

LCLS TPC Detailed Cost Estimate (FY05FY09)

5/5/2005

WBS Level						LCLA DCE March-2005 Description	Early Start	Early Finish	OBS	Fund Type	Res Code	Units	Budgeted Quantity		Fully Burdened and Escalated Cost		
Run Time: 4/22/05 8:43am	1	2	3	4	5								6	Hours	\$	Labor	M&S
	1	09											56,605	64,142,438	5,527,537	69,674,697	75,202,234
	1	09	01										36,238	7,536,919	3,836,791	8,245,584	12,082,375
	1	09	01	01									7,990	488,000	855,069	553,438	1,408,507
	1	09	01	01			9-May-05	30-Nov-05		P	SL_MSPS	\$\$		100,000		109,860	109,860
	1	09	01	01			1-Oct-04	11-Nov-04		P	SL_MSPS	\$\$		43,000		46,225	46,225
	1	09	01	01			13-Jun-05	8-Aug-05		P	SL_MSPS	\$\$		45,000		49,050	49,050
	1	09	01	01			1-Oct-04	30-Sep-05		P	SL_SEEM	Hrs	1,708		180,553		180,553
	1	09	01	01			3-Oct-05	31-Mar-09		C	SL_SEEM	Hrs	5,922		665,289		665,289
	1	09	01	01			3-Jan-05	30-Sep-05		P	SL_MSEG	\$\$		5,412		5,899	5,899
	1	09	01	01			3-Oct-05	21-Oct-08		C	SL_MSEG	\$\$		19,588		22,551	22,551
	1	09	01	01			11-Apr-05	23-Sep-05		P	SL_SRA	Hrs	360		9,227		9,227
	1	09	01	01			3-Oct-05	30-Sep-08		C	SL_SRA	Hrs	-		-		-
	1	09	01	01			1-Oct-04	30-Sep-05		P	SL_MSTR	\$\$		20,000		24,600	24,600
	1	09	01	01			3-Oct-05	30-Sep-08		C	SL_MSTR	\$\$		60,000		78,203	78,203
	1	09	01	01			13-Jul-05	19-Jul-05		P	SL_MSPS	\$\$		30,000		32,700	32,700
	1	09	01	01			1-May-07	7-May-07		C	SL_MSPS	\$\$		30,000		34,500	34,500
	1	09	01	01			8-Oct-07	12-Oct-07		C	SL_MSPS	\$\$		30,000		35,400	35,400
	1	09	01	01			9-May-05	30-Sep-05		P	SL_MSPS	\$\$		105,000		114,450	114,450
	1	09	01	02									22,644	-	2,537,840	-	2,537,840
	1	09	01	02			1-Oct-04	3-Jan-05		P	SL_SEEM	Hrs	385		40,698		40,698
	1	09	01	02			4-Jan-05	28-Feb-05		P	SL_SEEM	Hrs	266		28,119		28,119
	1	09	01	02			1-Mar-05	30-Sep-05		P	SL_SEEM	Hrs	2,114		223,471		223,471
	1	09	01	02			3-Oct-05	31-Mar-09		C	SL_SEEM	Hrs	17,766		1,995,868		1,995,868
	1	09	01	02			3-Oct-05	31-Mar-09		C	SL_CE	Hrs	1,692		202,317		202,317
	1	09	01	02			4-Oct-04	3-Jan-05		P	SL_CE	Hrs	43		4,838		4,838
	1	09	01	02			4-Jan-05	30-Sep-05		P	SL_CE	Hrs	378		42,529		42,529
	1	09	01	03									419	7,041,919	44,463	7,684,516	7,728,979
	1	09	01	03			6-Jun-05	30-Sep-05		L	SA_MSSC	\$\$		400,000		436,000	436,000
	1	09	01	03			2-Sep-05	30-Sep-05		L	SA_MSXX	\$\$		76,592		78,890	78,890
	1	09	01	03			2-Sep-05	30-Sep-05		L	SA_MSSC	\$\$		100,000		109,000	109,000
	1	09	01	03			3-Oct-05	30-Sep-08		C	SA_MSXX	\$\$		5,189,324		5,639,232	5,639,232
	1	09	01	03			1-Oct-04	28-Feb-05		P	SL_MSSC	\$\$		250,000		272,500	272,500
	1	09	01	03			1-Mar-05	21-Mar-05		L	SL_MSSC	\$\$		110,000		119,900	119,900
	1	09	01	03			28-Mar-05	30-Nov-05		P	SL_MSSC	\$\$		123,693		135,705	135,705
	1	09	01	03			1-Dec-05	30-Sep-08		C	SL_MSSC	\$\$		350,567		403,796	403,796
	1	09	01	03			1-Dec-05	30-Sep-08		C	SL_MSSC	\$\$		120,113		138,351	138,351
	1	09	01	03			3-Jan-05	14-Feb-05		P	SL_SEEM	Hrs	135		14,271		14,271
	1	09	01	03			15-Feb-05	1-Mar-05		P	SL_SEEM	Hrs	60		6,343		6,343
	1	09	01	03			13-Jun-05	17-Jun-05		P	SL_SEEM	Hrs	24		2,537		2,537
	1	09	01	03			21-Jun-05	26-Jul-05		P	SA_MSSC	\$\$		62,000		67,580	67,580
	1	09	01	03			27-Jan-05	10-Feb-05		P	SL_MSPS	\$\$		12,000		13,080	13,080
	1	09	01	03			23-May-05	27-May-05		P	SL_MSPS	\$\$		10,000		10,900	10,900
	1	09	01	03			9-May-05	30-Nov-05		P	SL_SEEM	Hrs	200		21,312		21,312
	1	09	01	03			9-May-05	30-Nov-05		P	SL_MSSC	\$\$		55,000		60,423	60,423
	1	09	01	03			9-May-05	30-Nov-05		P	SL_MSPS	\$\$		25,000		27,465	27,465
	1	09	01	03			17-May-05	30-Nov-05		P	SA_MSSC	\$\$		100,000		109,898	109,898
	1	09	01	03			31-May-05	3-Feb-06		L	SL_MSSC	\$\$		25,000		27,600	27,600
	1	09	01	03			1-Jun-05	20-Apr-06		L	SL_MSXX	\$\$		32,630		34,196	34,196
	1	09	01	04									2,656	-	179,898	-	179,898
	1	09	01	04	01								588	-	36,983	-	36,983
	1	09	01	04	02								192		12,046		12,046
	1	09	01	04	02		18-Apr-05	19-May-05		P	SL_MDD	Hrs	192		12,046		12,046
	1	09	01	04	02		20-Jul-05	12-Oct-05		P	SL_MDD	Hrs	396		24,937		24,937
	1	09	01	04	03								1,175	-	74,241	-	74,241
	1	09	01	04	03		3-Jan-05	30-Nov-05		P	SL_MDD	Hrs	127		8,007		8,007
	1	09	01	04	03		3-Jan-05	30-Nov-05		P	SL_MDD	Hrs	127		8,007		8,007
	1	09	01	04	03		3-Jan-05	30-Nov-05		P	SL_MDD	Hrs	127		8,007		8,007
	1	09	01	04	03		3-Jan-05	30-Nov-05		P	SL_MDD	Hrs	127		8,007		8,007
	1	09	01	04	03		3-Jan-05	30-Nov-05		P	SL_MDD	Hrs	127		8,007		8,007
	1	09	01	04	03		3-Jan-05	30-Nov-05		P	SL_MDD	Hrs	127		8,007		8,007
	1	09	01	04	03		9-Aug-05	8-Feb-06		P	SL_MDD	Hrs	127		8,118		8,118
	1	09	01	04	03		3-Jan-05	30-Nov-05		P	SL_MDD	Hrs	127		8,007		8,007
	1	09	01	04	03		6-Jan-05	5-Dec-05		P	SL_MDD	Hrs	127		8,010		8,010
	1	09	01	04	03		27-Apr-06	27-Jul-06		P	SL_MDD	Hrs	32		2,064		2,064
	1	09	01	04	03		3-Jan-05	30-Nov-05		P	SL_MDD	Hrs	127		8,007		8,007

