	SL_PPCE2	Hrs	120		10,425		10,425	35.0%	3,649
1	06	02	10	13		Prepare Docs 120 Hz Archive	14-Nov-08	9-Jan-09	SL_PPCE2	Hrs	40		3,475		3,475	35.0%	1,216
1	06	02	10	13		Design EPICS Archive	14-Aug-08	6-Nov-08	SL_SCE2	Hrs	32		3,729		3,729	35.0%	1,305
1	06	02	10	13		Final Design Review EPICS Archive	7-Nov-08	7-Nov-08	SL_SCE2	Hrs	8		953		953	35.0%	334
1	06	02	10	13		Dev Software EPICS Archive	10-Nov-08	5-Jan-09	SL_SCP2	Hrs	40		3,475		3,475	35.0%	1,216
1	06	02	10	13		Prepare Docs EPICS Archive	10-Nov-08	5-Jan-09	SL_SCP2	Hrs	16		1,390		1,390	35.0%	487
1	06	02	10	14		Data Retrieval & Analysis					859	31,000	83,702	34,622	118,324		41,413
1	06	02	10	14		Prepare Requirements	2-Oct-08	5-Nov-08	SL_PPCE2	Hrs	20		2,383		2,383	35.0%	834
1	06	02	10	14		Prepare Data Retrieval ICD	2-Oct-08	5-Nov-08	SL_PPCE2	Hrs	30		3,575		3,575	35.0%	1,251
1	06	02	10	14		Prepare Final Device List for Phase 1	2-Oct-08	5-Nov-08	SL_PPCE2	Hrs	5		434		434	35.0%	152
1	06	02	10	14		Preliminary Design for Data Retrieval	6-Nov-08	15-Jan-09	SL_PPCE2	Hrs	20		2,383		2,383	35.0%	834
1	06	02	10	14		Preliminary Design Review (PDR)	16-Jan-09	22-Jan-09	SL_PPCE2	Hrs	8		953		953	35.0%	334
1	06	02	10	14		Procure Hrdwr for Develop Test Setup	23-Jan-09	6-Mar-09	SL_MSEG2	\$\$		31,000		34,622	34,622	35.0%	12,118
1	06	02	10	14		Develop Software for Test Setup	23-Jan-09	16-Apr-09	SL_PPCE2	Hrs	40		3,475		3,475	35.0%	1,216
1	06	02	10	14		Design Data Retrieval	12-Jun-09	2-Oct-09	SL_SCE2	Hrs	60		7,152		7,152	35.0%	2,503
1	06	02	10	14		Final Design Review Data Retrieval	5-Oct-09	9-Oct-09	SL_SCE2	Hrs	8		991		991	35.0%	347
1	06	02	10	14		Dev Software Data Retrieval	12-Oct-09	2-Feb-10	SL_SCP2	Hrs	200		18,071		18,071	35.0%	6,325
1	06	02	10	14		Prepare Docs Data Retrieval	12-Oct-09	2-Feb-10	SL_SCP2	Hrs	40		3,614		3,614	35.0%	1,265
1	06	02	10	14		Design Data Analysis	12-Jun-09	2-Oct-09	SL_PPCE2	Hrs	60		7,152		7,152	35.0%	2,503
1	06	02	10	14		Final Design Review Data Analysis	5-Oct-09	9-Oct-09	SL_PPCE2	Hrs	8		991		991	35.0%	347
1	06	02	10	14		Dev Software Data Analysis	12-Oct-09	2-Feb-10	SL_PPCE2	Hrs	320		28,913		28,913	35.0%	10,119
1	06	02	10	14		Prepare Docs Data Analysis	12-Oct-09	2-Feb-10	SL_PPCE2	Hrs	40		3,614		3,614	35.0%	1,265
1	06	02	11			Laser Controls					1,020	87,400	91,425	97,613	189,038		47,259
1	06	02	11			Develop Laser Controls System ICDs	11-Jun-08	9-Jul-08	SL_PPCE2	Hrs	100		8,354		8,354	25.0%	2,088
1	06	02	11			Laser Controls System Preliminary Design	11-Jun-08	20-Aug-08	SL_PPCE2	Hrs	120		10,024		10,024	25.0%	2,506
1	06	02	11			Preliminary Design Review (PDR)	21-Aug-08	27-Aug-08	SL_PPCE2	Hrs	40		3,341		3,341	25.0%	835
1	06	02	11			Laser Controls System Final Design	28-Aug-08	6-Nov-08	SL_PPCE2	Hrs	120		10,231		10,231	25.0%	2,558
1	06	02	11			Final Design Review (FDR)	7-Nov-08	13-Nov-08	SL_CP2	Hrs	40		3,475		3,475	25.0%	869
1	06	02	11			Laser Controls System Software Development	14-Nov-08	6-Feb-09	SL_CP2	Hrs	480		41,701		41,701	25.0%	10,425
1	06	02	11			RCV: 1 Crate/CPU/EVR	16-Feb-09	16-Feb-09	SL_MSEG2	\$\$		9,000		10,052	10,052	25.0%	2,513
1	06	02	11			RCV: 24 Position controls	16-Feb-09	16-Feb-09	SL_MSEG2	\$\$		48,000		53,609	53,609	25.0%	13,402
1	06	02	11			RCV: 1 General IO	16-Feb-09	16-Feb-09	SL_MSEG2	\$\$		2,500		2,792	2,792	25.0%	698
1	06	02	11			RCV: 1 Timing	16-Feb-09	16-Feb-09	SL_MSEG2	\$\$		2,900		3,239	3,239	25.0%	810
1	06	02	11			RCV: 5 Video Diagnostics	16-Feb-09	16-Feb-09	SL_MSEG2	\$\$		25,000		27,921	27,921	25.0%	6,980
1	06	02	11			Laser Controls System Hardware Development	17-Feb-09	16-Mar-09	SL_PPCE2	Hrs	120		14,299		14,299	25.0%	3,575
1	06	04				XES Laser System					3,295	581,700	322,656	649,614	972,270		243,068

WBS Level						LCLB Description - New Rates	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	04	01			XES Laser					765	341,100	74,668	380,957	455,626		113,906
1	06	04	01			Specification - XES Laser	1-Feb-08	14-Mar-08	SL_PHS2	Hrs	48		3,559		3,559	25.0%	890
1	06	04	01			Specification - XES Laser	1-Feb-08	14-Mar-08	SL_OE2	Hrs	32		3,666		3,666	25.0%	917
1	06	04	01			Design - XES Laser	17-Mar-08	8-Jul-08	SL_PHS2	Hrs	40		2,965		2,965	25.0%	741
1	06	04	01			Design - XES Laser	17-Mar-08	8-Jul-08	SL_OE2	Hrs	60		6,874		6,874	25.0%	1,719
1	06	04	01			Design Review - XES Laser	9-Jul-08	22-Jul-08	SL_PHS2	Hrs	40		2,965		2,965	25.0%	741
1	06	04	01			Design Review - XES Laser	9-Jul-08	22-Jul-08	SL_OE2	Hrs	35		4,010		4,010	25.0%	1,003
1	06	04	01			Prep Bid Pkg - XES Laser	23-Jul-08	5-Aug-08	SL_PHS2	Hrs	30		2,224		2,224	25.0%	556
1	06	04	01			Prep Bid Pkg - XES Laser	23-Jul-08	5-Aug-08	SL_OE2	Hrs	40		4,583		4,583	25.0%	1,146
1	06	04	01			Evaluation of Proposals - XES Laser	4-Sep-08	17-Sep-08	SL_PHS2	Hrs	20		1,483		1,483	25.0%	371
1	06	04	01			Evaluation of Proposals - XES Laser	4-Sep-08	17-Sep-08	SL_OE2	Hrs	30		3,437		3,437	25.0%	859
1	06	04	01			AWARD: Contract - XES Laser	2-Oct-08	2-Oct-08	SL_AWARD	\$\$		371,799		371,799	371,799	25.0%	92,950
1	06	04	01			Design - XES Laser Integration	3-Oct-08	6-Mar-09	SL_PHS2	Hrs	100		7,710		7,710	25.0%	1,928
1	06	04	01			Design - XES Laser Integration	3-Oct-08	6-Mar-09	SL_OE2	Hrs	120		14,299		14,299	25.0%	3,575
1	06	04	01			Vendor Fab/Ship - XES Laser	3-Oct-08	5-Mar-09	SL_PHS2	Hrs	80		6,168		6,168	25.0%	1,542
1	06	04	01			Vendor Fab/Ship - XES Laser	3-Oct-08	5-Mar-09	SL_OE2	Hrs	90		10,724		10,724	25.0%	2,681
1	06	04	01			RCV: XES Laser	6-Mar-09	6-Mar-09	SA_MSEQ2	\$\$		341,100		380,957	380,957	25.0%	95,239
1	06	04	02			Laser Diagnostics					510	47,600	49,040	53,162	102,202		25,551
1	06	04	02			Specification - Laser Diagnostics	1-Feb-08	14-Apr-08	SL_PHS2	Hrs	40		2,965		2,965	25.0%	741
1	06	04	02			Specification - Laser Diagnostics	1-Feb-08	14-Apr-08	SL_OE2	Hrs	30		3,437		3,437	25.0%	859
1	06	04	02			Design - Laser Diagnostics	15-Apr-08	23-Jul-08	SL_PHS2	Hrs	40		2,965		2,965	25.0%	741
1	06	04	02			Design - Laser Diagnostics	15-Apr-08	23-Jul-08	SL_OE2	Hrs	40		4,583		4,583	25.0%	1,146
1	06	04	02			Prep Bid Pkg Energy Sensors - Laser Diagnostics	24-Jul-08	6-Aug-08	SL_PHS2	Hrs	20		1,483		1,483	25.0%	371
1	06	04	02			AWARD: Energy Sensors - Laser Diagnostics	3-Oct-08	3-Oct-08	SL_AWARD	\$\$		9,374		9,374	9,374	25.0%	2,344
1	06	04	02			RCV: Energy Sensors - Laser Diagnostics	2-Dec-08	2-Dec-08	SA_MSEQ2	\$\$		8,600		9,605	9,605	25.0%	2,401
1	06	04	02			Prep Bid Pkg IR FROG - Laser Diagnostics	24-Jul-08	6-Aug-08	SL_PHS2	Hrs	20		1,483		1,483	25.0%	371
1	06	04	02			AWARD: Contract - IR FROG - Laser Diagnostics	3-Oct-08	3-Oct-08	SL_AWARD	\$\$		27,250		27,250	27,250	25.0%	6,813
1	06	04	02			RCV: IR FROG - Laser Diagnostics	2-Dec-08	2-Dec-08	SA_MSEQ2	\$\$		25,000		27,921	27,921	25.0%	6,980
1	06	04	02			Prepare Bid Pkg Fast Diodes - Laser Diagnostics	24-Jul-08	6-Aug-08	SL_PHS2	Hrs	20		1,483		1,483	25.0%	371
1	06	04	02			AWARD: Fast Diodes - Laser Diagnostics	3-Oct-08	3-Oct-08	SL_AWARD	\$\$		2,180		2,180	2,180	25.0%	545
1	06	04	02			RCV: Fast Diodes - Laser Diagnostics	2-Dec-08	2-Dec-08	SA_MSEQ2	\$\$		2,000		2,234	2,234	25.0%	558
1	06	04	02			Prep Bid Pkg Autocorrelators - Laser Diagnostic	24-Jul-08	6-Aug-08	SL_PHS2	Hrs	20		1,483		1,483	25.0%	371
1	06	04	02			AWARD: Autocorrelators - Laser Diagnostics	3-Oct-08	3-Oct-08	SL_AWARD	\$\$		13,080		13,080	13,080	25.0%	3,270
1	06	04	02			Design - Laser Diagnostics Integration	6-Oct-08	2-Dec-08	SL_PHS2	Hrs	100		7,710		7,710	25.0%	1,928
1	06	04	02			Design - Laser Diagnostics Integration	6-Oct-08	2-Dec-08	SL_PCDE2	Hrs	60		7,149		7,149	25.0%	1,787
1	06	04	02			Design - Laser Diagnostics Integration	6-Oct-08	2-Dec-08	SL_OE2	Hrs	120		14,299		14,299	25.0%	3,575
1	06	04	02			RCV: Autocorrelators - Laser Diagnostics	2-Dec-08	2-Dec-08	SA_MSEQ2	\$\$		12,000		13,402	13,402	25.0%	3,351
1	06	04	03			Laser Optical Transport					1,670	184,000	166,160	205,444	371,604		92,901
1	06	04	03			Specification - Laser Optic Transport	1-Feb-08	14-Mar-08	SL_PHS2	Hrs	40		2,965		2,965	25.0%	741
1	06	04	03			Specification - Laser Optic Transport	1-Feb-08	14-Mar-08	SL_OE2	Hrs	30		3,437		3,437	25.0%	859
1	06	04	03			Specification - Laser Optic Transport	1-Feb-08	14-Mar-08	SL_ME2	Hrs	30		3,037		3,037	25.0%	759
1	06	04	03			Conceptual Design - Laser Optic Transport	17-Mar-08	18-Apr-08	SL_PHS2	Hrs	20		1,483		1,483	25.0%	371
1	06	04	03			Conceptual Design - Laser Optic Transport	17-Mar-08	18-Apr-08	SL_OE2	Hrs	60		6,874		6,874	25.0%	1,719
1	06	04	03			Conceptual Design - Laser Optic Transport	17-Mar-08	18-Apr-08	SL_ME2	Hrs	100		10,123		10,123	25.0%	2,531
1	06	04	03			Preliminary Design - Laser Optic Transport	21-Apr-08	23-May-08	SL_PHS2	Hrs	20		1,483		1,483	25.0%	371
1	06	04	03			Preliminary Design - Laser Optic Transport	21-Apr-08	23-May-08	SL_OE2	Hrs	40		4,583		4,583	25.0%	1,146
1	06	04	03			Preliminary Design - Laser Optic Transport	21-Apr-08	23-May-08	SL_ME2	Hrs	120		12,148		12,148	25.0%	3,037
1	06	04	03			Final Design - Laser Optic Transport	27-May-08	8-Jul-08	SL_PHS2	Hrs	20		1,483		1,483	25.0%	371
1	06	04	03			Final Design - Laser Optic Transport	27-May-08	8-Jul-08	SL_OE2	Hrs	40		4,583		4,583	25.0%	1,146

LCLS Estimate to Complete

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WBS Level						LCLB Description - New Rates	Early Start	Early Finish	Res Code	Units	Work Rem. Bud. Qty		Work Rem. Full Burd and Escltd Cost			Contingency %	Contingency \$
2	3	4	5	6	Hours						\$\$	Labor	M&S	Total			
1	06	04	03			Final Design - Laser Optic Transport	27-May-08	8-Jul-08	SL_ME2	Hrs	120		12,148		12,148	25.0%	3,037
1	06	04	03			Design Earthquake restraints for Optical Tables	9-Jul-08	19-Aug-08	SL_PHS2	Hrs	30		2,224		2,224	25.0%	556
1	06	04	03			Design Earthquake restraints for Optical Tables	9-Jul-08	19-Aug-08	SL_OE2	Hrs	60		6,874		6,874	25.0%	1,719
1	06	04	03			Design Earthquake restraints for Optical Tables	9-Jul-08	19-Aug-08	SL_ME2	Hrs	100		10,123		10,123	25.0%	2,531
1	06	04	03			Design Enclosures for Optical Tables	9-Jul-08	19-Aug-08	SL_PHS2	Hrs	30		2,224		2,224	25.0%	556
1	06	04	03			Design Enclosures for Optical Tables	9-Jul-08	19-Aug-08	SL_OE2	Hrs	60		6,874		6,874	25.0%	1,719
1	06	04	03			Design Enclosures for Optical Tables	9-Jul-08	19-Aug-08	SL_ME2	Hrs	100		10,123		10,123	25.0%	2,531
1	06	04	03			Prep Bid Pkg Lenses & Mirrors - Laser Optic Tran	20-Aug-08	3-Sep-08	SL_PHS2	Hrs	20		1,483		1,483	25.0%	371
1	06	04	03			AWARD: Contract Lenses & Mirrors-Laser Optic Tra	2-Oct-08	2-Oct-08	SL_AWARD	\$\$		69,760		69,760	69,760	25.0%	17,440
1	06	04	03			RCV: Lenses & Mirrors - Laser Optic Transport	9-Jan-09	9-Jan-09	SA_MSEQ2	\$\$		64,000		71,478	71,478	25.0%	17,870
1	06	04	03			Prep Bid Pkg Shielding/Contain - Laser Optic Tra	20-Aug-08	17-Sep-08	SL_PHS2	Hrs	20		1,483		1,483	25.0%	371
1	06	04	03			Prep Bid Pkg Shielding/Contain - Laser Optic Tra	20-Aug-08	17-Sep-08	SL_ME2	Hrs	40		4,049		4,049	25.0%	1,012
1	06	04	03			AWARD: Contract Shielding/Contain-Laser Optic T	16-Oct-08	16-Oct-08	SL_AWARD	\$\$		15,260		15,260	15,260	25.0%	3,815
1	06	04	03			RCV: Shielding/Contain - Laser Optic Transport	23-Jan-09	23-Jan-09	SA_MSEQ2	\$\$		14,000		15,636	15,636	25.0%	3,909
1	06	04	03			Prep Bid Pkg Optic Tables (4) - Laser Optic Tran	20-Aug-08	3-Sep-08	SL_PHS2	Hrs	20		1,483		1,483	25.0%	371
1	06	04	03			Prep Bid Pkg Optic Tables (4) - Laser Optic Tran	20-Aug-08	3-Sep-08	SL_ME2	Hrs	30		3,037		3,037	25.0%	759
1	06	04	03			AWARD: Contract Optic Tables (4) - Laser Optic T	2-Oct-08	2-Oct-08	SL_AWARD	\$\$		109,000		109,000	109,000	25.0%	27,250
1	06	04	03			RCV: Optic Tables (4) - Laser Optic Transport	9-Jan-09	9-Jan-09	SA_MSEQ2	\$\$		100,000		111,685	111,685	25.0%	27,921
1	06	04	03			Prep Bid Pkg Cabinets - Laser Optic Transport	20-Aug-08	3-Sep-08	SL_PHS2	Hrs	20		1,483		1,483	25.0%	371
1	06	04	03			AWARD: Contract Cabinets - Laser Optic Transport	2-Oct-08	2-Oct-08	SL_AWARD	\$\$		3,270		3,270	3,270	25.0%	818
1	06	04	03			Design - Laser Transport Integration	3-Oct-08	9-Jan-09	SL_PHS2	Hrs	160		12,336		12,336	25.0%	3,084
1	06	04	03			Design - Laser Transport Integration	3-Oct-08	9-Jan-09	SL_OE2	Hrs	160		19,065		19,065	25.0%	4,766
1	06	04	03			Design - Laser Transport Integration	3-Oct-08	9-Jan-09	SL_ME2	Hrs	180		18,951		18,951	25.0%	4,738
1	06	04	03			RCV: Cabinets - Laser Optic Transport	1-Dec-08	1-Dec-08	SA_MSEQ2	\$\$		3,000		3,351	3,351	25.0%	838
1	06	04	03			Procure Enclosures for Optical Tables	20-Aug-08	15-Oct-08	SL_MSEQ2	\$\$		3,000		3,294	3,294	25.0%	824
1	06	04	04			Laser Safety					350	9,000	32,787	10,052	42,839		10,710
1	06	04	04			Write SOP - Laser Safety	1-Dec-08	5-Feb-09	SL_PHS2	Hrs	40		3,084		3,084	25.0%	771
1	06	04	04			Prepare for Laser Safety PDR	17-Mar-08	8-Jul-08	SL_PHS2	Hrs	35		2,610		2,610	25.0%	652
1	06	04	04			Prepare for Laser Safety PDR	17-Mar-08	8-Jul-08	SL_OE2	Hrs	35		4,033		4,033	25.0%	1,008
1	06	04	04			Prepare for Laser Safety Oversight Comm. Review	23-Jul-08	12-Nov-08	SL_PHS2	Hrs	40		3,010		3,010	25.0%	752
1	06	04	04			Prepare for Laser Safety Oversight Comm. Review	23-Jul-08	12-Nov-08	SL_OE2	Hrs	40		4,652		4,652	25.0%	1,163
1	06	04	04			Prepare for Laser Safety FDR	23-Jul-08	17-Sep-08	SL_PHS2	Hrs	40		2,965		2,965	25.0%	741
1	06	04	04			Prepare for Laser Safety FDR	23-Jul-08	17-Sep-08	SL_OE2	Hrs	40		4,583		4,583	25.0%	1,146
1	06	04	04			Prepare for Laser Safety Committee Review	1-Dec-08	5-Mar-09	SL_PHS2	Hrs	40		3,084		3,084	25.0%	771
1	06	04	04			Prepare for Laser Safety Committee Review	1-Dec-08	5-Mar-09	SL_OE2	Hrs	40		4,766		4,766	25.0%	1,192
1	06	04	04			Procure Laser PPS	20-Mar-09	2-Apr-09	SL_MSEQ2	\$\$		9,000		10,052	10,052	25.0%	2,513
1	06	05				X-Ray Detectors					525	-	49,536	-	49,536		9,907
1	06	05	04			Detector & Streak Camera					525	-	49,536	-	49,536		9,907
1	06	05	04	01		X-Ray Detector Management					525	-	49,536	-	49,536		9,907
1	06	05	04	01		Detector Engineering (FY08)	1-Feb-08	30-Sep-08	SL_PHSS2	Hrs	525		49,536		49,536	20.0%	9,907
1	06	06				System Installation & Alignment					14,320	436,124	1,262,284	482,895	1,745,178		489,675
1	06	06	01			Front End Install					468	-	43,755	-	43,755		10,939
1	06	06	01			Install hutch stoppers in FEE - XE	6-Feb-09	18-Feb-09	SL_MFVE2	Hrs	16		1,791		1,791	25.0%	448
1	06	06	01			Install hutch stoppers in FEE - XE	6-Feb-09	18-Feb-09	SL_MFE2	Hrs	76		8,001		8,001	25.0%	2,000
1	06	06	01			Install hutch stoppers in FEE - XE	6-Feb-09	18-Feb-09	SL_MFAT2	Hrs	244		22,168		22,168	25.0%	5,542
1	06	06	01			Install hutch stoppers in FEE - XE	6-Feb-09	18-Feb-09	SL_MES2	Hrs	32		2,709		2,709	25.0%	677
1	06	06	01			Checkout FEE PPS - XE	19-Feb-09	4-Mar-09	SL_MFAT2	Hrs	100		9,085		9,085	25.0%	2,271
1	06	06	02			Near Hall Install					12,144	348,632	1,060,821	386,808	1,447,629		392,402
1	06	06	02	02		Network Fiber Installation					956	218,632	64,518	241,618	306,135		82,698

LCLS Estimate to Complete

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WBS Level						LCLB Description - New Rates	Early Start	Early Finish	Res Code	Units	Work Rem. Bud. Qty		Work Rem. Full Burd and Escldt Cost			Contingency %	Contingency \$
2	3	4	5	6	Hours						\$	Labor	M&S	Total			
1	06	06	02	02		Install Network Fiber NEH (PCD-Ph5)	5-Jun-08	31-Jul-08	SL_PCDT2	Hrs	190		11,918		11,918	30.0%	3,575
1	06	06	02	02		Install Network Fiber NEH (PCD-Ph5)	5-Jun-08	31-Jul-08	SL_MSDB2	\$\$		102,000		111,357	111,357	30.0%	33,407
1	06	06	02	02		Terminate cable plant NEH - XE	18-May-09	12-Jun-09	SL_MSSC2	\$\$		100,000		111,685	111,685	25.0%	27,921
1	06	06	02	02		Terminate cable plant NEH - XE	18-May-09	12-Jun-09	SL_MSDB2	\$\$		16,632		18,575	18,575	25.0%	4,644
1	06	06	02	02		Terminate cable plant NEH - XE	18-May-09	12-Jun-09	SL_MFAT2	Hrs	48		4,361		4,361	25.0%	1,090
1	06	06	02	02		Terminate cable plant NEH - XE	18-May-09	12-Jun-09	SL_CT2	Hrs	30		1,957		1,957	25.0%	489
1	06	06	02	02		Terminate cable plant NEH - XE	18-May-09	12-Jun-09	SL_CP2	Hrs	60		5,213		5,213	25.0%	1,303
1	06	06	02	02		Terminate cable plant NEH - XE	18-May-09	12-Jun-09	SL_CE2	Hrs	30		3,575		3,575	25.0%	894
1	06	06	02	02		ED&I for Network Fiber (PCD-Ph5)	1-Feb-08	31-Jul-08	SL_PCDT2	Hrs	598		37,494		37,494	25.0%	9,374
1	06	06	02	04		NEH Install AMO Experiment					3,100	-	279,849	-	279,849		69,962
1	06	06	02	04		Install AMO Experiment - Phase 1	25-May-09	9-Jul-09	SL_PHS2	Hrs	200		15,420		15,420	25.0%	3,855
1	06	06	02	04		Install AMO Experiment - Phase 1	25-May-09	9-Jul-09	SL_MFE2	Hrs	200		21,056		21,056	25.0%	5,264
1	06	06	02	04		Install AMO Experiment - Phase 1	25-May-09	9-Jul-09	SL_MFAT2	Hrs	400		36,342		36,342	25.0%	9,085
1	06	06	02	04		Install AMO Experiment - Phase 1	25-May-09	9-Jul-09	SL_CT2	Hrs	400		26,094		26,094	25.0%	6,523
1	06	06	02	04		Install AMO Experiment - Phase 1	25-May-09	9-Jul-09	SL_CP2	Hrs	500		43,439		43,439	25.0%	10,860
1	06	06	02	04		Install AMO Experiment - Phase 1	25-May-09	9-Jul-09	SL_CE2	Hrs	200		23,831		23,831	25.0%	5,958
1	06	06	02	04		Install AMO Experiment - Phase 2	12-Nov-09	25-Nov-09	SL_PHS2	Hrs	400		32,074		32,074	25.0%	8,019
1	06	06	02	04		Install AMO Experiment - Phase 2	12-Nov-09	25-Nov-09	SL_MFE2	Hrs	400		43,797		43,797	25.0%	10,949
1	06	06	02	04		Install AMO Experiment - Phase 2	12-Nov-09	25-Nov-09	SL_MFAT2	Hrs	400		37,795		37,795	25.0%	9,449
1	06	06	02	05		NEH Install Laser					1,440	-	150,324	-	150,324		37,581
1	06	06	02	05		Install NEH Laser Components - XE	6-Apr-09	5-Jun-09	SL_PHS2	Hrs	400		30,841		30,841	25.0%	7,710
1	06	06	02	05		Install NEH Laser Components - XE	6-Apr-09	5-Jun-09	SL_OE2	Hrs	720		85,793		85,793	25.0%	21,448
1	06	06	02	05		Install NEH Laser Components - XE	6-Apr-09	5-Jun-09	SL_ME2	Hrs	320		33,690		33,690	25.0%	8,423
1	06	06	02	06		NEH Install PPS					2,198	50,000	181,966	55,842	237,808		59,864
1	06	06	02	06		ED&I for PPS Cabling - FEE/NEH (PCD-Ph6)	1-Apr-08	30-Sep-08	SL_PCDT2	Hrs	800		50,181		50,181	25.0%	12,545
1	06	06	02	06		Install PPS wiring - FEE & NEH (PCD-Ph6)	29-Oct-08	18-Nov-08	SL_MSDB2	\$\$		50,000		55,842	55,842	25.0%	13,961
1	06	06	02	06		Install PPS wiring - FEE & NEH (PCD-Ph6)	29-Oct-08	18-Nov-08	SL_MFAT2	Hrs	64		5,815		5,815	25.0%	1,454
1	06	06	02	06		Install PPS wiring - FEE & NEH (PCD-Ph6)	29-Oct-08	18-Nov-08	SL_CT2	Hrs	16		1,044		1,044	25.0%	261
1	06	06	02	06		Install PPS wiring - FEE & NEH (PCD-Ph6)	29-Oct-08	18-Nov-08	SL_CP2	Hrs	32		2,780		2,780	25.0%	695
1	06	06	02	06		Install PPS wiring - FEE & NEH (PCD-Ph6)	29-Oct-08	18-Nov-08	SL_CE2	Hrs	16		1,907		1,907	25.0%	477
1	06	06	02	06		Install PPS/BCS racks in NEH	19-Nov-08	4-Dec-08	SL_MFAT2	Hrs	64		5,815		5,815	25.0%	1,454
1	06	06	02	06		Install PPS/BCS racks in NEH	19-Nov-08	4-Dec-08	SL_CT2	Hrs	15		979		979	25.0%	245
1	06	06	02	06		Install PPS/BCS racks in NEH	19-Nov-08	4-Dec-08	SL_CP2	Hrs	40		3,475		3,475	25.0%	869
1	06	06	02	06		Install PPS/BCS racks in NEH	19-Nov-08	4-Dec-08	SL_CE2	Hrs	15		1,787		1,787	25.0%	447
1	06	06	02	06		Install HPS in NEH	5-Dec-08	26-Dec-08	SL_CP2	Hrs	40		3,475		3,475	30.0%	1,043
1	06	06	02	06		Install HPS in NEH	5-Dec-08	26-Dec-08	SL_CE2	Hrs	40		4,766		4,766	30.0%	1,430
1	06	06	02	06		Checkout/verify PPS/BCS through NEH	29-Dec-08	26-Jan-09	SL_CT2	Hrs	164		10,699		10,699	25.0%	2,675
1	06	06	02	06		Checkout/verify PPS/BCS through NEH	29-Dec-08	26-Jan-09	SL_CP2	Hrs	528		45,871		45,871	25.0%	11,468
1	06	06	02	06		Checkout/verify PPS/BCS through NEH	29-Dec-08	26-Jan-09	SL_CE2	Hrs	364		43,373		43,373	25.0%	10,843
1	06	06	02	09		NEH Install Timing					800	80,000	50,181	89,348	139,529		41,859
1	06	06	02	09		ED&I for LBL Timing Fiber (PCD-Ph6)	1-Apr-08	30-Sep-08	SL_PCDT2	Hrs	800		50,181		50,181	30.0%	15,054
1	06	06	02	09		Install LBL Timing Fiber NEH (PCD-Ph6)	29-Oct-08	26-Dec-08	SL_MSDB2	\$\$		80,000		89,348	89,348	30.0%	26,804
1	06	06	02	99		NEH Install - Other					3,650	-	333,984	-	333,984		100,439
1	06	06	02	99		Install NEH Beamline components - XE	6-Apr-09	15-May-09	SL_MFE2	Hrs	160		16,845		16,845	30.0%	5,054
1	06	06	02	99		Install NEH Beamline components - XE	6-Apr-09	15-May-09	SL_MFAT2	Hrs	848		77,045		77,045	30.0%	23,113
1	06	06	02	99		Install NEH Beamline components - XE	6-Apr-09	15-May-09	SL_MES2	Hrs	8		677		677	30.0%	203
1	06	06	02	99		Install NEH Beamline components - XE	6-Apr-09	15-May-09	SL_CT2	Hrs	567		36,988		36,988	30.0%	11,096
1	06	06	02	99		Install NEH Beamline components - XE	6-Apr-09	15-May-09	SL_CP2	Hrs	580		50,389		50,389	30.0%	15,117
1	06	06	02	99		Install NEH Beamline components - XE	6-Apr-09	15-May-09	SL_CE2	Hrs	567		67,562		67,562	30.0%	20,269

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WBS Level						LCLB Description - New Rates	Early Start	Early Finish	Res Code	Units	Work Rem. Bud. Qty		Work Rem. Full Burd and Escltd Cost			Contingency %	Contingency \$	
2	3	4	5	6	Hours						\$	Labor	M&S	Total				
1	06	06	02	99		Test NEH components - XE	24-Jul-09	3-Sep-09	SL_PHS2	Hrs	40		3,084		3,084	25.0%	771	
1	06	06	02	99		Test NEH components - XE	24-Jul-09	3-Sep-09	SL_MFAT2	Hrs	160		14,537		14,537	25.0%	3,634	
1	06	06	02	99		Test NEH components - XE	24-Jul-09	3-Sep-09	SL_ME2	Hrs	80		8,423		8,423	25.0%	2,106	
1	06	06	02	99		Test NEH components - XE	24-Jul-09	3-Sep-09	SL_CT2	Hrs	80		5,219		5,219	25.0%	1,305	
1	06	06	02	99		Test NEH components - XE	24-Jul-09	3-Sep-09	SL_CP2	Hrs	160		13,900		13,900	25.0%	3,475	
1	06	06	02	99		Test NEH components - XE	24-Jul-09	3-Sep-09	SL_CE2	Hrs	80		9,533		9,533	25.0%	2,383	
1	06	06	02	99		Checkout NEH System - XE	4-Sep-09	1-Oct-09	SL_LFAT2	Hrs	40		3,634		3,634	40.0%	1,454	
1	06	06	02	99		Checkout NEH System - XE	4-Sep-09	1-Oct-09	SL_CT2	Hrs	50		3,262		3,262	40.0%	1,305	
1	06	06	02	99		Checkout NEH System - XE	4-Sep-09	1-Oct-09	SL_CP2	Hrs	140		12,163		12,163	40.0%	4,865	
1	06	06	02	99		Checkout NEH System - XE	4-Sep-09	1-Oct-09	SL_CE2	Hrs	90		10,724		10,724	40.0%	4,290	
1	06	06	03			Tunnel Install					418	4,536	38,026	4,536	42,562		10,641	
1	06	06	03			Install X-Ray tunnel components - XE	29-Jul-09	25-Aug-09	SL_MSSY2	\$		4,536		4,536		4,536	25.0%	1,134
1	06	06	03			Install X-Ray tunnel components - XE	29-Jul-09	25-Aug-09	SL_MFVE2	Hrs	12		1,343		1,343	25.0%	336	
1	06	06	03			Install X-Ray tunnel components - XE	29-Jul-09	25-Aug-09	SL_MFAT2	Hrs	152		13,810		13,810	25.0%	3,452	
1	06	06	03			Install X-Ray tunnel components - XE	29-Jul-09	25-Aug-09	SL_CT2	Hrs	4		261		261	25.0%	65	
1	06	06	03			Install X-Ray tunnel components - XE	29-Jul-09	25-Aug-09	SL_CP2	Hrs	8		695		695	25.0%	174	
1	06	06	03			Install X-Ray tunnel components - XE	29-Jul-09	25-Aug-09	SL_CE2	Hrs	4		477		477	25.0%	119	
1	06	06	03			Checkout X-Ray tunnel systems - XE	23-Sep-09	20-Oct-09	SL_LFAT2	Hrs	8		747		747	25.0%	187	
1	06	06	03			Install PPS conduits, wiring, racks - X-Ray & FEH	17-Jul-09	20-Aug-09	SL_MFAT2	Hrs	96		8,722		8,722	25.0%	2,181	
1	06	06	03			Install PPS conduits, wiring, racks - X-Ray & FEH	17-Jul-09	20-Aug-09	SL_CT2	Hrs	31		2,022		2,022	25.0%	506	
1	06	06	03			Install PPS conduits, wiring, racks - X-Ray & FEH	17-Jul-09	20-Aug-09	SL_CP2	Hrs	72		6,255		6,255	25.0%	1,564	
1	06	06	03			Install PPS conduits, wiring, racks - X-Ray & FEH	17-Jul-09	20-Aug-09	SL_CE2	Hrs	31		3,694		3,694	25.0%	923	
1	06	06	04			Far Hall Install					1,202	50,000	111,448	55,842	167,291		65,268	
1	06	06	04			Install FEH components - XE	17-Jul-09	6-Aug-09	SL_MSSC2	\$		50,000		55,842		55,842	40.0%	22,337
1	06	06	04			Install FEH components - XE	17-Jul-09	6-Aug-09	SL_MFAT2	Hrs	48		4,361		4,361	40.0%	1,744	
1	06	06	04			Install FEH components - XE	17-Jul-09	6-Aug-09	SL_CT2	Hrs	247		16,113		16,113	40.0%	6,445	
1	06	06	04			Install FEH components - XE	17-Jul-09	6-Aug-09	SL_CP2	Hrs	420		36,489		36,489	40.0%	14,595	
1	06	06	04			Install FEH components - XE	17-Jul-09	6-Aug-09	SL_CE2	Hrs	247		29,432		29,432	40.0%	11,773	
1	06	06	04			Checkout Far Hall systems - XE	21-Oct-09	3-Nov-09	SL_CP2	Hrs	40		3,614		3,614	40.0%	1,446	
1	06	06	04			Checkout Far Hall systems - XE	21-Oct-09	3-Nov-09	SL_CE2	Hrs	40		4,957		4,957	40.0%	1,983	
1	06	06	04			Install HPS in FEH	21-Aug-09	10-Sep-09	SL_CP2	Hrs	80		6,950		6,950	30.0%	2,085	
1	06	06	04			Install HPS in FEH	21-Aug-09	10-Sep-09	SL_CE2	Hrs	80		9,533		9,533	30.0%	2,860	
1	06	06	05			Electron Dump Enclosure Install					88	32,956	8,233	35,708	43,941		10,426	
1	06	06	05			Install Dump components - XE	9-Oct-08	5-Nov-08	SL_MSSY2	\$		2,956		2,956		2,956	20.0%	591
1	06	06	05			Install Dump components - XE	9-Oct-08	5-Nov-08	SL_MFVE2	Hrs	16		1,791		1,791	20.0%	358	
1	06	06	05			Install Dump components - XE	9-Oct-08	5-Nov-08	SL_MFAT2	Hrs	56		5,088		5,088	20.0%	1,018	
1	06	06	05			Install Dump components - XE	9-Oct-08	5-Nov-08	SL_MES2	Hrs	16		1,354		1,354	20.0%	271	
1	06	06	05			Install PPS wiring - Dump (PCD-Ph5)	5-Aug-08	9-Sep-08	SL_MSDB2	\$		30,000		32,752		32,752	25.0%	8,188
1	06	07				AMOS Experiment					6,470	2,137,734	625,405	2,350,588	2,975,993		915,680	
1	06	07	01			AMO Exp - Management & Design					3,128	-	327,919	-	327,919		80,382	
1	06	07	01			Management of AMO Experiment (FY08)	1-Feb-08	30-Sep-08	SL_PHPU2	Hrs	202		25,226		25,226	30.0%	7,568	
1	06	07	01			Management of AMO Experiment - Oct08 thru Jul09	1-Oct-08	31-Jul-09	SL_PHPU2	Hrs	176		22,844		22,844	30.0%	6,853	
1	06	07	01			Plan assembly/installation X1-high field physics	17-Nov-08	16-Dec-08	SL_LFAT2	Hrs	40		3,634		3,634	20.0%	727	
1	06	07	01			Plan assembly/installation of refocus optics	17-Nov-08	16-Dec-08	SL_LFAT2	Hrs	40		3,634		3,634	20.0%	727	
1	06	07	01			Plan assembly/installation of diagnostics	17-Nov-08	16-Dec-08	SL_LFAT2	Hrs	40		3,634		3,634	20.0%	727	
1	06	07	01			Plan assembly/installation X2 - particle imaging	17-Nov-08	16-Dec-08	SL_LFAT2	Hrs	40		3,634		3,634	20.0%	727	
1	06	07	01			Specify components - X1 High Field Physics	1-Feb-08	15-Apr-08	SL_LUME2	Hrs	75		7,592		7,592	25.0%	1,898	
1	06	07	01			Final design - X1 High Field Physics	1-Feb-08	23-Jun-08	SL_LUME2	Hrs	612		61,954		61,954	25.0%	15,489	
1	06	07	01			Specify components - Diagnostics	1-Feb-08	15-Apr-08	SL_LUME2	Hrs	60		6,074		6,074	25.0%	1,518	

LCLS Estimate to Complete

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WBS Level						LCLB Description - New Rates	Early Start	Early Finish	Res Code	Units	Work Rem. Bud. Qty		Work Rem. Full Burd and Escldt Cost			Contingency %	Contingency \$
1	2	3	4	5	6						Hours	\$	Labor	M&S	Total		
1	06	07	01			Final design - Diagnostics	1-Feb-08	23-Jun-08	SL_LUME2	Hrs	216		21,866		21,866	25.0%	5,467
1	06	07	01			FDR Safety Review	24-Jun-08	22-Jul-08	SL_LUME2	Hrs	220		22,271		22,271	25.0%	5,568
1	06	07	01			Prepare/hold FDR	23-Jul-08	12-Aug-08	SL_LUME2	Hrs	160		16,197		16,197	20.0%	3,239
1	06	07	01			Final design review (FDR)	13-Aug-08	29-Oct-08	SL_LUME2	Hrs	480		49,298		49,298	20.0%	9,860
1	06	07	01			AWARD: LBNL Contract (FY08 Funding)	31-Mar-08	31-Mar-08	SL_AWARD	\$\$		54,683		54,683	54,683	30.0%	16,405
1	06	07	01			AWARD: LBNL Contract (FY09 Funding)	2-Oct-08	2-Oct-08	SL_AWARD	\$\$		223,307		223,307	223,307	30.0%	66,992
1	06	07	01			Engineering Procurement Support	1-Aug-08	19-Dec-08	SL_ME2	Hrs	392		40,579		40,579	25.0%	10,145
1	06	07	01			Engineering Assembly Support	2-Jan-09	23-Jul-09	SL_ME2	Hrs	375		39,481		39,481	25.0%	9,870
1	06	07	02			AMO Exp - High Field Physics					2,080	1,294,446	187,151	1,445,701	1,632,852		481,144
1	06	07	02			Assemble - HF Physics Exp Phase 1	30-Mar-09	22-May-09	SL_PCDT2	Hrs	40		2,609		2,609	25.0%	652
1	06	07	02			Assemble - HF Physics Exp Phase 1	30-Mar-09	22-May-09	SL_MFE2	Hrs	100		10,528		10,528	25.0%	2,632
1	06	07	02			Assemble - HF Physics Exp Phase 1	30-Mar-09	22-May-09	SL_MFAT2	Hrs	200		18,171		18,171	25.0%	4,543
1	06	07	02			Readiness/Safety Review - X1 High Field Physics	25-May-09	5-Jun-09	SL_MFAT2	Hrs	80		7,268		7,268	25.0%	1,817
1	06	07	02			Testing - HF Physics Exp Phase 1	20-Jul-09	14-Aug-09	SL_MFAT2	Hrs	80		7,268		7,268	35.0%	2,544
1	06	07	02			RCV: Misc X-Ray Fluor. Spectrometer	6-May-09	6-May-09	SL_MSEQ2	\$\$		67,890		75,823	75,823	27.0%	20,472
1	06	07	02			Bid/Evaluate/RFP - X-Ray Fluor. Spectrometer	2-Jun-08	7-Jul-08	SL_ME2	Hrs	40		4,049		4,049	25.0%	1,012
1	06	07	02			AWARD: X-Ray Fluor. Spectrometer	2-Oct-08	2-Oct-08	SL_AWARD	\$\$		580,000		580,000	580,000	25.0%	145,000
1	06	07	02			RCV: X-Ray Fluor. Spectrometer	30-Sep-09	30-Sep-09	SA_MSEQ2	\$\$		532,110		594,286	594,286	27.0%	160,457
1	06	07	02			Assemble - X-Ray Fluor. Spectrometer	1-Oct-09	14-Oct-09	SL_MFAT2	Hrs	120		11,339		11,339	25.0%	2,835
1	06	07	02			Readiness/Safety Review - X-Ray Fluor. Spectrom	15-Oct-09	21-Oct-09	SL_ME2	Hrs	40		4,380		4,380	20.0%	876
1	06	07	02			Testing - X-Ray Fluor. Spectrometer	22-Oct-09	11-Nov-09	SL_PHPD2	Hrs	120		9,251		9,251	35.0%	3,238
1	06	07	02			Testing - X-Ray Fluor. Spectrometer	22-Oct-09	11-Nov-09	SL_MFAT2	Hrs	60		5,669		5,669	35.0%	1,984
1	06	07	02			RCV: Ion Imaging Detector (Misc Equip)	25-Mar-09	25-Mar-09	SL_MSEQ2	\$\$		56,211		62,779	62,779	35.0%	21,973
1	06	07	02			Bid/Evaluate/RFP - Ion Imaging Detector	2-Oct-08	12-Nov-08	SL_ME2	Hrs	40		4,211		4,211	35.0%	1,474
1	06	07	02			AWARD: Ion Imaging Detector	15-Dec-08	15-Dec-08	SL_AWARD	\$\$		51,000		51,000	51,000	35.0%	17,850
1	06	07	02			RCV: Ion Imaging Detector	22-Apr-09	22-Apr-09	SA_MSEQ2	\$\$		46,789		52,256	52,256	22.0%	11,496
1	06	07	02			Assemble - Ion Imaging Detector	23-Apr-09	20-May-09	SL_MFAT2	Hrs	120		10,903		10,903	25.0%	2,726
1	06	07	02			Readiness/Safety Review - Ion Imaging Detector	21-May-09	27-May-09	SL_ME2	Hrs	40		4,211		4,211	20.0%	842
1	06	07	02			Testing - Ion Imaging Detector	16-Jun-09	14-Jul-09	SL_PHPD2	Hrs	160		11,861		11,861	35.0%	4,151
1	06	07	02			Testing - Ion Imaging Detector	16-Jun-09	14-Jul-09	SL_MFAT2	Hrs	40		3,634		3,634	35.0%	1,272
1	06	07	02			Place Purchase Orders - TOF Detectors	16-Apr-08	30-Jul-08	SL_ME2	Hrs	40		4,049		4,049	25.0%	1,012
1	06	07	02			RCV: TOF Detectors	20-Nov-08	20-Nov-08	SL_MSEQ2	\$\$		189,000		211,084	211,084	33.0%	69,658
1	06	07	02			Assemble - TOF Detectors	16-Jan-09	12-Mar-09	SL_MFAT2	Hrs	120		10,903		10,903	25.0%	2,726
1	06	07	02			Readiness/Safety Review - TOF Detectors	13-Mar-09	19-Mar-09	SL_ME2	Hrs	40		4,211		4,211	20.0%	842
1	06	07	02			Testing - TOF Detectors	22-Apr-09	19-May-09	SL_PHPD2	Hrs	160		11,861		11,861	35.0%	4,151
1	06	07	02			Testing - TOF Detectors	22-Apr-09	19-May-09	SL_MFAT2	Hrs	40		3,634		3,634	35.0%	1,272
1	06	07	02			Place POs - X1 Sample Source	16-Apr-08	30-Jul-08	SL_LUME2	Hrs	40		4,049		4,049	25.0%	1,012
1	06	07	02			RCV: X1 Sample Source	20-Nov-08	20-Nov-08	SL_MSEQ2	\$\$		129,246		144,348	144,348	26.0%	37,531
1	06	07	02			Assemble - X1 Sample Source	16-Jan-09	12-Mar-09	SL_PCDT2	Hrs	40		2,609		2,609	20.0%	522
1	06	07	02			Assemble - X1 Sample Source	16-Jan-09	12-Mar-09	SL_LFAT2	Hrs	120		10,903		10,903	20.0%	2,181
1	06	07	02			Readiness/Safety Review - X1 Sample Source	13-Mar-09	19-Mar-09	SL_ME2	Hrs	40		4,211		4,211	35.0%	1,474
1	06	07	02			Testing - X1 Sample Source	27-Apr-09	22-May-09	SL_LFAT2	Hrs	80		7,268		7,268	35.0%	2,544
1	06	07	02			Place POs - X1 Vacuum System	16-Apr-08	30-Jul-08	SL_LUME2	Hrs	40		4,049		4,049	25.0%	1,012
1	06	07	02			RCV: X1 Vacuum System	20-Nov-08	20-Nov-08	SL_MSEQ2	\$\$		210,000		234,538	234,538	35.0%	82,088
1	06	07	02			Place POs - Differential Pumping	16-Apr-08	30-Jul-08	SL_LUME2	Hrs	40		4,049		4,049	35.0%	1,417
1	06	07	02			RCV: Differential Pumping	20-Nov-08	20-Nov-08	SL_MSEQ2	\$\$		63,200		70,585	70,585	35.0%	24,705
1	06	07	03			AMO Exp - Refocus Optics					100	423,288	10,123	435,811	445,934		164,848
1	06	07	03			Design - Optics Substrate	1-Apr-08	30-Apr-08	SA_MSPF2	\$\$		18,000		18,000	18,000	35.0%	6,300
1	06	07	03			Design - Mirror Manipulators	1-Apr-08	30-Sep-08	SA_MSPF2	\$\$		14,200		14,200	14,200	35.0%	4,970

WBS Level						LCLB Description - New Rates	Early Start	Early Finish	Res Code	Units	Work Rem. Bud. Qty		Work Rem. Full Burd and Escltd Cost			Contingency %	Contingency \$
2	3	4	5	6	Hours						\$\$	Labor	M&S	Total			
1	06	07	03			Fabricate - Mirror Manipulators	3-Oct-08	1-Dec-08	SA_MSPF2	\$\$		89,425	89,425	89,425	35.0%	31,299	
1	06	07	03			Design - Optics Vacuum Chamber	1-Apr-08	30-Sep-08	SA_MSPF2	\$\$		5,200	5,200	5,200	35.0%	1,820	
1	06	07	03			Fabricate - Optics Vacuum Chamber	3-Nov-08	31-Dec-08	SA_MSPF2	\$\$		34,214	34,214	34,214	35.0%	11,975	
1	06	07	03			Design - Optics Diagnostic Hardware	1-Apr-08	30-Sep-08	SA_MSPF2	\$\$		5,050	5,050	5,050	35.0%	1,768	
1	06	07	03			Fabricate - Optics Diagnostic Hardware	1-Dec-08	30-Jan-09	SA_MSPF2	\$\$		27,467	27,467	27,467	35.0%	9,613	
1	06	07	03			Design - Optics Stand	1-Apr-08	30-Sep-08	SA_MSPF2	\$\$		10,130	10,130	10,130	35.0%	3,546	
1	06	07	03			Fabricate - Optics Stand	2-Jan-09	27-Feb-09	SA_MSPF2	\$\$		63,612	63,612	63,612	35.0%	22,264	
1	06	07	03			Assemble - Refocus Optics	19-Jun-09	17-Jul-09	SL_MSPF2	\$\$		22,958	23,950	23,950	35.0%	8,382	
1	06	07	03			Bid/Evaluate/RFP - Optics Substrate	15-Apr-08	5-May-08	SL_ME2	Hrs	100		10,123		10,123	35.0%	3,543
1	06	07	03			AWARD: Optics Substrate	30-May-08	30-May-08	SL_AWARD	\$\$		85,600	85,600	85,600	35.0%	29,960	
1	06	07	03			RCV: Optics Substrate	26-Mar-09	26-Mar-09	SA_MSEQ2	\$\$		78,532	87,708	87,708	45.0%	39,469	
1	06	07	03			Optics Coating	27-Mar-09	23-Apr-09	SL_MSPF2	\$\$		21,800	22,742	22,742	35.0%	7,960	
1	06	07	03			Optics Metrology	24-Apr-09	18-Jun-09	SL_MSPF2	\$\$		32,700	34,113	34,113	35.0%	11,939	
1	06	07	04			AMO Exp - Diagnostics					1,162	420,000	100,212	469,077	569,288		189,307
1	06	07	04			Procure/Award - Phase 1 Diagnostic Equipment	16-Apr-08	30-Sep-08	SL_LUME2	Hrs	40		4,049		4,049	35.0%	1,417
1	06	07	04			Fab/Deliver - Phase 1 Diagnostic Equipment	2-Oct-08	27-Jan-09	SL_MSEQ2	\$\$		366,000	408,767	408,767	34.0%	138,981	
1	06	07	04			Procure/Award - Focus Verification	16-Apr-08	30-Sep-08	SL_ME2	Hrs	40		4,049		4,049	35.0%	1,417
1	06	07	04			Fab/Deliver - Focus Verification	2-Oct-08	27-Jan-09	SL_MSEQ2	\$\$		34,000	37,973	37,973	33.0%	12,531	
1	06	07	04			Assemble - Phase 1 Diagnostic Equipment	6-Apr-09	8-May-09	SL_PCDT2	Hrs	16		1,044		1,044	20.0%	209
1	06	07	04			Assemble - Phase 1 Diagnostic Equipment	6-Apr-09	8-May-09	SL_LFAT2	Hrs	200		18,171		18,171	20.0%	3,634
1	06	07	04			Readiness/Safety Review - Phase 1 Diagnostic Equ	11-May-09	15-May-09	SL_ME2	Hrs	40		4,211		4,211	25.0%	1,053
1	06	07	04			Testing - Phase 1 Diagnostic Equipment	15-Jun-09	13-Jul-09	SL_PHPD2	Hrs	320		23,722		23,722	35.0%	8,303
1	06	07	04			Testing - Phase 1 Diagnostic Equipment	15-Jun-09	13-Jul-09	SL_LFAT2	Hrs	160		14,537		14,537	35.0%	5,088
1	06	07	04			Procure/Award - Phase 2 Diagnostic Equipment	2-Oct-08	9-Jan-09	SL_LUME2	Hrs	40		4,211		4,211	35.0%	1,474
1	06	07	04			Fab/Deliver - Phase 2 Diagnostic Equipment	12-Jan-09	1-May-09	SL_MSEQ2	\$\$		20,000	22,337	22,337	34.0%	7,595	
1	06	07	04			Assemble - Phase 2 Diagnostic Equipment	4-May-09	15-May-09	SL_PCDT2	Hrs	6		391		391	20.0%	78
1	06	07	04			Assemble - Phase 2 Diagnostic Equipment	4-May-09	15-May-09	SL_LFAT2	Hrs	80		7,268		7,268	20.0%	1,454
1	06	07	04			Readiness/Safety Review - Phase 2 Diagnostic Equ	18-May-09	22-May-09	SL_ME2	Hrs	40		4,211		4,211	25.0%	1,053
1	06	07	04			Testing - Phase 2 Diagnostic Equipment	19-Jun-09	31-Jul-09	SL_PHPD2	Hrs	120		8,896		8,896	35.0%	3,113
1	06	07	04			Testing - Phase 2 Diagnostic Equipment	19-Jun-09	31-Jul-09	SL_LFAT2	Hrs	60		5,451		5,451	35.0%	1,908
1	06	08				K Measurement Crystals					40	20,000	4,992	21,835	26,827		6,707
1	06	08	01			K Measurement Crystals					40	20,000	4,992	21,835	26,827		6,707
1	06	08	01			Prepare Bid Docs - Si Crystal (2)	15-Apr-08	28-Apr-08	SL_PHPU2	Hrs	10		1,248		1,248	25.0%	312
1	06	08	01			Bid and Award - Si Crystal (2)	29-Apr-08	27-May-08	SL_PHPU2	Hrs	30		3,744		3,744	25.0%	936
1	06	08	01			AWARD: Si Crystal (2)	28-May-08	28-May-08	SL_AWARD	\$\$		21,400	21,400	21,400	25.0%	5,350	
1	06	08	01			Fab and Deliver - Si Crystal (2)	29-May-08	21-Aug-08	SA_MSEQ2	\$\$		20,000	21,835	21,835	25.0%	5,459	
1	06	09				Mechanical Systems					7,096	94,650	649,294	104,507	753,801		188,450
1	06	09	01			PPS Stoppers					4,267	84,150	382,576	93,044	475,620		118,905
1	06	09	01			Purchase Absorber Mats - EDE Stoppers	1-Feb-08	24-Jun-08	SL_ME2	Hrs	8		759		759	25.0%	190
1	06	09	01			Prep Bid Pkg - EDE Stoppers	1-Feb-08	14-Feb-08	SL_ME2	Hrs	-		-		-	25.0%	0
1	06	09	01			Bid Process - EDE Stoppers	15-Feb-08	29-Feb-08	SL_ME2	Hrs	-		-		-	25.0%	0
1	06	09	01			MFD Fabricate - EDE Stoppers	4-Mar-08	24-Jun-08	SL_MFAT2	Hrs	934		81,594		81,594	25.0%	20,399
1	06	09	01			MFD Fabricate - EDE Stoppers	4-Mar-08	24-Jun-08	SL_ME2	Hrs	40		4,049		4,049	25.0%	1,012
1	06	09	01			Test - EDE Stoppers	25-Jun-08	23-Jul-08	SL_ME2	Hrs	50		5,062		5,062	25.0%	1,265
1	06	09	01			Test - EDE Stoppers	25-Jun-08	23-Jul-08	SL_MDAT2	Hrs	160		13,978		13,978	25.0%	3,494
1	06	09	01			Purchase Absorber Mats - FEE/NEH Stoppers	1-Feb-08	23-May-08	SL_ME2	Hrs	10		1,012		1,012	25.0%	253
1	06	09	01			RCV: Vacuum Components - FEE/NEH Stoppers	9-Jul-08	9-Jul-08	SL_MSEQ2	\$\$		37,400	40,831	40,831	25.0%	10,208	
1	06	09	01			MFD Fabricate - FEE/NEH Stoppers	1-Feb-08	31-Jul-08	SL_MFAT2	Hrs	1,042		90,994		90,994	25.0%	22,749
1	06	09	01			MFD Fabricate - FEE/NEH Stoppers	1-Feb-08	31-Jul-08	SL_ME2	Hrs	32		3,239		3,239	25.0%	810

WBS Level						LCLB Description - New Rates	Early Start	Early Finish	Res Code	Units	Work Rem. Bud. Qty		Work Rem. Full Burd and Escltd Cost			Contingency %	Contingency \$
2	3	4	5	6	Hours						\$	Labor	M&S	Total			
1	06	09	01			Test - FEE/NEH Stoppers	1-Aug-08	28-Aug-08	SL_MFAT2	Hrs	240		20,966		20,966	25.0%	5,242
1	06	09	01			Test - FEE/NEH Stoppers	1-Aug-08	28-Aug-08	SL_ME2	Hrs	50		5,062		5,062	25.0%	1,265
1	06	09	01			Prep Bid Pkg - TUN/FEH Stoppers	2-Oct-08	12-Nov-08	SL_ME2	Hrs	10		1,053		1,053	25.0%	263
1	06	09	01			Bid Process - TUN/FEH Stoppers	13-Nov-08	19-Nov-08	SL_ME2	Hrs	5		526		526	25.0%	132
1	06	09	01			Purchase Absorber Matls - TUN/FEH Stoppers	2-Oct-08	29-Oct-08	SL_ME2	Hrs	10		1,053		1,053	25.0%	263
1	06	09	01			RCV: Vacuum Components - TUN/FEH Stoppers	6-Feb-09	6-Feb-09	SL_MSEQ2	\$\$		46,750		52,213	52,213	25.0%	13,053
1	06	09	01			MFD Fabricate - TUN/FEH Stoppers	21-Nov-08	30-Apr-09	SL_MFAT2	Hrs	1,377		125,107		125,107	25.0%	31,277
1	06	09	01			MFD Fabricate - TUN/FEH Stoppers	21-Nov-08	30-Apr-09	SL_ME2	Hrs	40		4,211		4,211	25.0%	1,053
1	06	09	01			Test - TUN/FEH Stoppers	1-May-09	28-May-09	SL_MFAT2	Hrs	240		21,805		21,805	25.0%	5,451
1	06	09	01			Test - TUN/FEH Stoppers	1-May-09	28-May-09	SL_ME2	Hrs	20		2,106		2,106	25.0%	526
1	06	09	02			PPS Shielding					2,241	-	208,116	-	208,116		52,029
1	06	09	02			Prepare Specification - PPS Shielding & Supports	1-Feb-08	30-Apr-08	SL_PHS2	Hrs	14		1,038		1,038	25.0%	259
1	06	09	02			Develop RP Reqmnts - PPS Shielding & Supports	1-Feb-08	30-Apr-08	SL_PHS2	Hrs	14		1,038		1,038	25.0%	259
1	06	09	02			Design PPS Shielding & Supports	1-Feb-08	31-Jul-08	SL_ME2	Hrs	120		12,148		12,148	25.0%	3,037
1	06	09	02			Design PPS Shielding & Supports	1-Feb-08	31-Jul-08	SL_MDD2	Hrs	84		7,130		7,130	25.0%	1,782
1	06	09	02			Review PPS Shielding Design	1-Aug-08	14-Aug-08	SL_ME2	Hrs	20		2,025		2,025	25.0%	506
1	06	09	02			Review PPS Shielding Design	1-Aug-08	14-Aug-08	SL_MDD2	Hrs	40		3,395		3,395	25.0%	849
1	06	09	02			RP Safety Review - Shielding & Supports	15-Aug-08	16-Sep-08	SL_ME2	Hrs	20		2,025		2,025	25.0%	506
1	06	09	02			Finalize PPS Shielding Design	15-Aug-08	10-Oct-08	SL_ME2	Hrs	120		12,226		12,226	25.0%	3,056
1	06	09	02			Finalize PPS Shielding Design	15-Aug-08	10-Oct-08	SL_MDD2	Hrs	120		10,251		10,251	25.0%	2,563
1	06	09	02			Prep Bid Pkg - PPS Shielding & Supports	13-Oct-08	24-Oct-08	SL_ME2	Hrs	10		1,053		1,053	25.0%	263
1	06	09	02			Bid Process - PPS Shielding & Supports	27-Oct-08	21-Nov-08	SL_ME2	Hrs	10		1,053		1,053	25.0%	263
1	06	09	02			Fab/Assemble FEE/NEH - PPS Shielding & Supports	25-Nov-08	3-Feb-09	SL_MFE2	Hrs	40		4,211		4,211	25.0%	1,053
1	06	09	02			Fab/Assemble FEE/NEH - PPS Shielding & Supports	25-Nov-08	3-Feb-09	SL_MFAT2	Hrs	534		48,516		48,516	25.0%	12,129
1	06	09	02			Prepare TUN/FEH Spec - PPS Shielding & Supports	1-Aug-08	26-Sep-08	SL_PHS2	Hrs	20		1,483		1,483	25.0%	371
1	06	09	02			Develop RP Reqmnts - PPS Shielding & Supports	1-Aug-08	26-Sep-08	SL_PHS2	Hrs	20		1,483		1,483	25.0%	371
1	06	09	02			Design PPS Shielding & Supports	29-Sep-08	5-Jan-09	SL_ME2	Hrs	120		12,624		12,624	25.0%	3,156
1	06	09	02			Design PPS Shielding & Supports	29-Sep-08	5-Jan-09	SL_MDD2	Hrs	160		14,112		14,112	25.0%	3,528
1	06	09	02			Review PPS Shielding Design	6-Jan-09	19-Jan-09	SL_ME2	Hrs	10		1,053		1,053	25.0%	263
1	06	09	02			Review PPS Shielding Design	6-Jan-09	19-Jan-09	SL_MDD2	Hrs	40		3,531		3,531	25.0%	883
1	06	09	02			RP Safety Review - Shielding & Supports	20-Jan-09	19-Feb-09	SL_ME2	Hrs	10		1,053		1,053	25.0%	263
1	06	09	02			Finalize PPS Shielding Design	20-Jan-09	16-Mar-09	SL_ME2	Hrs	120		12,634		12,634	25.0%	3,158
1	06	09	02			Finalize PPS Shielding Design	20-Jan-09	16-Mar-09	SL_MDD2	Hrs	120		10,593		10,593	25.0%	2,648
1	06	09	02			Prep Bid Pkg - PPS Shielding & Supports	17-Mar-09	30-Mar-09	SL_ME2	Hrs	10		1,053		1,053	25.0%	263
1	06	09	02			Bid Process - PPS Shielding & Supports	31-Mar-09	27-Apr-09	SL_ME2	Hrs	5		526		526	25.0%	132
1	06	09	02			Fab/Assemble TUN/FEH - PPS Shielding & Supports	29-Apr-09	28-Jul-09	SL_MFE2	Hrs	5		526		526	25.0%	132
1	06	09	02			Fab/Assemble TUN/FEH - PPS Shielding & Supports	29-Apr-09	28-Jul-09	SL_MFAT2	Hrs	455		41,339		41,339	25.0%	10,335
1	06	09	03			NEH Hutch Doors					588	10,500	58,602	11,463	70,065		17,516
1	06	09	03			MFD Fab/Deliver - NEH Hutch Doors	1-Feb-08	31-Jul-08	SL_MSEG2	\$\$		10,500		11,463	11,463	25.0%	2,866
1	06	09	03			MFD Fab/Deliver - NEH Hutch Doors	1-Feb-08	31-Jul-08	SL_MFMS2	Hrs	280		31,306		31,306	25.0%	7,827
1	06	09	03			MFD Fab/Deliver - NEH Hutch Doors	1-Feb-08	31-Jul-08	SL_MFE2	Hrs	28		2,835		2,835	25.0%	709
1	06	09	03			MFD Fab/Deliver - NEH Hutch Doors	1-Feb-08	31-Jul-08	SL_MFAT2	Hrs	280		24,461		24,461	25.0%	6,115
1	09					CONVENTIONAL FACILITIES					7,283	26,441,680	779,367	26,530,472	27,309,839		7,719,938
1	09	01				System Management & Integration					6,153	4,444,125	676,413	4,515,340	5,191,752		762,169
1	09	01	01			Management					2,039	62,950	227,026	68,315	295,341		0
1	09	01	01			CF Management - FY08 (0.70 fte)	1-Feb-08	30-Sep-08	SL_SEEM2	Hrs	739		79,584		79,584	0.0%	0
1	09	01	01			Travel - FY08	1-Feb-08	30-Sep-08	SL_MSTR2	\$\$		5,250		6,593	6,593	0.0%	0
1	09	01	01			Travel - FY09	1-Oct-08	30-Sep-09	SL_MSTR2	\$\$		3,000		3,854	3,854	0.0%	0
1	09	01	01			Consumable Supplies - FY08	1-Feb-08	30-Sep-08	SL_MSEG2	\$\$		10,500		11,463	11,463	0.0%	0

WBS Level						LCLB Description - New Rates	Early Start	Early Finish	Res Code	Units	Work Rem. Bud. Qty		Work Rem. Full Burd and Escldt Cost			Contingency %	Contingency \$
1	2	3	4	5	6						Hours	\$\$	Labor	M&S	Total		
1	09	01	01			Consumable Supplies - FY09	1-Oct-08	30-Sep-09	SL_MSEG2	\$\$		4,000		4,467	4,467	0.0%	0
1	09	01	01			CF Deputy Manager - FY08	1-Feb-08	30-Apr-08	SL_MSPF2	\$\$		40,200		41,937	41,937	0.0%	0
1	09	01	01			CF Management - FY09 (0.50 fte)	1-Oct-08	30-Sep-09	SL_SEEM2	Hrs	872		97,614		97,614	0.0%	0
1	09	01	01			CF Management - FY10 (0.25 fte)	1-Oct-09	30-Jul-10	SL_SEEM2	Hrs	428		49,828		49,828	0.0%	0
1	09	01	02			CAM/CF Engineering					1,729	765,056	188,044	828,918	1,016,961		292,410
1	09	01	02			CF Engr Support - FY08 (Feb-May 1.35 fte)	1-Feb-08	30-May-08	SL_LSEE2	Hrs	630		67,811		67,811	0.0%	0
1	09	01	02			CF Engr Support - FY08 (Jun-Sep .65 fte)	2-Jun-08	30-Sep-08	SL_LSEE2	Hrs	425		45,746		45,746	0.0%	0
1	09	01	02			CF Engr Support - FY09 (Oct-Sep 0.30 fte)	1-Oct-08	30-Sep-09	SL_LSEE2	Hrs	640		71,643		71,643	0.0%	0
1	09	01	02			JE A&E Contract Admin/Cost Estimator	1-Feb-08	30-Apr-08	SL_MSPF2	\$\$		115,000		119,968	119,968	0.0%	0
1	09	01	02			JE A&E T3-DCNs	3-Mar-08	28-Mar-08	SL_MSPS2	\$\$		200,000		218,348	218,348	30.0%	65,504
1	09	01	02			MTH A&E - FEH Temporary Power	1-Feb-08	30-Apr-08	SL_MSPF2	\$\$		10,050		10,484	10,484	30.0%	3,145
1	09	01	02			MTH A&E - FEH Temporary Power	1-Feb-08	30-Apr-08	SL_MDD2	Hrs	34		2,843		2,843	30.0%	853
1	09	01	02			BFK Engineering Consultant - FY08	1-Feb-08	30-Jun-08	SL_MSPF2	\$\$		20,000		20,864	20,864	30.0%	6,259
1	09	01	02			R&C Engineering Consultant - FY08	17-Mar-08	9-May-08	SL_MSPF2	\$\$		10,000		10,432	10,432	30.0%	3,130
1	09	01	02			JE A&E Title 3 Engineering Support	1-Feb-08	30-Sep-08	SL_MSPS2	\$\$		113,097		123,473	123,473	10.0%	12,347
1	09	01	02			Start: Ph 2&3 I&C PS Electr Branch - AE Design	1-Feb-08	18-Jul-08	SL_MSPF2	\$\$		84,909		88,577	88,577	40.0%	35,431
1	09	01	02			AWARD: FEH Hutches - A&E Design	2-Oct-08	2-Oct-08	SL_AWFY2	\$\$		231,080		231,080	231,080	60.0%	138,648
1	09	01	02			Start: FEH Hutches - A&E Design	3-Oct-08	25-Mar-09	SA_MSSC2	\$\$		212,000		236,772	236,772	70.0%	165,740
1	09	01	03			Construction Management & AE Support					2,385	3,616,119	261,343	3,618,107	3,879,450		469,759
1	09	01	03			CEF CM Support - FY08 (Feb-May 0.35 fte)	1-Feb-08	30-May-08	SL_UTR2	Hrs	189		20,343		20,343	0.0%	0
1	09	01	03			CEF CM Support - FY08 (Jun-Sep 0.10 fte)	2-Jun-08	30-Sep-08	SL_UTR2	Hrs	85		9,149		9,149	0.0%	0
1	09	01	03			CF CM Support - FY08 (Feb-May - 0.95 fte)	1-Feb-08	30-May-08	SL_LUTR2	Hrs	441		47,468		47,468	0.0%	0
1	09	01	03			CF CM Support - FY08 (Jun-Sep 0.90 fte)	2-Jun-08	30-Sep-08	SL_LUTR2	Hrs	595		64,044		64,044	0.0%	0
1	09	01	03			CF CM Support - FY09 (Oct-Sep 0.60 fte)	1-Oct-08	30-Sep-09	SL_LUTR2	Hrs	1,075		120,338		120,338	0.0%	0
1	09	01	03			CF CM Support - ME Consultant	1-Feb-08	30-Apr-08	SL_MSPF2	\$\$		46,029		48,017	48,017	0.0%	0
1	09	01	03			Phase 2 Construction Management - FY08	1-Feb-08	30-Sep-08	SL_MSPY2	\$\$		965,090		965,090	965,090	10.0%	96,509
1	09	01	03			Phase 2 CM Incentive Fee - FY08	7-Apr-08	4-Dec-08	SL_MSPY2	\$\$		350,000		350,000	350,000	10.0%	35,000
1	09	01	03			Phase 2 CM/GC Claims- FY09	5-Jun-09	28-Aug-09	SL_MSPY2	\$\$		2,255,000		2,255,000	2,255,000	15.0%	338,250
1	09	03				Construction -T3 Conventional Facilities					1,130	21,997,555	102,954	22,015,132	22,118,086		6,957,769
1	09	03	03			BTH West					100	68,662	6,361	70,792	77,154		0
1	09	03	03	01		BTH West - Site Preparation					100	-	6,361	-	6,361		0
1	09	03	03	01		Site Preparation	1-Feb-08	20-Mar-08	SL_SEPM2	Hrs	100		6,361		6,361	0.0%	0
1	09	03	03	15		BTH West Mechanical					-	34,672	-	36,170	36,170		0
1	09	03	03	15		Start: BTH West - Mechanical Construction	1-Feb-08	7-Mar-08	SL_MSSF2	\$\$		34,672		36,170	36,170	0.0%	0
1	09	03	03	16		BTH West - Electrical					-	31,350	-	31,868	31,868		0
1	09	03	03	16		Start: BTH West - Electrical Construction	1-Feb-08	7-Mar-08	SL_MSSY2	\$\$		19,350		19,350	19,350	0.0%	0
1	09	03	03	16		PCOs - BTH West Construction - issued req	15-Feb-08	20-Mar-08	SL_MSSF2	\$\$		12,000		12,518	12,518	0.0%	0
1	09	03	03	20		BTH West Project Close Out					-	2,640	-	2,754	2,754		0
1	09	03	03	20		BTH West - Greene T3 Support	1-Feb-08	7-Mar-08	SL_MSSF2	\$\$		2,640		2,754	2,754	0.0%	0
1	09	03	04			Linac Facility Upgrade (LN)					-	950,000	-	950,000	950,000		570,000
1	09	03	04	16		LN - Electrical					-	950,000	-	950,000	950,000		570,000
1	09	03	04	16		AWARD: Ph 2 - I&C/PS Electr Branch Circuit Fdr	21-Apr-08	21-Apr-08	SL_AWFY2	\$\$		300,000		300,000	300,000	60.0%	180,000
1	09	03	04	16		AWARD: Ph 3 - I&C/PS Electr Branch Circuit Fdr	11-Aug-08	11-Aug-08	SL_AWFY2	\$\$		650,000		650,000	650,000	60.0%	390,000
1	09	03	04	16		Start: Ph 2 - I&C/PS Elect Branch Circuit Fdr	20-May-08	30-Sep-08	SA_MSSY2	\$\$		300,000		300,000	300,000	60.0%	180,000
1	09	03	04	16		Start: Ph 3 - I&C/PS Elect Branch Circuit Fdr	1-Oct-08	9-Jan-09	SA_MSSY2	\$\$		650,000		650,000	650,000	60.0%	390,000
1	09	03	05			Research Yard					-	96,227	-	98,445	98,445		9,844
1	09	03	05	02		RY - Site Construction					-	44,891	-	44,891	44,891		4,489
1	09	03	05	02		Trade - RSY Site Construction	1-Feb-08	9-May-08	SL_GCFX2	\$\$		44,891		44,891	44,891	10.0%	4,489
1	09	03	05	20		RY - Project Close Out					-	51,337	-	53,554	53,554		5,355

LCLS Estimate to Complete

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WBS Level						LCLB Description - New Rates	Early Start	Early Finish	Res Code	Units	Work Rem. Bud. Qty		Work Rem. Full Burd and Escldd Cost			Contingency %	Contingency \$
2	3	4	5	6	Hours						\$	Labor	M&S	Total			
1	09	03	05	20		Start: Third Party Testing - Beam Path	1-Feb-08	30-Sep-08	SL_MSSF2	\$\$		51,337		53,554	53,554	10.0%	5,355
1	09	03	06			Pre-Purchase Equipment for Beam Path					-	143,225	-	143,225	143,225		14,323
1	09	03	06	11		PPE - Pre-Purchase Equipment					-	143,225	-	143,225	143,225		14,323
1	09	03	06	11		Trade - Pre-Purchase Equipment	1-Feb-08	31-Jul-08	SL_GCFX2	\$\$		143,225		143,225	143,225	10.0%	14,323
1	09	03	07			SITWORK, Earthwork, Site Utilities, & Survey					-	2,336,909	-	2,339,476	2,339,476		308,948
1	09	03	07	01		SW - General Requirements					-	194,743	-	194,743	194,743		19,474
1	09	03	07	01		Trade - SW General Requirements	1-Feb-08	31-Jul-08	SL_GCFX2	\$\$		194,743		194,743	194,743	10.0%	19,474
1	09	03	07	02		SW - Earthwork, Site Utilities & Survey					-	2,142,166	-	2,144,733	2,144,733		289,473
1	09	03	07	02		CF Beam Path Construction Support	1-Feb-08	30-Sep-09	SL_MSSY2	\$\$		142,500		142,500	142,500	10.0%	14,250
1	09	03	07	02		Data Switches Materials & Supplies	1-Feb-08	28-Mar-08	SL_MSEG2	\$\$		23,984		26,184	26,184	10.0%	2,618
1	09	03	07	02		Security Services during Turner Construction	1-Feb-08	29-Aug-08	SL_MSPF2	\$\$		8,500		8,867	8,867	10.0%	887
1	09	03	07	02		Trade - SW Site Construction	1-Feb-08	31-Jul-08	SL_GCFX2	\$\$		314,789		314,789	314,789	10.0%	31,479
1	09	03	07	02		FCO Funding & COR 025, 169 & 184	3-Apr-08	22-Aug-08	SL_GCFX2	\$\$		902,393		902,393	902,393	10.0%	90,239
1	09	03	07	02		Fire Protection - Hazard Analysis	2-Oct-08	26-Nov-08	SL_GCFX2	\$\$		600,000		600,000	600,000	10.0%	60,000
1	09	03	07	02		ICD for PPS	27-May-08	12-Nov-08	SL_MSSY2	\$\$		150,000		150,000	150,000	60.0%	90,000
1	09	03	08			Beam Transport Hall (BTH)					-	80,373	-	80,373	80,373		8,037
1	09	03	08	15		BTH - Mechanical					-	61,754	-	61,754	61,754		6,175
1	09	03	08	15		Trade - BTH Mechanical	1-Feb-08	8-Aug-08	SL_GCFX2	\$\$		61,754		61,754	61,754	10.0%	6,175
1	09	03	08	16		BTH - Electrical					-	-	-	-	-		0
1	09	03	08	16		Trade - BTH Electrical	1-Feb-08	19-Feb-08	SL_GCFX2	\$\$		-		-	-	10.0%	0
1	09	03	08	17		BTH - Others (include Div 4, and 6 through 14)					-	18,619	-	18,619	18,619		1,862
1	09	03	08	17		Trade - BTH Others	1-Feb-08	7-Mar-08	SL_GCFX2	\$\$		18,619		18,619	18,619	10.0%	1,862
1	09	03	09			Front End Enclosure (FEE)					-	373,736	-	373,736	373,736		37,374
1	09	03	09	15		FEE - Mechanical					-	97,935	-	97,935	97,935		9,794
1	09	03	09	15		Trade - FEE Mechanical	1-Feb-08	8-Aug-08	SL_GCFX2	\$\$		97,935		97,935	97,935	10.0%	9,794
1	09	03	09	16		FEE - Electrical					-	104,095	-	104,095	104,095		10,409
1	09	03	09	16		Trade - FEE Electrical	1-Feb-08	4-Apr-08	SL_GCFX2	\$\$		104,095		104,095	104,095	10.0%	10,409
1	09	03	09	17		FEE - Others (include Div 4, and 6 through 14)					-	171,706	-	171,706	171,706		17,171
1	09	03	09	17		Trade - FEE Others	1-Feb-08	8-Aug-08	SL_GCFX2	\$\$		171,706		171,706	171,706	10.0%	17,171
1	09	03	10			Electron Beam Dump (EBD)					-	334,105	-	334,105	334,105		33,411
1	09	03	10	05		EBD - Metals					-	154,928	-	154,928	154,928		15,493
1	09	03	10	05		Trade - EBD Metals	1-Feb-08	8-Aug-08	SL_GCFX2	\$\$		154,928		154,928	154,928	10.0%	15,493
1	09	03	10	15		EBD - Mechanical					-	105,895	-	105,895	105,895		10,589
1	09	03	10	15		Trade - EBD Mechanical	1-Feb-08	8-Aug-08	SL_GCFX2	\$\$		105,895		105,895	105,895	10.0%	10,589
1	09	03	10	16		EBD - Electrical					-	73,283	-	73,283	73,283		7,328
1	09	03	10	16		Trade - EBD Electrical	1-Feb-08	8-Aug-08	SL_GCFX2	\$\$		73,283		73,283	73,283	10.0%	7,328
1	09	03	11			Near Experimental Hall (NEH)					-	1,161,144	-	1,168,920	1,168,920		135,670
1	09	03	11	03		NEH - Concrete					-	60,397	-	60,397	60,397		6,040
1	09	03	11	03		Trade - NEH Concrete	1-Feb-08	8-Aug-08	SL_GCFX2	\$\$		60,397		60,397	60,397	10.0%	6,040
1	09	03	11	05		NEH - Metals					-	55,250	-	55,250	55,250		5,525
1	09	03	11	05		Trade - NEH Metals	1-Feb-08	8-Aug-08	SL_GCFX2	\$\$		55,250		55,250	55,250	10.0%	5,525
1	09	03	11	15		NEH - Mechanical					-	291,289	-	291,289	291,289		29,129
1	09	03	11	15		Trade - NEH Mechanical	1-Feb-08	8-Aug-08	SL_GCFX2	\$\$		291,289		291,289	291,289	10.0%	29,129
1	09	03	11	16		NEH - Electrical					-	127,546	-	127,546	127,546		12,755
1	09	03	11	16		Trade - NEH Electrical	1-Feb-08	8-Aug-08	SL_GCFX2	\$\$		127,546		127,546	127,546	10.0%	12,755
1	09	03	11	17		NEH - Others (include Div 4, and 6 through 14)					-	446,662	-	446,662	446,662		44,666
1	09	03	11	17		Trade - NEH Others	1-Feb-08	8-Aug-08	SL_GCFX2	\$\$		446,662		446,662	446,662	10.0%	44,666
1	09	03	11	20		NEH - Project Close Out					-	180,000	-	187,776	187,776		37,555
1	09	03	11	20		AWARD: NEH Furnishing	24-Mar-08	24-Mar-08	SL_AWFY2	\$\$		187,200		187,200	187,200	20.0%	37,440

WBS Level						LCLB Description - New Rates	Early Start	Early Finish	Res Code	Units	Work Rem. Bud. Qty		Work Rem. Full Burd and Escldtd Cost			Contingency %	Contingency \$
1	2	3	4	5	6						Hours	\$	Labor	M&S	Total		
1	09	03	11	20		NEH Furnishing	20-May-08	16-Jul-08	SA_MSSF2	\$\$		180,000		187,776	187,776	20.0%	37,555
1	09	03	12			Undulator Hall (UH)					-	987,037	-	987,037	987,037		98,704
1	09	03	12	01		UH - Site Preparation/General Requirements					-	27,052	-	27,052	27,052		2,705
1	09	03	12	01		Trade - UH General Requirements	1-Feb-08	8-Aug-08	SL_GCFX2	\$\$		27,052		27,052	27,052	10.0%	2,705
1	09	03	12	15		UH Mechanical					-	145,405	-	145,405	145,405		14,541
1	09	03	12	15		Trade - UH Mechanical	1-Feb-08	17-Apr-08	SL_GCFX2	\$\$		145,405		145,405	145,405	10.0%	14,541
1	09	03	12	16		UH - Electrical					-	478,399	-	478,399	478,399		47,840
1	09	03	12	16		Trade - UH Electrical	1-Feb-08	8-Aug-08	SL_GCFX2	\$\$		478,399		478,399	478,399	10.0%	47,840
1	09	03	12	17		UH - Others (include Div 4, and 6 through 14)					-	105,968	-	105,968	105,968		10,597
1	09	03	12	17		Trade - UH Others	1-Feb-08	8-Aug-08	SL_GCFX2	\$\$		105,968		105,968	105,968	10.0%	10,597
1	09	03	12	19		UH Tunnel Construction					-	230,213	-	230,213	230,213		23,021
1	09	03	12	19		Trade - UH Tunnel Construction	1-Feb-08	12-May-08	SL_GCFX2	\$\$		230,213		230,213	230,213	10.0%	23,021
1	09	03	13			X-Ray Transport & Diagnostic (XRTD)					-	1,948,193	-	1,948,193	1,948,193		194,819
1	09	03	13	15		XRTD - Mechanical					-	311,168	-	311,168	311,168		31,117
1	09	03	13	15		Trade - XRTD Mechanical	1-Feb-08	22-Aug-08	SL_GCFX2	\$\$		311,168		311,168	311,168	10.0%	31,117
1	09	03	13	16		XRTD - Electrical					-	435,863	-	435,863	435,863		43,586
1	09	03	13	16		Trade - XRTD Electrical	1-Feb-08	22-Aug-08	SL_GCFX2	\$\$		435,863		435,863	435,863	10.0%	43,586
1	09	03	13	19		XRTD - Tunnel Construction					-	1,201,162	-	1,201,162	1,201,162		120,116
1	09	03	13	19		Trade - XRTD Tunnel Construction	1-Feb-08	8-Aug-08	SL_GCFX2	\$\$		1,201,162		1,201,162	1,201,162	10.0%	120,116
1	09	03	14			Far Experimental Hall (FEH)					-	4,974,814	-	4,974,814	4,974,814		1,788,347
1	09	03	14	02		FEH - Site Construction					-	2,581,732	-	2,581,732	2,581,732		1,549,039
1	09	03	14	02		AWARD: FEH Hutches - Construction	8-Jan-09	8-Jan-09	SL_AWFY2	\$\$		2,581,732		2,581,732	2,581,732	60.0%	1,549,039
1	09	03	14	02		Start FEH Hutches Construction	15-Jan-09	1-Jul-09	SA_MSSY2	\$\$		2,581,732		2,581,732	2,581,732	60.0%	1,549,039
1	09	03	14	15		FEH - Mechanical					-	971,083	-	971,083	971,083		97,108
1	09	03	14	15		Trade - FEH Mechanical	1-Feb-08	22-Aug-08	SL_GCFX2	\$\$		971,083		971,083	971,083	10.0%	97,108
1	09	03	14	16		FEH - Electrical					-	376,577	-	376,577	376,577		37,658
1	09	03	14	16		Trade - FEH Electrical	1-Feb-08	22-Aug-08	SL_GCFX2	\$\$		376,577		376,577	376,577	10.0%	37,658
1	09	03	14	17		FEH - Others (include Div 4, and 6 through 14)					-	89,904	-	89,904	89,904		8,990
1	09	03	14	17		Trade - FEH Others	9-Apr-08	8-Aug-08	SL_GCFX2	\$\$		89,904		89,904	89,904	10.0%	8,990
1	09	03	14	18		FEH - Access Tunnel					-	344,364	-	344,364	344,364		34,436
1	09	03	14	18		Trade - FEH Access Tunnel	1-Feb-08	8-Aug-08	SL_GCFX2	\$\$		344,364		344,364	344,364	10.0%	34,436
1	09	03	14	19		FEH - Tunnel Construction					-	611,154	-	611,154	611,154		61,115
1	09	03	14	19		Trade - FEH Tunnel Construction	1-Feb-08	12-Aug-08	SL_GCFX2	\$\$		611,154		611,154	611,154	10.0%	61,115
1	09	03	15			BTH Service Buildings 2.1, 2.2, and 2.3 (SB BTH)					-	408,012	-	408,012	408,012		40,801
1	09	03	15	05		SB BTH - Metals					-	65,564	-	65,564	65,564		6,556
1	09	03	15	05		Trade - SB BTH Metals	1-Feb-08	7-Apr-08	SL_GCFX2	\$\$		65,564		65,564	65,564	10.0%	6,556
1	09	03	15	15		SB BTH - Mechanical					-	268,790	-	268,790	268,790		26,879
1	09	03	15	15		Trade - SB BTH Mechanical	1-Feb-08	7-Apr-08	SL_GCFX2	\$\$		268,790		268,790	268,790	10.0%	26,879
1	09	03	15	16		SB BTH - Electrical					-	73,658	-	73,658	73,658		7,366
1	09	03	15	16		Trade - SB BTH Electrical	1-Feb-08	17-Mar-08	SL_GCFX2	\$\$		73,658		73,658	73,658	10.0%	7,366
1	09	03	16			UH Service Building 3.1 (SB UH)					-	194,796	-	194,796	194,796		19,480
1	09	03	16	03		SB UH - Concrete					-	-	-	-	-		0
1	09	03	16	03		Trade - SB UH Concrete	1-Feb-08	29-Feb-08	SL_GCFX2	\$\$		-		-	-	10.0%	0
1	09	03	16	15		SB UH - Mechanical					-	175,362	-	175,362	175,362		17,536
1	09	03	16	15		Trade - SB UH Mechanical	1-Feb-08	7-Apr-08	SL_GCFX2	\$\$		175,362		175,362	175,362	10.0%	17,536
1	09	03	16	16		SB UH - Electrical					-	19,434	-	19,434	19,434		1,943
1	09	03	16	16		Trade - SB UH Electrical	1-Feb-08	21-Mar-08	SL_GCFX2	\$\$		19,434		19,434	19,434	10.0%	1,943
1	09	03	17			FEH Access Tunnel Service Yard (SY FEH)					-	655,929	-	655,929	655,929		65,593
1	09	03	17	03		SY FEH - Concrete					-	500,000	-	500,000	500,000		50,000

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WBS Level						LCLB Description - New Rates	Early Start	Early Finish	Res Code	Units	Work Rem. Bud. Qty		Work Rem. Full Burd and Escltd Cost			Contingency %	Contingency \$
2	3	4	5	6	Hours						\$\$	Labor	M&S	Total			
1	09	03	17	03		Trade - SY FEH Concrete	20-Mar-08	16-May-08	SL_GCFX2	\$\$		500,000		500,000	500,000	10.0%	50,000
1	09	03	17	16		SY FEH - Electrical					-	155,929	-	155,929	155,929		15,593
1	09	03	17	16		Trade - SY FEH Electrical	1-Feb-08	6-Jun-08	SL_GCFX2	\$\$		155,929		155,929	155,929	10.0%	15,593
1	09	03	18			Central Utility Plant (CUP)					-	801,594	-	801,594	801,594		212,419
1	09	03	18	02		CUP - Site Construction					-	120,520	-	120,520	120,520		72,312
1	09	03	18	02		AWARD: Gas Line - PG&E Construction	1-Feb-08	1-Feb-08	SL_AWFY2	\$\$		120,520		120,520	120,520	50.0%	60,260
1	09	03	18	02		Start : Gas Line - PG&E Construction	11-Feb-08	27-Mar-08	SA_MSSY2	\$\$		120,520		120,520	120,520	60.0%	72,312
1	09	03	18	15		CUP - Mechanical					-	348,064	-	348,064	348,064		34,806
1	09	03	18	15		Trade - CUP Mechanical	1-Feb-08	8-Aug-08	SL_GCFX2	\$\$		348,064		348,064	348,064	10.0%	34,806
1	09	03	18	16		CUP - Electrical					-	309,040	-	309,040	309,040		102,904
1	09	03	18	16		Start:Construction: S522 Substation	1-Feb-08	31-Mar-08	SL_MSSY2	\$\$		26,678		26,678	26,678	10.0%	2,668
1	09	03	18	16		FCOs: Construction: S522 Substation	1-Feb-08	31-Mar-08	SL_MSSY2	\$\$		30,000		30,000	30,000	10.0%	3,000
1	09	03	18	16		Temporary Power to FEH Substation	1-May-08	30-Sep-08	SL_MSSY2	\$\$		180,000		180,000	180,000	50.0%	90,000
1	09	03	18	16		Trade - CUP Electrical	1-Feb-08	18-Apr-08	SL_GCFX2	\$\$		72,362		72,362	72,362	10.0%	7,236
1	09	03	18	17		CUP - Others (include Div 4, and 6 through 14)					-	23,970	-	23,970	23,970		2,397
1	09	03	18	17		Trade - CUP Others	1-Feb-08	8-Aug-08	SL_GCFX2	\$\$		23,970		23,970	23,970	10.0%	2,397
1	09	03	19			SLAC Space Renovation for LCLS Ops					-	4,984,000	-	4,984,000	4,984,000		2,990,400
1	09	03	19	01		ED&I of SLAC Space Renovations for LCLS Ops					-	740,475	-	740,475	740,475		444,285
1	09	03	19	01		Independent Cost Estimate for B028 Ph 2	22-Sep-09	12-Oct-09	SL_MSPY2	\$\$		14,000		14,000	14,000	60.0%	8,400
1	09	03	19	01		Independent Cost Estimate for CEH Bldg	22-Sep-09	12-Oct-09	SL_MSPY2	\$\$		26,000		26,000	26,000	60.0%	15,600
1	09	03	19	01		SLAC Engineering Support - CEH Bldg & B028	2-Oct-09	16-Jul-10	SL_MSPY2	\$\$		154,740		154,740	154,740	60.0%	92,844
1	09	03	19	01		AWARD: A&E Design Contract for CEH Building	6-Mar-09	6-Mar-09	SL_AWFY2	\$\$		258,000		258,000	258,000	60.0%	154,800
1	09	03	19	01		Start: A&E Design Contract for CEH Building	6-Apr-09	21-Sep-09	SA_MSSY2	\$\$		258,000		258,000	258,000	60.0%	154,800
1	09	03	19	01		AWARD: A&E Design Contract for B028 Ph 2	6-Mar-09	6-Mar-09	SL_AWFY2	\$\$		135,000		135,000	135,000	60.0%	81,000
1	09	03	19	01		Start: A&E Design Contract for B028 Ph 2	6-Apr-09	21-Sep-09	SA_MSSY2	\$\$		135,000		135,000	135,000	60.0%	81,000
1	09	03	19	01		SLAC UTR/PM Support - CEH Bldg & B028	2-Oct-09	16-Jul-10	SL_MSPY2	\$\$		124,925		124,925	124,925	60.0%	74,955
1	09	03	19	01		SLAC - ES&H Support - CEH Bldg & B028	2-Oct-09	26-Nov-09	SL_MSPY2	\$\$		27,810		27,810	27,810	60.0%	16,686
1	09	03	19	02		Construction of SLAC Space Renovation for LCLS					-	4,243,525	-	4,243,525	4,243,525		2,546,115
1	09	03	19	02		AWARD: Construction for B028 Phase 2 Renovation	27-Nov-09	27-Nov-09	SL_AWARD	\$\$		1,664,000		1,664,000	1,664,000	60.0%	998,400
1	09	03	19	02		Start: Construction for B028 Phase 2 Renovation	29-Dec-09	15-Jun-10	SA_MSSY2	\$\$		1,664,000		1,664,000	1,664,000	60.0%	998,400
1	09	03	19	02		AWARD: Construction for CEH Building Remodel	27-Nov-09	27-Nov-09	SL_AWARD	\$\$		2,579,525		2,579,525	2,579,525	60.0%	1,547,715
1	09	03	19	02		Start: CEH Building Remodel Construction	29-Dec-09	15-Jun-10	SA_MSSY2	\$\$		2,579,525		2,579,525	2,579,525	60.0%	1,547,715
1	09	03	20			Project Close Out - Conventional Facilities System					1,030	1,498,800	96,593	1,501,686	1,598,278		429,600
1	09	03	20	01		Non-Turner Trade Project Close Out					1,030	66,800	96,593	69,686	166,278		0
1	09	03	20	01		CF Project Close Out - Non Turner Trades	30-Jul-09	16-Jul-10	SL_SEE2	Hrs	110		12,718		12,718	0.0%	0
1	09	03	20	01		CF Project Close Out - Non Turner Trades	30-Jul-09	16-Jul-10	SL_MSSF2	\$\$		16,800		17,526	17,526	0.0%	0
1	09	03	20	01		CF Project Close Out - Non Turner Trades	30-Jul-09	16-Jul-10	SL_MSPF2	\$\$		50,000		52,160	52,160	0.0%	0
1	09	03	20	01		CF Project Close Out - Non Turner Trades	30-Jul-09	16-Jul-10	SL_MDD2	Hrs	920		83,875		83,875	0.0%	0
1	09	03	20	02		Turner Trade Project Close Out					-	1,432,000	-	1,432,000	1,432,000		429,600
1	09	03	20	02		Turner Trades Project Close-Out - FY08	25-Aug-08	30-Sep-08	SL_GCFX2	\$\$		50,000		50,000	50,000	30.0%	15,000
1	09	03	20	02		Turner Trades Project Close-Out - FY09	1-Oct-08	4-Dec-08	SL_GCFX2	\$\$		1,382,000		1,382,000	1,382,000	30.0%	414,600
2						LCLS PROJECT - R&D, SPARES, COMMISSIONING					174,391	8,580,923	21,093,299	9,609,967	30,703,266		0
2	01					LCLS PROJECT MGMT, PLANNING & ADMN (OPC)					59,197	2,669,973	7,304,494	2,929,659	10,234,154		0
2	01	01				LCLS Commissioning Mgmt & Physics Support					18,751	60,568	2,223,757	66,581	2,290,338		0
2	01	01	05			X-Ray Transport Physics					3,088	-	466,112	-	466,112		0
2	01	01	05			X-Ray Transport Physicists FY07-08	1-Feb-08	30-Sep-08	SL_PHPU2	Hrs	1,035		150,716		150,716		
2	01	01	05			X-Ray Transport Physicists FY09	1-Oct-08	30-Sep-09	SL_PHPU2	Hrs	1,307		197,914		197,914		
2	01	01	05			X-Ray Transport Physicists FY10	1-Oct-09	29-Jul-10	SL_PHPU2	Hrs	746		117,482		117,482		
2	01	01	06			X-Ray Physics Commissioning					3,088	-	276,885	-	276,885		0

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WBS Level						LCLB Description - New Rates	Early Start	Early Finish	Res Code	Units	Work Rem. Bud. Qty		Work Rem. Full Burd and Escltd Cost			Contingency %	Contingency \$
2	3	4	5	6	Hours						\$	Labor	M&S	Total			
2	01	01	06			X-Ray Endstation Physicists FY07-08	1-Feb-08	30-Sep-08	SL_PHS2	Hrs	1,035		89,530		89,530		
2	01	01	06			X-Ray Endstation Physicists FY09	1-Oct-08	30-Sep-09	SL_PHS2	Hrs	1,307		117,567		117,567		
2	01	01	06			X-Ray Endstation Physicists FY10	1-Oct-09	29-Jul-10	SL_PHS2	Hrs	746		69,788		69,788		
2	01	01	11			Global Controls OPC					-	60,568	-	66,581	66,581		0
2	01	01	11	15		Controls S/W Applications LOE					-	60,568	-	66,581	66,581		0
2	01	01	11	15		LCLS Share of Network Cost	1-Feb-08	25-Apr-08	SL_MSEG2	\$		60,568		66,581	66,581		
2	01	01	12			E-Beam Systems Commissioning Management					3,429	-	417,222	-	417,222		0
2	01	01	12			L2/BC2/L3 Commissioning Management	1-Feb-08	29-Aug-08	SL_ME2	Hrs	839		99,096		99,096		
2	01	01	12			LTU/Und/Dump Commissioning Management	2-Oct-08	2-Jul-09	SL_ME2	Hrs	2,590		318,127		318,127		
2	01	01	13			E-Beam Systems Physics Support					7,766	-	879,120	-	879,120		0
2	01	01	13			L2/BC2/L3 Physicist Commissioning Support	1-Feb-08	29-Aug-08	SL_PHSS2	Hrs	2,262		249,000		249,000		
2	01	01	13			LTU/Und/Dump Physicist Commissioning Support	2-Oct-08	2-Jul-09	SL_PHSS2	Hrs	5,504		630,120		630,120		
2	01	01	14			Laser Commissioning Management					1,380	-	184,418	-	184,418		0
2	01	01	14			Laser Group Commissioning Support I	1-Feb-08	30-Apr-08	SL_OE2	Hrs	1,380		184,418		184,418		
2	01	03				Project Mgmt, Planning and Admn - M&S (OPC)					40,446	2,609,405	5,080,737	2,863,079	7,943,815		0
2	01	03	01			SLAC Project Office - General					31,551	-	4,068,495	-	4,068,495		0
2	01	03	01			E-Beam Systems Deputy OPC - FY08	1-Feb-08	30-Sep-08	SL_TSM2	Hrs	626		78,639		78,639		
2	01	03	01			E-Beam Systems Deputy OPC - FY09	1-Oct-08	30-Sep-09	SL_TSM2	Hrs	784		102,390		102,390		
2	01	03	01			E-Beam Systems Deputy OPC - FY10	1-Oct-09	29-Jul-10	SL_TSM2	Hrs	671		91,138		91,138		
2	01	03	01			Administrative Support - FY08	1-Feb-08	30-Sep-08	SL_ADMN2	Hrs	3,652		253,368		253,368		
2	01	03	01			Administrative Support - FY09	1-Oct-08	30-Sep-09	SL_ADMN2	Hrs	3,486		251,500		251,500		
2	01	03	01			Administrative Support - FY10	1-Oct-09	29-Jul-10	SL_ADMN2	Hrs	2,237		167,846		167,846		
2	01	03	01			Budget/Finance Officer - FY08	1-Feb-08	30-Sep-08	SL_FA2	Hrs	626		66,574		66,574		
2	01	03	01			Budget/Finance Officer - FY09	1-Oct-08	30-Sep-09	SL_FA2	Hrs	784		86,681		86,681		
2	01	03	01			Budget/Finance Officer - FY10	1-Oct-09	29-Jul-10	SL_FA2	Hrs	671		77,155		77,155		
2	01	03	01			Project Director - FY08	1-Feb-08	30-Sep-08	SL_PM2	Hrs	438		84,284		84,284		
2	01	03	01			Project Director- FY09	1-Oct-08	30-Sep-09	SL_PM2	Hrs	784		156,772		156,772		
2	01	03	01			Project Director- FY10	1-Oct-09	29-Jul-10	SL_PM2	Hrs	671		139,543		139,543		
2	01	03	01			Senior Project Mgrs - FY08	1-Feb-08	30-Sep-08	SL_PM2	Hrs	1,957		376,310		376,310		
2	01	03	01			Senior Project Mgrs - FY09	1-Oct-08	30-Sep-09	SL_PM2	Hrs	2,353		470,516		470,516		
2	01	03	01			Senior Project Mgrs - FY10	1-Oct-09	29-Jul-10	SL_PM2	Hrs	2,013		418,629		418,629		
2	01	03	01			E-Beam Systems Manager - FY08	1-Feb-08	30-Sep-08	SL_TSM2	Hrs	626		78,639		78,639		
2	01	03	01			E-Beam Systems Manager - FY09	1-Oct-08	30-Sep-09	SL_TSM2	Hrs	784		102,390		102,390		
2	01	03	01			E-Beam Systems Manager - FY10	1-Oct-09	29-Jul-10	SL_TSM2	Hrs	671		91,138		91,138		
2	01	03	01			Photon System Manager - FY08	1-Feb-08	30-Sep-08	SL_TSM2	Hrs	835		104,888		104,888		
2	01	03	01			Photon System Manager - FY09	1-Oct-08	30-Sep-09	SL_TSM2	Hrs	784		102,390		102,390		
2	01	03	01			Photon System Manager - FY10	1-Oct-09	29-Jul-10	SL_TSM2	Hrs	671		91,138		91,138		
2	01	03	01			Finance Administrative Support - FY08	1-Feb-08	30-Sep-08	SL_FA2	Hrs	522		55,509		55,509		
2	01	03	01			Finance Administrative Support - FY09	1-Oct-08	30-Sep-09	SL_ADMN2	Hrs	436		31,456		31,456		
2	01	03	01			Finance Administrative Support - FY10	1-Oct-09	29-Jul-10	SL_ADMN2	Hrs	560		42,018		42,018		
2	01	03	01			Physics Support - FY08	1-Feb-08	30-Sep-08	SL_PHPU2	Hrs	522		76,025		76,025		
2	01	03	01			Physics Support - FY09	1-Oct-08	30-Sep-09	SL_PHPU2	Hrs	872		132,043		132,043		
2	01	03	01			Physics Support - FY10	1-Oct-09	29-Jul-10	SL_PHPU2	Hrs	373		58,741		58,741		
2	01	03	01			Global Laser Coordination - FY08	1-Feb-08	30-Sep-08	SL_LPM2	Hrs	522		65,569		65,569		
2	01	03	01			Global Laser Coordination - FY09	1-Oct-08	30-Sep-09	SL_LPM2	Hrs	872		113,883		113,883		
2	01	03	01			Global Laser Coordination - FY10	1-Oct-09	29-Jul-10	SL_LPM2	Hrs	746		101,324		101,324		
2	01	03	02			SLAC Project Support					8,895	1,175,000	1,012,242	1,322,150	2,334,391		0
2	01	03	02			PMCS Support - Maintenance - Feb08	1-Feb-08	29-Feb-08	SL_MSPS2	\$		-		-	-		
2	01	03	02			PMCS Support - Maintenance - Mar08-Sep08	3-Mar-08	30-Sep-08	SL_MSPS2	\$		350,000		384,746	384,746		

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WBS Level						LCLB Description - New Rates	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	03	02			PMCS Support - Maintenance - FY09-CD4	1-Oct-08	29-Jul-10	SL_MSPS2	\$\$		825,000		937,404	937,404		
2	01	03	02			QA/QC Support - FY08	1-Feb-08	30-Sep-08	SL_QAO2	Hrs	522		71,715		71,715		
2	01	03	02			QA/QC Support - FY09	1-Oct-08	30-Sep-09	SL_QAO2	Hrs	87		12,427		12,427		
2	01	03	02			QA/QC Support - FY10	1-Oct-09	29-Jul-10	SL_QAO2	Hrs	75		11,142		11,142		
2	01	03	02			Computing Mgr Support - FY08	1-Feb-08	30-Sep-08	SL_CRM2	Hrs	522		71,715		71,715		
2	01	03	02			Computing Mgr Support - FY09	1-Oct-08	30-Sep-09	SL_CRM2	Hrs	575		82,134		82,134		
2	01	03	02			Computing Mgr Support - FY10	1-Oct-09	29-Jul-10	SL_CRM2	Hrs	492		73,089		73,089		
2	01	03	02			Computing Res Support - FY08	1-Feb-08	30-Sep-08	SL_CRA2	Hrs	889		55,577		55,577		
2	01	03	02			Computing Res Support - FY09	1-Oct-08	30-Sep-09	SL_CRA2	Hrs	904		58,772		58,772		
2	01	03	02			Computing Res Support - FY10	1-Oct-09	29-Jul-10	SL_CRA2	Hrs	751		50,778		50,778		
2	01	03	02			ESH Management & Coordination - FY08	1-Feb-08	30-Sep-08	SL_ESH2	Hrs	365		55,164		55,164		
2	01	03	02			Area Coordination - FY08	1-Feb-08	30-Sep-08	SL_IPM2	Hrs	841		105,553		105,553		
2	01	03	02			Area Coordination - FY09	1-Oct-08	30-Sep-09	SL_IPM2	Hrs	2,527		330,026		330,026		
2	01	03	02			Design Supervisor - FY08	1-Feb-08	30-Sep-08	SL_MDD2	Hrs	345		34,149		34,149		
2	01	03	03			Project Mgmt, Planning and Admn - M&S (OPC)					-	1,434,405	-	1,540,929	1,540,929		0
2	01	03	03			Physics Programmatic Travel	1-Feb-08	28-May-10	SL_MSTR2	\$\$		152,163		228,077	228,077		
2	01	03	03			Physics Programmatic Travel-Feb08-Sep08	1-Feb-08	30-Sep-08	SL_MSTR2	\$\$		35,280		51,690	51,690		
2	01	03	03			Pre-ops Electrical Power Usage - 2008	1-Feb-08	30-Sep-08	SL_POWB2	\$\$		386,610		386,610	386,610		
2	01	03	03			Pre-ops Electrical Power Usage - 2009	1-Oct-08	30-Sep-09	SL_POWB2	\$\$		500,000		500,000	500,000		
2	01	03	03			Pre-ops Electrical Power Usage - 2010	1-Oct-09	28-Jul-10	SL_POWB2	\$\$		250,000		250,000	250,000		
2	01	03	03			SLAC Project Office Consumables- FY08	1-Feb-08	30-Sep-08	SL_MSCS2	\$\$		19,728		21,686	21,686		
2	01	03	03			SLAC Project Office Consumables- FY09	1-Oct-08	30-Sep-09	SL_MSCS2	\$\$		32,160		36,166	36,166		
2	01	03	03			SLAC Project Office Consumables- FY10	1-Oct-09	29-Jul-10	SL_MSCS2	\$\$		32,160		36,998	36,998		
2	01	03	03			Education/Outreach M&S - FY07-08	1-Feb-08	30-Sep-08	SL_MSCS2	\$\$		5,864		6,446	6,446		
2	01	03	03			Education/Outreach M&S - FY09	1-Oct-08	30-Sep-09	SL_MSCS2	\$\$		10,000		11,246	11,246		
2	01	03	03			Education/Outreach M&S - FY10	1-Oct-09	29-Jul-10	SL_MSCS2	\$\$		10,441		12,012	12,012		
2	02					INJECTOR SYSTEM (OPC)					3,371	403,468	378,048	453,364	831,412		0
2	02	02				Injector Controls Subsystem					-	14,200	-	15,610	15,610		0
2	02	02	04			Power Conv (beamline pwr supp) Spares					-	14,200	-	15,610	15,610		0
2	02	02	04			Procure 12 AMP MCOR Modules (2)-Spares	1-Feb-08	22-Jul-08	SL_MSEG2	\$\$		3,600		3,957	3,957		
2	02	02	04			Procure 30 AMP MCOR Modules (1)-Spares	1-Feb-08	22-Jul-08	SL_MSEG2	\$\$		2,100		2,308	2,308		
2	02	02	04			Procure 15KW Power Supply-Spares	1-Feb-08	22-Jul-08	SL_MSEG2	\$\$		8,500		9,344	9,344		
2	02	03				Injector Lasers					-	2,000	-	2,249	2,249		0
2	02	03	14			LSR HTR - Beam Conditioning Optics (Laser Bay)					-	2,000	-	2,249	2,249		0
2	02	03	14			Procure Laser Heater Optics Spares	23-Feb-09	23-Mar-09	SL_MSEG2	\$\$		2,000		2,249	2,249		
2	02	08				Injector System Emittance Enhancement					3,371	387,268	378,048	435,505	813,553		0
2	02	08	01			Heater Integration					663	-	74,301	-	74,301		0
2	02	08	01			Heater Area Installation Oversight	1-Feb-08	28-Mar-08	SL_ME2	Hrs	-		-	-	-		
2	02	08	01			Heater Area Installation Oversight	1-Feb-08	28-Mar-08	SL_MDD2	Hrs	-		-	-	-		
2	02	08	01			Heater Area Installation Oversight-FY09	2-Oct-08	1-Dec-08	SL_ME2	Hrs	29		3,562		3,562		
2	02	08	01			Heater Area Installation Oversight-FY09	2-Oct-08	1-Dec-08	SL_MDD2	Hrs	14		1,442		1,442		
2	02	08	01			Heater & Optics Integration	1-Feb-08	23-May-08	SL_ME2	Hrs	40		4,724		4,724		
2	02	08	01			Heater & Optics Integration	1-Feb-08	23-May-08	SL_MDD2	Hrs	80		7,922		7,922		
2	02	08	01			Heater & Optics Integration-FY09	2-Oct-08	26-Jan-09	SL_ME2	Hrs	100		12,283		12,283		
2	02	08	01			Heater & Optics Integration-FY09	2-Oct-08	26-Jan-09	SL_MDD2	Hrs	200		20,597		20,597		
2	02	08	01			Heater & Optics Fabrication Oversight	27-Jan-09	27-Mar-09	SL_ME2	Hrs	80		9,826		9,826		
2	02	08	01			Heater & Optics Installation Oversight	28-Apr-09	24-Jun-09	SL_ME2	Hrs	80		9,826		9,826		
2	02	08	01			Heater & Optics Installation Oversight	28-Apr-09	24-Jun-09	SL_MDD2	Hrs	40		4,119		4,119		
2	02	08	02			Heater Laser & Optics					644	86,168	79,467	96,901	176,368		0

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WBS Level						LCLB Description - New Rates	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	02	08	02			Design Transport optics and diagnostics	1-Feb-08	22-Jul-08	SL_PHS2	Hrs	1		104		104			
2	02	08	02			Design Transport optics and diagnostics	1-Feb-08	22-Jul-08	SL_OE2	Hrs	33		4,438		4,438			
2	02	08	02			Design Transport optics and diagnostics	1-Feb-08	22-Jul-08	SL_MDD2	Hrs	34		3,327		3,327			
2	02	08	02			Design Transport optics and diagnostics	10-Mar-08	17-Jul-08	SL_PHS2	Hrs	27		2,335		2,335			
2	02	08	02			Design Transport optics and diagnostics	10-Mar-08	17-Jul-08	SL_OE2	Hrs	153		20,451		20,451			
2	02	08	02			Design Transport optics and diagnostics	10-Mar-08	17-Jul-08	SL_MDD2	Hrs	156		15,447		15,447			
2	02	08	02			Procure transport components and diagnostics	2-Oct-08	20-Feb-09	SL_MSEG2	\$\$		81,168		91,278		91,278		
2	02	08	02			Fabricate Transport optics and diagnostics	23-Feb-09	23-Feb-09	SL_MSC2	\$\$		5,000		5,623		5,623		
2	02	08	02			Install transport components and diagnostics	30-Mar-09	10-Jun-09	SL_OE2	Hrs	240		33,364		33,364			
2	02	08	03			Heater Magnets					664	137,000	68,995	154,064	223,060		0	
2	02	08	03	01		Heater Dipoles					-	12,000	-	13,495	13,495		0	
2	02	08	03	01		Fabricate Support	2-Oct-08	13-Oct-08	SL_MSEQ2	\$\$		12,000		13,495		13,495		
2	02	08	03	01		Perform QC/MM on Chicane Dipole Assm	1-Feb-08	29-Feb-08	SL_MTAT2	Hrs	-		-		-			
2	02	08	03	02		Heater Undulator					664	125,000	68,995	140,570	209,565		0	
2	02	08	03	02		Define Undulator specifications	1-Feb-08	29-Feb-08	SL_PHS2	Hrs	-		-		-			
2	02	08	03	02		Design Undulator	8-Feb-08	7-Mar-08	SL_PHS2	Hrs	8		692		692			
2	02	08	03	02		Design Undulator	8-Feb-08	7-Mar-08	SL_ME2	Hrs	16		1,890		1,890			
2	02	08	03	02		Design Undulator	8-Feb-08	7-Mar-08	SL_MDD2	Hrs	32		3,169		3,169			
2	02	08	03	02		Design Undulator-FY08	3-Mar-08	9-Apr-08	SL_PHS2	Hrs	40		3,460		3,460			
2	02	08	03	02		Design Undulator-FY08	3-Mar-08	9-Apr-08	SL_ME2	Hrs	80		9,448		9,448			
2	02	08	03	02		Design Undulator-FY08	3-Mar-08	9-Apr-08	SL_MDD2	Hrs	160		15,844		15,844			
2	02	08	03	02		Prep Bid Pak - Undulator	2-Oct-08	20-Oct-08	SL_ME2	Hrs	10		1,228		1,228			
2	02	08	03	02		Prep Bid Pak - Undulator-FY09	2-Oct-08	20-Oct-08	SL_ME2	Hrs	10		1,228		1,228			
2	02	08	03	02		Design Support	10-Apr-08	30-Apr-08	SL_ME2	Hrs	20		2,362		2,362			
2	02	08	03	02		Design Support	10-Apr-08	30-Apr-08	SL_MDD2	Hrs	60		5,941		5,941			
2	02	08	03	02		Design Support-FY08	10-Apr-08	30-Apr-08	SL_ME2	Hrs	20		2,362		2,362			
2	02	08	03	02		Design Support-FY08	10-Apr-08	30-Apr-08	SL_MDD2	Hrs	60		5,941		5,941			
2	02	08	03	02		Evaluate Vendor Proposals - Undulator	2-Oct-08	22-Oct-08	SL_PHS2	Hrs	8		720		720			
2	02	08	03	02		Fabricate Support	2-Oct-08	21-Oct-08	SA_MSEG2	\$\$		25,000		28,114		28,114		
2	02	08	03	02		AWARD: Undulator	23-Oct-08	23-Oct-08	SL_AWARD	\$\$		125,000		125,000		125,000		
2	02	08	03	02		Vendor Fab - Undulator	24-Oct-08	14-Jan-09	SL_ME2	Hrs	20		2,457		2,457			
2	02	08	03	02		RCV: Undulator	15-Jan-09	15-Jan-09	SA_MSEG2	\$\$		100,000		112,456		112,456		
2	02	08	03	02		Perform Magnetic Measurements and QA	15-Jan-09	11-Feb-09	SL_PHS2	Hrs	20		1,799		1,799			
2	02	08	03	02		Perform Magnetic Measurements and QA	15-Jan-09	11-Feb-09	SL_MFAT2	Hrs	80		8,480		8,480			
2	02	08	03	02		Perform Magnetic Measurements and QA	15-Jan-09	11-Feb-09	SL_MES2	Hrs	20		1,975		1,975			
2	02	08	04			Heater Vacuum					400	45,000	43,462	50,605	94,067		0	
2	02	08	04			Vacuum Integration Support	10-Mar-08	14-May-08	SL_ME2	Hrs	60		7,086		7,086			
2	02	08	04			Laser Heater Chamber Engineering	10-Mar-08	5-May-08	SL_ME2	Hrs	120		14,173		14,173			
2	02	08	04			Laser Heater Chamber Design	10-Mar-08	5-May-08	SL_MDD2	Hrs	160		15,844		15,844			
2	02	08	04			Fabricate Heater Special Chambers	2-Oct-08	31-Dec-08	SL_MSEG2	\$\$		35,000		39,360		39,360		
2	02	08	04			Vacuum Process Heater Special Chambers	2-Jan-09	28-Jan-09	SL_MFAT2	Hrs	60		6,360		6,360			
2	02	08	04			Fabricate Heater Vacuum Supports	2-Oct-08	29-Jan-09	SL_MSEG2	\$\$		10,000		11,246		11,246		
2	02	08	05			Heater Diagnostics					296	20,000	31,507	22,491	53,998		0	
2	02	08	05			Design OTRH1/OTRH2 External Optics	10-Mar-08	5-May-08	SL_ME2	Hrs	80		9,448		9,448			
2	02	08	05			Design OTRH1/OTRH2 External Optics	10-Mar-08	5-May-08	SL_MDD2	Hrs	120		11,883		11,883			
2	02	08	05			Fabricate OTRH1/OTRH2 External Optics	2-Oct-08	23-Oct-08	SL_MSEG2	\$\$		20,000		22,491		22,491		
2	02	08	05			Assemble OTRH1/OTRH2 External Optics (2)	24-Oct-08	18-Nov-08	SL_MFAT2	Hrs	24		2,544		2,544			
2	02	08	05			Assemble OTRH1/OTRH2 Beamline Assy (2)	19-Nov-08	26-Dec-08	SL_MFAT2	Hrs	32		3,392		3,392			
2	02	08	05			Vac Process OTRH1/OTRH2 Beamline Assy (2)	29-Dec-08	26-Jan-09	SL_MFAT2	Hrs	40		4,240		4,240			

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WBS Level						LCLB Description - New Rates	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	02	08	06			Heater Install & Align					172	-	17,927	-	17,927	0	
2	02	08	06			Install Enclosures, Tubes & Supports	11-Jun-09	24-Jun-09	SL_MFAT2	Hrs	20		2,120		2,120		
2	02	08	06			Install Magnet Supports	25-Jun-09	9-Jul-09	SL_MFTM2	Hrs	24		2,239		2,239		
2	02	08	06			Install Photon Diagnostics Supports	10-Jul-09	16-Jul-09	SL_MFAT2	Hrs	8		848		848		
2	02	08	06			Install Beampipe	17-Jul-09	30-Jul-09	SL_MFAT2	Hrs	40		4,240		4,240		
2	02	08	06			Install Undulator	31-Jul-09	20-Aug-09	SL_MFAT2	Hrs	80		8,480		8,480		
2	02	08	07			Laser Heater Controls					532	99,100	62,389	111,444	173,833	0	
2	02	08	07			RCV: 4 Camera	30-Oct-08	30-Oct-08	SL_MSEG2	\$\$		12,000		13,495	13,495		
2	02	08	07			RCV: 4 PMC Interface and Cables	30-Oct-08	30-Oct-08	SL_MSEG2	\$\$		10,400		11,695	11,695		
2	02	08	07			RCV: 4 Interrack Cables	30-Oct-08	30-Oct-08	SL_MSEG2	\$\$		500		562	562		
2	02	08	07			RCV: 1 Motor Drivers	30-Oct-08	30-Oct-08	SL_MSEG2	\$\$		6,500		7,310	7,310		
2	02	08	07			RCV: 8 Motor Drivers	30-Oct-08	30-Oct-08	SL_MSEG2	\$\$		10,400		11,695	11,695		
2	02	08	07			RCV: 5 IOCs CPU/EVR/Span	30-Oct-08	30-Oct-08	SL_MSEG2	\$\$		28,000		31,488	31,488		
2	02	08	07			RCV: 1 IOC Crate	30-Oct-08	30-Oct-08	SL_MSEG2	\$\$		10,000		11,246	11,246		
2	02	08	07			RCV: 1 UPS	30-Oct-08	30-Oct-08	SL_MSEG2	\$\$		1,800		2,024	2,024		
2	02	08	07			RCV: 1 Function Generator	30-Oct-08	30-Oct-08	SL_MSEG2	\$\$		4,500		5,061	5,061		
2	02	08	07			LTU Laser Heater Controls H/W Fab	31-Oct-08	1-Dec-08	SL_CT2	Hrs	10		761		761		
2	02	08	07			LTU Laser Heater Controls H/W Fab	31-Oct-08	1-Dec-08	SL_CE2	Hrs	10		1,390		1,390		
2	02	08	07			LTU Laser Heater Controls Integration and Test	2-Dec-08	15-Dec-08	SL_CT2	Hrs	20		1,522		1,522		
2	02	08	07			LTU Laser Heater Controls Integration and Test	2-Dec-08	15-Dec-08	SL_CE2	Hrs	20		2,780		2,780		
2	02	08	07			Procure: Laser Heater Controls misc	2-Oct-08	29-Oct-08	SL_MSEG2	\$\$		15,000		16,868	16,868		
2	02	08	07			Laser Heater Controls Conceptual Design	1-Feb-08	28-Feb-08	SL_CP2	Hrs	64		6,237		6,237		
2	02	08	07			Laser Heater Controls Conceptual Design	1-Feb-08	28-Feb-08	SL_CE2	Hrs	64		8,555		8,555		
2	02	08	07			Conceptual Design Review	29-Feb-08	29-Feb-08	SL_CE2	Hrs	8		1,069		1,069		
2	02	08	07			Laser Heater Controls Preliminary Design	3-Mar-08	28-Mar-08	SL_CE2	Hrs	80		10,694		10,694		
2	02	08	07			Preliminary Design Review (PDR)	31-Mar-08	31-Mar-08	SL_CE2	Hrs	8		1,069		1,069		
2	02	08	07			Laser Heater Controls Final Design	1-Apr-08	30-Apr-08	SL_CE2	Hrs	80		10,694		10,694		
2	02	08	07			Laser Heater Controls Final Design Review (FDR)	1-May-08	1-May-08	SL_CE2	Hrs	8		1,069		1,069		
2	02	08	07			Laser Heater Controls Prototype Hardware	2-May-08	16-May-08	SL_CT2	Hrs	80		5,854		5,854		
2	02	08	07			Laser Heater Controls Prototype Hardware	2-May-08	16-May-08	SL_CE2	Hrs	80		10,694		10,694		
2	03					LINAC SYSTEM (OPC)					10,344	290,384	907,931	319,211	1,227,142	0	
2	03	02				Linac Controls & Power Conversion Subsystem					182	54,833	16,479	60,276	76,755	0	
2	03	02	04			Power Conversion					182	54,833	16,479	60,276	76,755	0	
2	03	02	04	01		Spare Power Supply (Dipole Type)					82	16,110	7,081	17,709	24,790	0	
2	03	02	04	01		Spare Pwr Supply (Dipole Type) Procurement	1-Feb-08	23-Jun-08	SL_MSEG2	\$\$		16,110		17,709	17,709		
2	03	02	04	01		Assemble Pwr Supply, Transducer & Control	24-Jun-08	1-Jul-08	SL_PCDT2	Hrs	16		1,171		1,171		
2	03	02	04	01		Assemble Pwr Supply, Transducer & Control	24-Jun-08	1-Jul-08	SL_PCDE2	Hrs	8		1,069		1,069		
2	03	02	04	01		Assemble Pwr Supply, Transducer & Control	24-Jun-08	1-Jul-08	SL_PCCA2	Hrs	24		1,868		1,868		
2	03	02	04	01		Integrate Pwr Supply, Transducer & Control	2-Jul-08	11-Jul-08	SL_PCEF2	Hrs	26		1,903		1,903		
2	03	02	04	01		Integrate Cables	14-Jul-08	15-Jul-08	SL_PCDE2	Hrs	8		1,069		1,069		
2	03	02	04	02		Spare Power Supply (Quad Type)					84	16,110	7,260	17,709	24,969	0	
2	03	02	04	02		Spare Pwr Supply (Quad Type) Procurement	1-Feb-08	23-Jun-08	SL_MSEG2	\$\$		16,110		17,709	17,709		
2	03	02	04	02		Assemble Pwr Supply, Transducer & Control	24-Jun-08	1-Jul-08	SL_PCDT2	Hrs	16		1,171		1,171		
2	03	02	04	02		Assemble Pwr Supply, Transducer & Control	24-Jun-08	1-Jul-08	SL_PCDE2	Hrs	8		1,069		1,069		
2	03	02	04	02		Assemble Pwr Supply, Transducer & Control	24-Jun-08	1-Jul-08	SL_PCCA2	Hrs	24		1,868		1,868		
2	03	02	04	02		Integrate Pwr Supply, Transducer & Control	2-Jul-08	11-Jul-08	SL_PCEF2	Hrs	26		1,903		1,903		
2	03	02	04	02		Integrate Cables	14-Jul-08	15-Jul-08	SL_PCDE2	Hrs	8		1,069		1,069		
2	03	02	04	02		Integrate Magnet Interlock	16-Jul-08	16-Jul-08	SL_MFTM2	Hrs	2		179		179		
2	03	02	04	03		Spare Power Supply (Trim Type)					16	22,613	2,139	24,857	26,996	0	

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WBS Level						LCLB Description - New Rates	Early Start	Early Finish	Res Code	Units	Work Rem. Bud. Qty		Work Rem. Full Burd and Escldt Cost			Contingency %	Contingency \$
2	3	4	5	6	Hours						\$\$	Labor	M&S	Total			
1	2	3	4	5	6												
2	03	02	04	03		Spare Power Supply Procurement	1-Feb-08	23-Jun-08	SL_MSEG2	\$\$		22,613		24,857	24,857		
2	03	02	04	03		Integrate Cables	24-Jun-08	25-Jun-08	SL_PCDE2	Hrs	16		2,139		2,139		
2	03	07				Linac System Commissioning					10,162	235,551	891,451	258,935	1,150,387	0	
2	03	07	10			L2/BC2/L3 Commissioning					10,162	235,551	891,451	258,935	1,150,387	0	
2	03	07	10			L2/BC2/L3 Designers Support - Maintenance	1-Feb-08	19-Aug-08	SL_MDD2	Hrs	824		81,552		81,552		
2	03	07	10			L2/BC2/L3 Engr Commissioning Support	1-Feb-08	19-Aug-08	SL_EE2	Hrs	629		69,346		69,346		
2	03	07	10			CTL - Maintenance IA	1-Feb-08	19-Aug-08	SL_TSM2	Hrs	146		18,295		18,295		
2	03	07	10			CTL - Maintenance IA	1-Feb-08	19-Aug-08	SL_MSPS2	\$\$		57,269		62,954	62,954		
2	03	07	10			CTL - Maintenance IA	1-Feb-08	19-Aug-08	SL_CP2	Hrs	729		71,077		71,077		
2	03	07	10			CTL - Maintenance IA	1-Feb-08	19-Aug-08	SL_CE2	Hrs	321		42,958		42,958		
2	03	07	10			CTL - Maintenance IA	1-Feb-08	19-Aug-08	SL_CCA2	Hrs	1,490		116,018		116,018		
2	03	07	10			CTL - Maintenance II	20-Aug-08	18-Dec-08	SL_CCA2	Hrs	1,764		140,893		140,893		
2	03	07	10			PCD - Maintenance I	1-Feb-08	30-May-08	SL_PCDT2	Hrs	896		65,578		65,578		
2	03	07	10			PCD - Maintenance II	2-Jun-08	29-Sep-08	SL_PCDT2	Hrs	588		43,030		43,030		
2	03	07	10			MFD - Maintenance I	1-Feb-08	30-May-08	SL_MFAT2	Hrs	780		79,449		79,449		
2	03	07	10			MFD - Maintenance II	2-Jun-08	29-Sep-08	SL_MFAT2	Hrs	588		59,929		59,929		
2	03	07	10			KLY - Maintenance	1-Feb-08	30-Sep-08	SL_KT2	Hrs	1,043		76,357		76,357		
2	03	07	10			CEF - Maintenance	1-Feb-08	30-Sep-08	SL_SEPM2	Hrs	363		26,968		26,968		
2	03	07	10			M&S - Maintenance FY08	1-Feb-08	30-Sep-08	SL_MSEQ2	\$\$		97,241		106,894	106,894		
2	03	07	10			Controls E-Beam Diagnostics Tech Lead - FY08	1-Feb-08	30-Sep-08	SL_MSPS2	\$\$		81,042		89,087	89,087		
2	04					UNDULATOR SYSTEM (OPC)					48,644	1,285,855	5,144,944	1,489,843	6,634,788	0	
2	04	01				Undulator System Management & Integration					11,971	110,364	1,375,105	153,200	1,528,306	0	
2	04	01	01			Undulator System Mgmt & Integration					11,971	110,364	1,375,105	153,200	1,528,306	0	
2	04	01	01			SLAC Indirect Tax - FY08 (Spares)	1-Feb-08	30-Sep-08	SL_MSXX2	\$\$		26,460		27,691	27,691		
2	04	01	01			Project Management	16-Jul-08	15-Jul-09	AN_PM2	Hrs	189		22,640		22,640		
2	04	01	01			Project Management	1-Feb-08	15-Jul-08	AN_PM2	Hrs	1,124		129,988		129,988		
2	04	01	01			Project Management	16-Jul-08	30-Sep-08	AN_PM2	Hrs	189		21,864		21,864		
2	04	01	01			Undulator Documentation	1-Feb-08	15-Jul-08	AN_PM2	Hrs	1,124		129,988		129,988		
2	04	01	01			Undulator Documentation	16-Jul-08	30-Sep-08	AN_PM2	Hrs	189		21,864		21,864		
2	04	01	01			Engineering Oversight	1-Feb-08	15-Jul-08	AN_PM2	Hrs	428		49,551		49,551		
2	04	01	01			Design/Drafter/Integration	1-Feb-08	15-Jul-08	AN_MDD2	Hrs	281		19,079		19,079		
2	04	01	01			Integration Engineer	1-Feb-08	15-Jul-08	AN_PM2	Hrs	1,124		129,988		129,988		
2	04	01	01			Integration Engineer	16-Jul-08	30-Sep-08	AN_PM2	Hrs	189		21,864		21,864		
2	04	01	01			Und Magnet & Support Engr Oversight	1-Feb-08	15-Jul-08	AN_PM2	Hrs	665		76,932		76,932		
2	04	01	01			Und Magnet & Support Engr Oversight	16-Jul-08	30-Sep-08	AN_PM2	Hrs	189		21,864		21,864		
2	04	01	01			Vacuum/Diagnostics Engineering Oversight	1-Feb-08	15-Jul-08	AN_PM2	Hrs	562		64,994		64,994		
2	04	01	01			Vacuum/Diagnostics Engineering Oversight	16-Jul-08	30-Sep-08	AN_PM2	Hrs	95		10,990		10,990		
2	04	01	01			Controls System Engineering Oversight	1-Feb-08	15-Jul-08	AN_PM2	Hrs	562		64,994		64,994		
2	04	01	01			Controls System Engineering Oversight	16-Jul-08	30-Sep-08	AN_PM2	Hrs	95		10,990		10,990		
2	04	01	01			Quality Assurance Oversight & Documentation	1-Feb-08	15-Jul-08	AN_PM2	Hrs	1,686		194,982		194,982		
2	04	01	01			Quality Assurance Oversight & Documentation	16-Jul-08	30-Sep-08	AN_PM2	Hrs	211		24,409		24,409		
2	04	01	01			Secretarial/Administrative/IT	1-Feb-08	15-Jul-08	AN_ADMN2	Hrs	742		85,837		85,837		
2	04	01	01			Secretarial/Administrative/IT	16-Jul-08	30-Sep-08	AN_ADMN2	Hrs	125		14,460		14,460		
2	04	01	01			Monitor Budget, Schedule and Contracts	1-Feb-08	15-Jul-08	AN_ADMN2	Hrs	1,124		129,988		129,988		
2	04	01	01			Monitor Budget/Schedule, and Contracts	16-Jul-08	30-Sep-08	AN_ADMN2	Hrs	189		21,864		21,864		
2	04	01	01			ANL Division - PMCS Support	1-Feb-08	15-Jul-08	AN_ADMN2	Hrs	281		32,497		32,497		
2	04	01	01			ANL Division - PMCS Support	16-Jul-08	30-Sep-08	AN_ADMN2	Hrs	50		5,784		5,784		
2	04	01	01			Office Supplies and Misc Materials	3-Mar-08	15-Jul-08	AN_MSCS2	\$\$		1,754		2,004	2,004		
2	04	01	01			Tele/Video Conferencing	3-Mar-08	15-Jul-08	AN_MSEG2	\$\$		843		963	963		

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WBS Level						LCLB Description - New Rates	Early Start	Early Finish	Res Code	Units	Work Rem. Bud. Qty		Work Rem. Full Burd and Escldtd Cost			Contingency %	Contingency \$
1	2	3	4	5	6						Hours	\$\$	Labor	M&S	Total		
2	04	01	01			CPUs and Software	3-Mar-08	15-Jul-08	AN_MSEG2	\$\$		5,264		6,014	6,014		
2	04	01	01			Domestic Travel	3-Mar-08	15-Jul-08	AN_MSTR2	\$\$		25,000		44,632	44,632		
2	04	01	01			Foreign Travel	3-Mar-08	15-Jul-08	AN_MSTR2	\$\$		3,950		7,052	7,052		
2	04	01	01			Shipping and Storage	2-Apr-08	14-Aug-08	AN_MSEG2	\$\$		13,264		15,154	15,154		
2	04	01	01			Office Supplies and Misc Materials	16-Jul-08	30-Sep-08	AN_MSCS2	\$\$		713		815	815		
2	04	01	01			Tele/Video Conferencing	16-Jul-08	30-Sep-08	AN_MSEG2	\$\$		342		391	391		
2	04	01	01			CPUs and Software	16-Jul-08	30-Sep-08	AN_MSEG2	\$\$		2,138		2,443	2,443		
2	04	01	01			Shipping and Storage	15-Aug-08	30-Oct-08	AN_MSEG2	\$\$		5,386		6,207	6,207		
2	04	01	01			Domestic Travel	16-Jul-08	30-Sep-08	AN_MSTR2	\$\$		3,750		6,695	6,695		
2	04	01	01			Misc Crafts/Shops	2-Apr-08	14-Aug-08	AN_MSEG2	\$\$		6,000		6,855	6,855		
2	04	01	01			Misc Crafts/Shops	15-Aug-08	30-Oct-08	AN_MSEG2	\$\$		3,000		3,457	3,457		
2	04	01	01			Commissioning Support	1-Oct-08	30-Apr-09	AN_PM2	Hrs	560		67,697		67,697		
2	04	01	01			Domestic Travel (10 trips @\$1250 ea)	1-Oct-08	30-Apr-09	AN_MSTR2	\$\$		12,500		22,829	22,829		
2	04	02				Controls					524	155,887	54,253	176,528	230,782	0	
2	04	02	01			Controls Management and Integration					-	87,476	-	98,372	98,372	0	
2	04	02	01			RCV: Quad PS + addl items (2)	2-Dec-08	2-Dec-08	SA_MSSC2	\$\$		60,000		67,473	67,473		
2	04	02	01			Vendor Fab/Assy - Quad Cables (2)	3-Oct-08	16-Oct-08	SL_MSSC2	\$\$		8,000		8,996	8,996		
2	04	02	01			AWARD: Contract-Quad PS+addl items (2)	2-Oct-08	2-Oct-08	SL_AWFY2	\$\$		65,400		65,400	65,400		
2	04	02	01			RCV: SDB Ion Pump	6-Oct-08	14-Nov-08	SL_MSEG2	\$\$		1,450		1,631	1,631		
2	04	02	01			RCV: SDB Ion Pump Power Supply	6-Oct-08	14-Nov-08	SL_MSEG2	\$\$		4,996		5,618	5,618		
2	04	02	01			RCV: SDB Ion Pump Cable	6-Oct-08	14-Nov-08	SL_MSEG2	\$\$		540		607	607		
2	04	02	01			RCV: LDB Power Supply (1)	6-Oct-08	2-Dec-08	SL_MSEG2	\$\$		4,996		5,618	5,618		
2	04	02	01			RCV: LDB Cable (1)	6-Oct-08	2-Dec-08	SL_MSEG2	\$\$		540		607	607		
2	04	02	01			RCV: LDB Ion Pump (1)	6-Oct-08	2-Dec-08	SL_MSEG2	\$\$		6,954		7,820	7,820		
2	04	02	10			Undulator Controls Module Spares					64	55,588	5,875	63,507	69,382	0	
2	04	02	10			Procure Spare Production UCMI	2-Jun-08	31-Jul-08	AN_MSEG2	\$\$		10,000		11,425	11,425		
2	04	02	10			Procure Spare Production UCMI	2-Jun-08	31-Jul-08	AN_CT2	Hrs	7		475		475		
2	04	02	10			Procure Spare Production UCMI	2-Jun-08	31-Jul-08	AN_CE2	Hrs	7		810		810		
2	04	02	10			Procure Spare Production Blade IOC	2-Jun-08	31-Jul-08	AN_MSEG2	\$\$		20,000		22,849	22,849		
2	04	02	10			Procure Spare Production Blade IOC	2-Jun-08	31-Jul-08	AN_CT2	Hrs	5		340		340		
2	04	02	10			Procure Spare Production Blade IOC	2-Jun-08	31-Jul-08	AN_CE2	Hrs	5		578		578		
2	04	02	10			Procure Spare Production Motors	2-Jun-08	31-Jul-08	AN_MSEG2	\$\$		20,588		23,521	23,521		
2	04	02	10			Procure Spare Production Motors	2-Jun-08	31-Jul-08	AN_CT2	Hrs	7		475		475		
2	04	02	10			Procure Spare Production Motors	2-Jun-08	31-Jul-08	AN_CE2	Hrs	7		810		810		
2	04	02	10			Procure Spare Production Potentiometers	2-Jun-08	31-Jul-08	AN_MSEG2	\$\$		3,529		4,032	4,032		
2	04	02	10			Procure Spare Production Potentiometers	2-Jun-08	31-Jul-08	AN_CT2	Hrs	6		408		408		
2	04	02	10			Procure Spare Production Potentiometers	2-Jun-08	31-Jul-08	AN_CE2	Hrs	6		694		694		
2	04	02	10			Procure Spare Production RTD	2-Jun-08	31-Jul-08	AN_MSEG2	\$\$		1,471		1,681	1,681		
2	04	02	10			Procure Spare Production RTD	2-Jun-08	31-Jul-08	AN_CT2	Hrs	7		475		475		
2	04	02	10			Procure Spare Production RTD	2-Jun-08	31-Jul-08	AN_CE2	Hrs	7		810		810		
2	04	02	12			Undulator Controls Rack & Cables Spares					18	12,823	1,270	14,650	15,920	0	
2	04	02	12			Spare Undulator Racks	2-Jun-08	31-Jul-08	AN_MSEG2	\$\$		3,235		3,696	3,696		
2	04	02	12			Spare Undulator Racks	2-Jun-08	31-Jul-08	AN_ME2	Hrs	1		116		116		
2	04	02	12			Spare Undulator Racks	2-Jun-08	31-Jul-08	AN_CT2	Hrs	6		408		408		
2	04	02	12			Spare Intra-Undulator Cabling	2-Jun-08	31-Jul-08	AN_MSEG2	\$\$		3,235		3,696	3,696		
2	04	02	12			Spare Intra-Undulator Cabling	2-Jun-08	31-Jul-08	AN_CT2	Hrs	11		747		747		
2	04	02	12			Spare Electronics Interface Assembly	2-Jun-08	31-Jul-08	AN_MSEG2	\$\$		6,353		7,258	7,258		
2	04	02	15			BLM Interface Module Development					442	-	47,108	-	47,108	0	
2	04	02	15			Electronic Design	1-Feb-08	22-Apr-08	AN_CE2	Hrs	112		12,956		12,956		

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WBS Level						LCLB Description - New Rates	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	04	02	15			Interface Supervision	1-Feb-08	29-Jul-08	AN_CE2	Hrs	166		19,192		19,192		
2	04	02	15			BLM-IM Testing	23-Apr-08	18-Jun-08	AN_CE2	Hrs	80		9,255		9,255		
2	04	02	15			BLM-IM Prototype Fabrication	1-Feb-08	8-Feb-08	AN_CT2	Hrs	42		2,853		2,853		
2	04	02	15			Prepare BLM-IM for Shipment to SLAC	14-Jul-08	18-Jul-08	AN_CT2	Hrs	35		2,377		2,377		
2	04	02	15			Ship BLM-IM to SLAC	21-Jul-08	21-Jul-08	AN_CT2	Hrs	7		475		475		
2	04	03				Undulator Magnet & Support					3,438	193,135	357,523	219,989	577,512		0
2	04	03	03			1st Article Undulators & Long Lead Procurements					113	-	13,102	-	13,102		0
2	04	03	03			Survey & Align	1-Feb-08	23-Jun-08	AN_MES2	Hrs	113		13,102		13,102		
2	04	03	04			Production Undulator					-	139,064	-	158,875	158,875		0
2	04	03	04			RCV: 5 S/M Spares (#34,35,36,37,38)	14-Apr-08	18-Apr-08	AN_MSEG2	\$\$		121,050		138,295	138,295		
2	04	03	04			Ship 2 S/M Spares to SLAC (#34-35)	21-Apr-08	25-Apr-08	AN_MSEG2	\$\$		7,206		8,233	8,233		
2	04	03	04			Ship 3 S/M Spares to SLAC (#36,37,38)	21-Apr-08	25-Apr-08	AN_MSEG2	\$\$		10,808		12,348	12,348		
2	04	03	05			Focusing Magnets					-	41,085	-	46,938	46,938		0
2	04	03	05			Spares - Quad Magnets Materials	2-Jun-08	31-Jul-08	AN_MSEG2	\$\$		40,016		45,717	45,717		
2	04	03	05			Spares - Quad Magnets Techs	2-Jun-08	31-Jul-08	AN_MSEG2	\$\$		500		571	571		
2	04	03	05			Spares - Quad Magnets Shops	2-Jun-08	31-Jul-08	AN_MSEG2	\$\$		229		262	262		
2	04	03	05			Spares - Quad Stages/Stands Materials	2-Jun-08	31-Jul-08	AN_MSEG2	\$\$		340		388	388		
2	04	03	06			Undulator Magnetic Measurement Facility (SLAC)					3,325	-	344,422	-	344,422		0
2	04	03	06			Assy, Tune, Fiducialize Und Spares - FY08	1-Aug-08	30-Sep-08	SL_MTAT2	Hrs	748		76,236		76,236		
2	04	03	06			Assy, Tune, Fiducialize Und Spares - FY08	1-Aug-08	30-Sep-08	SL_MPSS2	Hrs	89		9,797		9,797		
2	04	03	06			Assy, Tune, Fiducialize Und Spares - FY08	1-Aug-08	30-Sep-08	SL_MPHS2	Hrs	32		2,768		2,768		
2	04	03	06			Assy, Tune, Fiducialize Und Spares - FY08	1-Aug-08	30-Sep-08	SL_MES2	Hrs	203		19,275		19,275		
2	04	03	06			Assy, Tune, Fiducialize Und Spares - FY08	1-Aug-08	30-Sep-08	SL_LSEE2	Hrs	1		126		126		
2	04	03	06			Assy, Tune, Fiducialize Und Spares - FY09	1-May-09	2-Sep-09	SL_MTAT2	Hrs	1,568		166,203		166,203		
2	04	03	06			Assy, Tune, Fiducialize Und Spares - FY09	1-May-09	2-Sep-09	SL_MPSS2	Hrs	187		21,409		21,409		
2	04	03	06			Assy, Tune, Fiducialize Und Spares - FY09	1-May-09	2-Sep-09	SL_MPHS2	Hrs	68		6,117		6,117		
2	04	03	06			Assy, Tune, Fiducialize Und Spares - FY09	1-May-09	2-Sep-09	SL_MES2	Hrs	425		41,969		41,969		
2	04	03	06			Assy, Tune, Fiducialize Und Spares - FY09	1-May-09	2-Sep-09	SL_LSEE2	Hrs	4		522		522		
2	04	03	08			Fixed Supports					-	12,986	-	14,176	14,176		0
2	04	03	08			Remaining Costs for Fixed Supports-Spares	2-Jun-08	31-Jul-08	AN_MSSF2	\$\$		12,986		14,176	14,176		
2	04	04				Vacuum System					-	218,680	-	249,833	249,833		0
2	04	04	02			Undulator Vacuum Chamber Assembly					-	200,015	-	228,509	228,509		0
2	04	04	02			Spares - Vacuum Chamber Assy - Recurring Engr	2-Jun-08	31-Jul-08	AN_MSEG2	\$\$		2,630		3,005	3,005		
2	04	04	02			Spares - Vacuum Chamber Assy -Materials	2-Jun-08	31-Jul-08	AN_MSEG2	\$\$		157,130		179,514	179,514		
2	04	04	02			Spares - Vacuum Chamber Assy Techs	2-Jun-08	31-Jul-08	AN_MSEG2	\$\$		31,416		35,891	35,891		
2	04	04	02			Spares - Vacuum Chamber Assy Shops	2-Jun-08	31-Jul-08	AN_MSEG2	\$\$		8,839		10,098	10,098		
2	04	04	03			Beam-line Bellows Module Assembly					-	5,753	-	6,573	6,573		0
2	04	04	03			Spares - Beam In-line Bellows -Materials	2-Jun-08	31-Jul-08	AN_MSEG2	\$\$		2,517		2,876	2,876		
2	04	04	03			Spares - Beam In-line Bellows Techs	2-Jun-08	31-Jul-08	AN_MSEG2	\$\$		1,631		1,863	1,863		
2	04	04	03			Spares - Beam In-line Bellows - Recurring Engr	2-Jun-08	31-Jul-08	AN_MSEG2	\$\$		779		890	890		
2	04	04	03			Spares - Beam In-line Bellows Shops	2-Jun-08	31-Jul-08	AN_MSEG2	\$\$		826		944	944		
2	04	04	05			Short Diagnostic Break (SDB) Assembly					-	5,432	-	6,206	6,206		0
2	04	04	05			Spares - SDB -Materials	2-Jun-08	31-Jul-08	AN_MSEG2	\$\$		2,172		2,481	2,481		
2	04	04	05			Spares - SDB Techs	2-Jun-08	31-Jul-08	AN_MSEG2	\$\$		1,525		1,742	1,742		
2	04	04	05			Spares - SDB - Recurring Engr	2-Jun-08	31-Jul-08	AN_MSEG2	\$\$		389		444	444		
2	04	04	05			Spares - SDB Shops	2-Jun-08	31-Jul-08	AN_MSEG2	\$\$		1,346		1,538	1,538		
2	04	04	06			Long Diagnostic Break (LDB) Assembly					-	7,480	-	8,546	8,546		0
2	04	04	06			Spares - LDB -Materials	2-Jun-08	31-Jul-08	AN_MSEG2	\$\$		5,128		5,859	5,859		
2	04	04	06			Spares - LDB Techs	2-Jun-08	31-Jul-08	AN_MSEG2	\$\$		1,628		1,860	1,860		

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WBS Level						LCLB Description - New Rates	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	04	04	06			Spares - LDB - Recurring Engr	2-Jun-08	31-Jul-08	AN_MSEG2	\$\$		313		358	358		
2	04	04	06			Spares - LDB Shops	2-Jun-08	31-Jul-08	AN_MSEG2	\$\$		411		470	470		
2	04	05				Undulator System Diagnostics [OPC]					82	379,820	9,458	433,928	443,387		0
2	04	05	05			RFBPM					-	296,151	-	338,340	338,340		0
2	04	05	05			Spares - RFBPM -Materials	2-Jun-08	31-Jul-08	AN_MSEG2	\$\$		113,409		129,565	129,565		
2	04	05	05			Spares - RFBPM Techs	2-Jun-08	31-Jul-08	AN_MSEG2	\$\$		11,363		12,982	12,982		
2	04	05	05			Spares - RFBPM - Recurring Engr	2-Jun-08	31-Jul-08	AN_MSEG2	\$\$		2,440		2,788	2,788		
2	04	05	05			Spares - RFBPM Shops	2-Jun-08	31-Jul-08	AN_MSEG2	\$\$		25,552		29,192	29,192		
2	04	05	05			BPMs Final Brazing at ANL (4 spares)	1-Jul-08	10-Jul-08	AN_MSEG2	\$\$		10,200		11,653	11,653		
2	04	05	05			Waveguide/Transition Brazing R&D	1-Feb-08	30-Sep-08	AN_MSEG2	\$\$		39,300		44,899	44,899		
2	04	05	05			BPMs Final Brazing at ANL (1st 5)	10-Apr-08	1-May-08	AN_MSEG2	\$\$		29,887		34,145	34,145		
2	04	05	05			Spare Transitions (40@\$250)	1-May-08	2-Jun-08	AN_MSEG2	\$\$		10,000		11,425	11,425		
2	04	05	05			Spare Transitions (15@\$250)	1-May-08	2-Jun-08	AN_MSEG2	\$\$		3,750		4,284	4,284		
2	04	05	05			Spare BPM Bodies (3@\$3250)	18-Apr-08	13-Jun-08	AN_MSEG2	\$\$		9,750		11,139	11,139		
2	04	05	05			Body End Caps (6@\$250)	10-Apr-08	10-Jul-08	AN_MSEG2	\$\$		1,500		1,714	1,714		
2	04	05	05			3 Extra Spares Brazes at Altair (3@\$1500)	2-Jun-08	10-Jul-08	AN_MSEG2	\$\$		4,500		5,141	5,141		
2	04	05	05			Additional Replacement Windows(150@\$200)	25-Apr-08	1-Aug-08	AN_MSEG2	\$\$		30,000		34,274	34,274		
2	04	05	05			Expedite Windows(15%)	10-Apr-08	2-May-08	AN_MSEG2	\$\$		4,500		5,141	5,141		
2	04	05	06			Beam Finder Wire					-	37,554	-	42,904	42,904		0
2	04	05	06			Spares - BFW -Materials	2-Jun-08	31-Jul-08	AN_MSEG2	\$\$		29,364		33,547	33,547		
2	04	05	06			Spares - BFW Techs	2-Jun-08	31-Jul-08	AN_MSEG2	\$\$		5,428		6,201	6,201		
2	04	05	06			Spares - BFW Shops	2-Jun-08	31-Jul-08	AN_MSEG2	\$\$		2,762		3,155	3,155		
2	04	05	08			Beam Loss Monitoring					64	46,115	7,422	52,684	60,107		0
2	04	05	08			Beam Loss Monitor R&D	1-Feb-08	30-Jun-08	AN_MSEQ2	\$\$		46,115		52,684	52,684		
2	04	05	08			Beam Loss Monitor R&D	1-Feb-08	30-Jun-08	AN_EE2	Hrs	64		7,422		7,422		
2	04	05	10			Single Undulator Test (SUT)-Diagnostics					18	-	2,036	-	2,036		0
2	04	05	10			Support SUT Test (FY07-08)	1-Feb-08	30-Jun-08	AN_MVE2	Hrs	18		2,036		2,036		
2	04	06				LTU/Undulator/Dump Commissioning					32,629	227,969	3,348,604	256,364	3,604,969		0
2	04	06	01			LTU/Undulator/Dump Commissioning					32,629	227,969	3,348,604	256,364	3,604,969		0
2	04	06	01			Girder Assy & Install Prep	4-Mar-08	24-Mar-08	SL_MES2	Hrs	209		19,845		19,845		
2	04	06	01			Girder Assy & Install Prep	4-Mar-08	24-Mar-08	SL_LFAT2	Hrs	418		42,603		42,603		
2	04	06	01			Develop Data Acquisition Software	1-Apr-08	31-Jul-08	SL_CE2	Hrs	480		64,161		64,161		
2	04	06	01			Develop Local Control Program	1-Apr-08	29-Sep-08	SL_CE2	Hrs	320		42,774		42,774		
2	04	06	01			Specs of WPM Installation at U-Hall	1-Apr-08	10-Nov-08	SL_MES2	Hrs	120		11,476		11,476		
2	04	06	01			Control of WPM Installation at U-Hall	1-Apr-08	25-Apr-08	SL_MES2	Hrs	80		7,596		7,596		
2	04	06	01			System Startup of WPM at U-Hall	11-Nov-08	23-Feb-09	SL_MES2	Hrs	120		11,850		11,850		
2	04	06	01			System Measurements at Test Facility	1-Feb-08	16-Jul-08	SL_MPSS2	Hrs	192		21,136		21,136		
2	04	06	01			Wire Monitor Calibration	3-Jun-08	10-Nov-08	SL_MPSS2	Hrs	200		22,236		22,236		
2	04	06	01			LTU/Und/Dump Designers Support	2-Oct-08	1-May-09	SL_MDD2	Hrs	1,974		203,288		203,288		
2	04	06	01			LTU/Und/Dump Designers Support II	4-May-09	2-Jun-09	SL_MDD2	Hrs	308		31,719		31,719		
2	04	06	01			LTU/Und/Dump Engr Commissioning Support	2-Oct-08	1-Jun-09	SL_EE2	Hrs	11,507		1,319,293		1,319,293		
2	04	06	01			LTU/Und/Dump Engr Commissioning Support II	2-Jun-09	1-Jul-09	SL_EE2	Hrs	770		88,282		88,282		
2	04	06	01			Metrology - Maintenance I	2-Oct-08	30-Apr-09	SL_MES2	Hrs	3,742		369,526		369,526		
2	04	06	01			Metrology - Maintenance II	1-May-09	1-Jun-09	SL_MES2	Hrs	308		30,415		30,415		
2	04	06	01			Metrology - Maintenance III	2-Jun-09	1-Jul-09	SL_MES2	Hrs	154		15,208		15,208		
2	04	06	01			CTL - Maintenance I	2-Oct-08	30-Apr-09	SL_CCA2	Hrs	4,678		378,737		378,737		
2	04	06	01			CTL - Maintenance II	1-May-09	1-Jun-09	SL_CCA2	Hrs	462		37,404		37,404		
2	04	06	01			CTL - Maintenance III	2-Jun-09	1-Jul-09	SL_CCA2	Hrs	231		18,702		18,702		
2	04	06	01			PCD - Maintenance I	2-Oct-08	30-Apr-09	SL_PCDT2	Hrs	1,871		142,397		142,397		

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WBS Level						LCLB Description - New Rates	Early Start	Early Finish	Res Code	Units	Work Rem. Bud. Qty		Work Rem. Full Burd and Escldt Cost			Contingency %	Contingency \$
2	3	4	5	6	Hours						\$	Labor	M&S	Total			
1	2	3	4	5	6												
2	04	06	01			PCD - Maintenance II	1-May-09	1-Jun-09	SL_PCDT2	Hrs	154		11,721		11,721		
2	04	06	01			PCD - Maintenance III	2-Jun-09	1-Jul-09	SL_PCDT2	Hrs	77		5,860		5,860		
2	04	06	01			MFD - Maintenance I	2-Oct-08	30-Apr-09	SL_MFAT2	Hrs	2,807		297,533		297,533		
2	04	06	01			MFD - Maintenance II	1-May-09	1-Jun-09	SL_MFAT2	Hrs	154		16,324		16,324		
2	04	06	01			MFD - Maintenance III	2-Jun-09	1-Jul-09	SL_MFAT2	Hrs	77		8,162		8,162		
2	04	06	01			CEF - Maintenance II	2-Oct-08	1-Jul-09	SL_SEPM2	Hrs	318		24,544		24,544		
2	04	06	01			CEF - Maintenance III	2-Jul-09	3-Aug-09	SL_SEPM2	Hrs	23		1,775		1,775		
2	04	06	01			M&S - Maintenance	2-Oct-08	3-Aug-09	SL_MSEQ2	\$\$		227,969	256,364	256,364			
2	04	06	01			Support Commissioning - ANL	1-Jul-08	27-Feb-09	AN_CE2	Hrs	875		104,038		104,038		
2	05					X-RAY TRANSPORT & DIAGNOSTICS SYSTEMS (OPC)					2,544	1,139,763	717,817	1,303,498	2,021,315	0	
2	05	01				System Management & Integration					1,161	52,175	342,596	62,027	404,623	0	
2	05	01	01			Management					1,161	52,175	342,596	62,027	404,623	0	
2	05	01	01			Management & Oversight - Feb08 thru Sep08	1-Feb-08	30-Sep-08	LL_PHSS2	Hrs	536		168,302		168,302		
2	05	01	01			Management & Oversight - Feb08 thru Sep08	1-Feb-08	30-Sep-08	LL_MESR2	Hrs	468		132,948		132,948		
2	05	01	01			Management & Oversight - Oct08	1-Oct-08	31-Oct-08	LL_SEE2	Hrs	39		4,636		4,636		
2	05	01	01			Management & Oversight - Oct08	1-Oct-08	31-Oct-08	LL_PHSS2	Hrs	59		19,285		19,285		
2	05	01	01			Management & Oversight - Oct08	1-Oct-08	31-Oct-08	LL_MSTR2	\$\$		1,754	2,235	2,235			
2	05	01	01			Management & Oversight - Oct08	1-Oct-08	31-Oct-08	LL_MESR2	Hrs	59		17,426		17,426		
2	05	01	01			Facility Usage Charge thru FY08	1-Feb-08	30-Sep-08	LL_MSEQ2	\$\$		19,189	22,291	22,291			
2	05	01	01			Facility Usage Charge FY09/FY10	1-Oct-08	30-Jul-10	LL_MSEQ2	\$\$		31,232	37,502	37,502			
2	05	04				Optical Subsystem					463	968,288	121,371	1,114,650	1,236,021	0	
2	05	04	01			Optical Subsystem R&D					463	28,200	121,371	32,758	154,129	0	
2	05	04	01			Coating Optimization - SOMS Substrate	1-Feb-08	15-Feb-08	LL_PHSS2	Hrs	1		189		189		
2	05	04	01			Coating Optimization - SOMS Substrate	1-Feb-08	15-Feb-08	LL_MFAT2	Hrs	1		80		80		
2	05	04	01			Deposition R&D - HOMS Substrate	1-Feb-08	3-Mar-08	LL_PHSS2	Hrs	3		1,006		1,006		
2	05	04	01			Deposition R&D - HOMS Substrate	1-Feb-08	3-Mar-08	LL_MSPS2	\$\$		480	558	558			
2	05	04	01			Deposition R&D - HOMS Substrate	1-Feb-08	3-Mar-08	LL_MFAT2	Hrs	2		256		256		
2	05	04	01			Deposition R&D - HOMS Substrate	1-Feb-08	3-Mar-08	LL_CTS2	Hrs	1		237		237		
2	05	04	01			Adv. R&D Development - HOMS Mech	1-Feb-08	14-Mar-08	LL_PHS2	Hrs	3		621		621		
2	05	04	01			Adv. R&D Development - HOMS Mech	1-Feb-08	14-Mar-08	LL_MESR2	Hrs	93		26,412		26,412		
2	05	04	01			Adv. R&D Development - HOMS Mech	1-Feb-08	14-Mar-08	LL_ME2	Hrs	4		704		704		
2	05	04	01			Adv. R&D Development - HOMS Mech	1-Feb-08	14-Mar-08	LL_MDD2	Hrs	5		674		674		
2	05	04	01			Adv. R&D Development - HOMS Mech	1-Feb-08	14-Mar-08	LL_EE2	Hrs	1		201		201		
2	05	04	01			Coating Optimization - HOMS Substrate	21-Feb-08	19-Sep-08	LL_PHSS2	Hrs	202		63,361		63,361		
2	05	04	01			Coating Optimization - HOMS Substrate	21-Feb-08	19-Sep-08	LL_MSPS2	\$\$		9,450	10,978	10,978			
2	05	04	01			Coating Optimization - HOMS Substrate	21-Feb-08	19-Sep-08	LL_MSCS2	\$\$		18,270	21,223	21,223			
2	05	04	01			Coating Optimization - HOMS Substrate	21-Feb-08	19-Sep-08	LL_MFAT2	Hrs	101		16,128		16,128		
2	05	04	01			Verify Coating Stability - HOMS Substrate	4-Mar-08	15-Dec-08	LL_PHSS2	Hrs	24		7,622		7,622		
2	05	04	01			Verify Coating Stability - HOMS Substrate	4-Mar-08	15-Dec-08	LL_MFAT2	Hrs	24		3,880		3,880		
2	05	04	02			Spares for Optical Subsystem					-	940,088	-	1,081,892	1,081,892	0	
2	05	04	02			Award: Spare HOMS substrate	1-Feb-08	1-Feb-08	LL_AWARD	\$\$		40,000	40,000	40,000			
2	05	04	02			RCV: Spare HOMS substrate	19-Sep-08	19-Sep-08	LA_MSEQ2	\$\$		35,088	40,760	40,760			
2	05	04	02			Procure Spares - FY10	2-Oct-09	24-Dec-09	SL_MSEQ2	\$\$		905,000	1,041,132	1,041,132			
2	05	05				Diagnostics Subsystem					921	119,300	253,849	126,821	380,670	0	
2	05	05	01			Diagnostics Subsystem R&D					68	-	11,562	-	11,562	0	
2	05	05	01			Sensor Fab/Testing - Total Energy Measurement	1-Feb-08	15-Apr-08	LL_PHS2	Hrs	34		8,451		8,451		
2	05	05	01			Sensor Fab/Testing - Total Energy Measurement	1-Feb-08	15-Apr-08	LL_PHPD2	Hrs	34		3,110		3,110		
2	05	05	02			Modeling & Simulation					853	69,300	242,288	69,300	311,588	0	
2	05	05	02			Modeling & Simulation - FY08 (LLNL\$)	1-Feb-08	30-Sep-08	LL_CE2	Hrs	853		242,288		242,288		

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WBS Level						LCLB Description - New Rates	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	05	05	02			Modeling & Simulation - FY08 (SLAC\$-Kirby)	1-Feb-08	30-Sep-08	SL_MSPY2	\$\$		69,300		69,300	69,300		
2	05	05	03			Spares for Diagnostics Subsystem					-	50,000	-	57,521	57,521		0
2	05	05	03			Procure Spares - Direct Imager	2-Oct-09	24-Dec-09	SL_MSEQ2	\$\$		50,000		57,521	57,521		
2	06					X-RAY END STATION SYSTEMS (OPC)					39,667	2,581,475	5,256,749	2,893,802	8,150,551		0
2	06	01				XE System Mgmt & Integration					4,676	38,119	610,478	53,058	663,536		0
2	06	01				AMO Exp. Management - FY08	1-Feb-08	30-Sep-08	SL_PHPU2	Hrs	809		117,719		117,719		
2	06	01				AMO Exp. Management - Oct08 thru Jul09	1-Oct-08	31-Jul-09	SL_PHPU2	Hrs	1,323		200,336		200,336		
2	06	01				X-Ray Detector Management - Oct08 thru Jul09	1-Oct-08	31-Jul-09	SL_PHSS2	Hrs	612		70,064		70,064		
2	06	01				Management & Oversight - FY08	1-Feb-08	30-Sep-08	SL_ME2	Hrs	505		59,628		59,628		
2	06	01				Management & Oversight - FY08	1-Feb-08	30-Sep-08	SL_EE2	Hrs	202		22,283		22,283		
2	06	01				Management & Oversight - Oct08 thru Aug09	1-Oct-08	31-Aug-09	SL_EE2	Hrs	1,225		140,448		140,448		
2	06	01				Travel & Misc Expenses - Nov08 thru Sep09	3-Nov-08	30-Sep-09	SL_MSTR2	\$\$		27,228		40,810	40,810		
2	06	01				Travel & Misc Expenses - Nov08 thru Sep09	3-Nov-08	30-Sep-09	SL_MSCS2	\$\$		10,891		12,248	12,248		
2	06	02				Controls Subsystem					5,654	866,666	651,979	964,153	1,616,132		0
2	06	02	04			LBNL Laser Timing					-	766,666	-	852,131	852,131		0
2	06	02	04			LBL Timing Procurement (FY08)	1-Feb-08	30-Sep-08	SL_MSSC2	\$\$		396,666		436,045	436,045		
2	06	02	04			LBL Timing Procurement (FY09)	1-Oct-08	30-Sep-09	SL_MSSC2	\$\$		370,000		416,086	416,086		
2	06	02	08			2-D X-Ray Detector Controls					5,654	100,000	651,979	112,022	764,001		0
2	06	02	08			DAQ system & component design	3-Mar-08	30-Sep-08	SL_PPCE2	Hrs	340		45,448		45,448		
2	06	02	08			DAQ Software Development (FY08)	28-Apr-08	30-Sep-08	SL_PPCE2	Hrs	60		5,848		5,848		
2	06	02	08			DAQ Software Development (FY09)	1-Oct-08	27-Apr-09	SL_PPCE2	Hrs	928		94,059		94,059		
2	06	02	08			ASIC interface board schematic/layout	27-May-08	24-Sep-08	SL_PPCE2	Hrs	170		22,724		22,724		
2	06	02	08			Fabrication of interface board	25-Sep-08	23-Oct-08	SL_MSEQ2	\$\$		10,000		11,191	11,191		
2	06	02	08			Testing/commissioning DAQ - Functional	24-Oct-08	27-Feb-09	SL_PPCE2	Hrs	266		36,978		36,978		
2	06	02	08			Testing/commissioning DAQ - Performance	2-Mar-09	21-Aug-09	SL_PPCE2	Hrs	413		57,414		57,414		
2	06	02	08			Mechanical Design & Analysis, testing	3-Mar-08	1-Aug-08	SL_PPCE2	Hrs	645		86,217		86,217		
2	06	02	08			Mech. Fabrication, first article (1st half)	4-Aug-08	30-Sep-08	SL_PPCT2	Hrs	160		11,709		11,709		
2	06	02	08			Mech. Fabrication, first article (1st half)	4-Aug-08	30-Sep-08	SL_PPCE2	Hrs	160		21,387		21,387		
2	06	02	08			Mech. Fabrication, first article (1st half)	4-Aug-08	30-Sep-08	SL_MSEQ2	\$\$		15,000		16,489	16,489		
2	06	02	08			Mech. Fabrication, first article (2nd half)	1-Oct-08	25-Nov-08	SL_PPCT2	Hrs	160		12,177		12,177		
2	06	02	08			Mech. Fabrication, first article (2nd half)	1-Oct-08	25-Nov-08	SL_PPCE2	Hrs	160		22,243		22,243		
2	06	02	08			Mech. Fabrication, first article (2nd half)	1-Oct-08	25-Nov-08	SL_MSEQ2	\$\$		15,000		16,868	16,868		
2	06	02	08			Mech. Test & Design Modifications, 1st Article	1-Oct-08	9-Dec-08	SL_PPCT2	Hrs	520		39,576		39,576		
2	06	02	08			Mech. Test & Design Modifications, 1st Article	1-Oct-08	9-Dec-08	SL_PPCE2	Hrs	520		72,288		72,288		
2	06	02	08			Mech. Fabrication, Final System	10-Dec-08	4-Mar-09	SL_PPCT2	Hrs	416		31,661		31,661		
2	06	02	08			Mech. Fabrication, Final System	10-Dec-08	4-Mar-09	SL_PPCE2	Hrs	416		57,831		57,831		
2	06	02	08			Mech. Fabrication, Final System	10-Dec-08	4-Mar-09	SL_MSEQ2	\$\$		60,000		67,473	67,473		
2	06	02	08			Mech. Assembly, Final System	5-Mar-09	1-Apr-09	SL_PPCT2	Hrs	160		12,177		12,177		
2	06	02	08			Mech. Assembly, Final System	5-Mar-09	1-Apr-09	SL_PPCE2	Hrs	160		22,243		22,243		
2	06	03				Commissioning					27,217	34,372	3,754,289	49,307	3,803,596		0
2	06	03				LLNL Commissioning Team - Nov08 thru Jun09	3-Nov-08	30-Jun-09	LL_PHSS2	Hrs	1,210		395,503		395,503		
2	06	03				LLNL Commissioning Team - Nov08 thru Jun09	3-Nov-08	30-Jun-09	LL_MESR2	Hrs	605		178,693		178,693		
2	06	03				LLNL Commissioning Team - Nov08 thru Jun09	3-Nov-08	30-Jun-09	LL_MDD2	Hrs	1,210		169,708		169,708		
2	06	03				LLNL Commissioning Team - Nov08 thru Jun09	3-Nov-08	30-Jun-09	LL_EE2	Hrs	605		126,557		126,557		
2	06	03				LLNL Commissioning Team - Nov08 thru Jun09	3-Nov-08	30-Jun-09	LL_CE2	Hrs	1,210		357,386		357,386		
2	06	03				SLAC Commissioning Team - FY09	1-Oct-08	30-Sep-09	SL_PHS2	Hrs	1,225		110,191		110,191		
2	06	03				SLAC Commissioning Team - FY09	1-Oct-08	30-Sep-09	SL_MFAT2	Hrs	1,225		129,846		129,846		
2	06	03				SLAC Commissioning Team - FY09	1-Oct-08	30-Sep-09	SL_ME2	Hrs	875		107,475		107,475		
2	06	03				SLAC Commissioning Team - FY09	1-Oct-08	30-Sep-09	SL_CT2	Hrs	613		46,654		46,654		

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WBS Level						LCLB Description - New Rates	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	06	03				SLAC Commissioning Team - FY09	1-Oct-08	30-Sep-09	SL_CP2	Hrs	1,225		124,162		124,162		
2	06	03				SLAC Commissioning Team - FY10	1-Oct-09	30-Jul-10	SL_PPCT2	Hrs	770		60,947		60,947		
2	06	03				SLAC Commissioning Team - FY10	1-Oct-09	30-Jul-10	SL_PHS2	Hrs	1,541		144,160		144,160		
2	06	03				SLAC Commissioning Team - FY10	1-Oct-09	30-Jul-10	SL_MFAT2	Hrs	1,541		169,875		169,875		
2	06	03				SLAC Commissioning Team - FY10	1-Oct-09	30-Jul-10	SL_ME2	Hrs	770		98,361		98,361		
2	06	03				SLAC Commissioning Team - FY10	1-Oct-09	30-Jul-10	SL_CP2	Hrs	1,541		162,439		162,439		
2	06	03				Laser Commissioning - FY09	1-Oct-08	30-Sep-09	SL_PHS2	Hrs	1,524		137,086		137,086		
2	06	03				Laser Commissioning - FY09	1-Oct-08	30-Sep-09	SL_OE2	Hrs	1,524		211,861		211,861		
2	06	03				Laser Commissioning - FY09	1-Oct-08	30-Sep-09	SL_ME2	Hrs	1,524		187,191		187,191		
2	06	03				Laser Commissioning Oct09 thru Jul10	1-Oct-09	30-Jul-10	SL_PHS2	Hrs	1,313		122,831		122,831		
2	06	03				Laser Commissioning Oct09 thru Jul10	1-Oct-09	30-Jul-10	SL_OE2	Hrs	1,312		189,685		189,685		
2	06	03				Laser Commissioning Oct09 thru Jul10	1-Oct-09	30-Jul-10	SL_ME2	Hrs	1,312		167,597		167,597		
2	06	03				AMO Exp. Commissioning - Oct09 thru Jul10	1-Oct-09	30-Jul-10	SL_PHPU2	Hrs	1,387		218,429		218,429		
2	06	03				X-Ray Detector Commissioning - Oct09 thru Jul10	1-Oct-09	30-Jul-10	SL_PHSS2	Hrs	385		45,839		45,839		
2	06	03				XES Commissioning - Oct09 thru Jul10	1-Oct-09	30-Jul-10	SL_EE2	Hrs	770		91,813		91,813		
2	06	03				Travel & Misc Expenses FY10	1-Oct-09	30-Jul-10	SL_MSTR2	\$\$		25,502		39,103		39,103	
2	06	03				Travel & Misc Expenses FY10	1-Oct-09	30-Jul-10	SL_MSCS2	\$\$		8,870		10,204		10,204	
2	06	04				Spares					2,120		-		240,004	0	
2	06	04	01			Spares - PPS Stoppers					2,120		-		240,004	0	
2	06	04	01			Submit MFD Job Order - Spare PPS Stoppers	2-Oct-09	24-Dec-09	SL_ME2	Hrs	40		5,110		5,110		
2	06	04	01			MFD Fab/Assemble - Spare PPS Stoppers	28-Dec-09	19-Apr-10	SL_MFAT2	Hrs	1,280		141,103		141,103		
2	06	04	01			MFD Fab/Assemble - Spare PPS Stoppers	28-Dec-09	19-Apr-10	SL_ME2	Hrs	160		20,439		20,439		
2	06	04	01			Test - Spare PPS Beam Stop Hardware (2)	20-Apr-10	14-Jun-10	SL_MFE2	Hrs	160		20,439		20,439		
2	06	04	01			Test - Spare PPS Beam Stop Hardware (2)	20-Apr-10	14-Jun-10	SL_MFAT2	Hrs	480		52,914		52,914		
2	06	05				X-Ray Detectors					-	1,642,318		-	1,827,284	0	
2	06	05	02			2-D X-Ray Detector					-	1,642,318		-	1,827,284	0	
2	06	05	02			Cornell Labor/Materials _ Jan/Feb08 Inv.	17-Mar-08	17-Mar-08	SL_MSSC2	\$\$		-		-	-		
2	06	05	02			Cornell Labor/Materials Feb-Jul08 Inv.	1-Apr-08	30-Sep-08	SL_MSSC2	\$\$		408,318		448,853		448,853	
2	06	05	02			Cornell Labor/Materials Q4 CY08	1-Oct-08	31-Dec-08	SL_MSSC2	\$\$		180,000		202,420		202,420	
2	06	05	02			Cornell Labor/Materials CY09	2-Jan-09	30-Sep-09	SL_MSSC2	\$\$		540,000		607,261		607,261	
2	06	05	02			Fabricate Proto 4 ASIC	3-Jun-08	29-Jul-08	SL_MSSC2	\$\$		42,000		46,170		46,170	
2	06	05	02			Fabricate Proto 5 ASIC	4-Sep-08	29-Oct-08	SL_MSSC2	\$\$		42,000		46,710		46,710	
2	06	05	02			Fabricate Detector Diode #2	16-Jun-08	7-Oct-08	SL_MSSC2	\$\$		110,000		121,068		121,068	
2	06	05	02			Fabricate Full-lot ASIC #2	16-Jun-08	18-Aug-08	SL_MSSC2	\$\$		200,000		219,855		219,855	
2	06	05	02			Bump Bond Full-lot ASIC #2	15-Oct-08	11-Dec-08	SL_MSSC2	\$\$		120,000		134,947		134,947	
2	09					Conventional Facility Commissioning					10,625	210,005	1,383,316	220,589	1,603,905	0	
2	09	03				Beam Path Project Commissioning					10,625	210,005	1,383,316	220,589	1,603,905	0	
2	09	03	05			Beam Path Project Commissioning					10,625	210,005	1,383,316	220,589	1,603,905	0	
2	09	03	05			CEF Support- FY08 (Feb-May 0.35 fte)	1-Feb-08	30-May-08	SL_UTR2	Hrs	189		23,734		23,734		
2	09	03	05			CEF Support- FY08 (Jun-Sep 0.60 fte)	2-Jun-08	30-Sep-08	SL_UTR2	Hrs	340		42,696		42,696		
2	09	03	05			CF Engr Support - FY08 (Feb-May 0.65 fte)	1-Feb-08	30-May-08	SL_LSEE2	Hrs	315		39,557		39,557		
2	09	03	05			CF Engr Support - FY08 (Jun-Sep 0.85 fte)	2-Jun-08	30-Sep-08	SL_LSEE2	Hrs	510		64,044		64,044		
2	09	03	05			CF Engr Support - FY09 (0.85 fte)	1-Oct-08	30-Sep-09	SL_LSEE2	Hrs	1,536		200,601		200,601		
2	09	03	05			CF Commissioning Liaison - FY08 (1 fte)	1-Feb-08	30-Sep-08	SL_LUTR2	Hrs	1,035		129,988		129,988		
2	09	03	05			CF Commissioning Liaison - FY09 (1 fte)	1-Oct-08	30-Sep-09	SL_LUTR2	Hrs	1,792		234,035		234,035		
2	09	03	05			CF Commissioning Liaison - FY10 (1 fte)	1-Oct-09	30-Jul-10	SL_LUTR2	Hrs	1,498		203,464		203,464		
2	09	03	05			CF Management - FY08 (0.3 fte)	1-Feb-08	30-Sep-08	SL_SEEM2	Hrs	375		47,028		47,028		
2	09	03	05			CF Management - FY09 (0.50 fte)	1-Oct-08	30-Sep-09	SL_SEEM2	Hrs	872		113,883		113,883		
2	09	03	05			CF Management - FY10 (0.75 fte)	1-Oct-09	30-Jul-10	SL_SEEM2	Hrs	1,134		154,024		154,024		

LCLS Estimate to Complete

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WBS Level						LCLB Description - New Rates	Early Start	Early Finish	Res Code	Units	Work Rem. Bud. Qty		Work Rem. Full Burd and Escldd Cost			Contingency %	Contingency \$
1	2	3	4	5	6						Hours	\$\$	Labor	M&S	Total		
2	09	03	05			CF Support- FY08 (Feb-May 0.75 fte)	1-Feb-08	30-May-08	SL_LUTR2	Hrs	331		41,534		41,534		
2	09	03	05			CF Support- FY08 (Jun-Sep 0.80fte)	2-Jun-08	30-Sep-08	SL_LUTR2	Hrs	510		64,044		64,044		
2	09	03	05			CF Support- FY09 (Oct-Dec 0.35 fte)	1-Oct-08	31-Dec-08	SL_LUTR2	Hrs	189		24,683		24,683		
2	09	03	05			Pre-Design for CEH Building	28-Apr-08	23-Jun-08	SL_MSPF2	\$\$		17,000		17,857	17,857		
2	09	03	05			Pre-Design for B028 Ph 2	28-Apr-08	23-Jun-08	SL_MSPF2	\$\$		20,000		21,008	21,008		
2	09	03	05			Commissioning Plan - FY08	1-Feb-08	30-Sep-08	SL_MSPF2	\$\$		98,005		102,944	102,944		
2	09	03	05			Commissioning Plan - FY09	1-Oct-08	30-Sep-09	SL_MSSF2	\$\$		75,000		78,780	78,780		