LCLS TPC Detailed Cost Estimate (FY05FY09)

5/5/2005

WBS Level						LCLA DCE March-2005 Description	Early Start	Early Finish	OBS	Fund Type	Res Code	Units	Budgeted Quantity		Fully Burdened and Escalated Cost		
Run Time: 4/22/05 8:43am													Hours	\$\$	Labor	M&S	Total (No Conting)
1	09	01	04	04	6	<b>Mechanical Design T2 Linac Facilities</b>							348	-	22,443	-	22,443
1	09	01	04	04		Mechanical Design Support Title 2 Linac Facility	7-Feb-06	9-Jun-06		P	SL_MDD	Hrs	348		22,443		22,443
1	09	01	04	05		<b>Mechanical Design Title 3 Linac Facility</b>							220	-	24,494	-	24,494
1	09	01	04	05		Mechanical Design Support for Construction	21-Sep-06	11-Apr-07		C	SL_SEE	Hrs	220		24,494		24,494
1	09	01	04	06		<b>Mechanical Design Title 3 (Linac not Included)</b>							325	-	21,737	-	21,737
1	09	01	04	06		Mechanical Design Title 3 (Linac not Included)	14-Nov-06	16-May-08		C	SL_MDD	Hrs	325		21,737		21,737
1	09	01	05			<b>Conventional Experiment Facility (CEF)</b>							2,529	7,000	219,521	7,630	227,151
1	09	01	05	01		<b>CEF Engineering Title 1(Linac Not Included)</b>							82	-	5,286	-	5,286
1	09	01	05	01		MCC Field Survey	3-Oct-05	13-Oct-05		P	SL_MDD	Hrs	72		4,643		4,643
1	09	01	05	01		MCC Prepare as Builts	30-Sep-05	13-Oct-05		P	SL_MDD	Hrs	10		643		643
1	09	01	05	02		<b>CEF Engineering Title 1 Linac Facility</b>							600	-	60,224	-	60,224
1	09	01	05	02		Develop as-built package Linac Facility	20-May-05	3-Jun-05		P	SL_SEE	Hrs	80		8,457		8,457
1	09	01	05	02		Utility investigation Linac Facility	20-May-05	3-Jun-05		P	SL_SEE	Hrs	80		8,457		8,457
1	09	01	05	02		Utility investigation Linac Facility	20-May-05	3-Jun-05		P	SL_MDD	Hrs	80		5,019		5,019
1	09	01	05	02		Review Schedule Linac Facility	6-Jun-05	10-Jun-05		P	SL_SEE	Hrs	40		4,228		4,228
1	09	01	05	02		Review Budget/Constructibility Linac Facility	6-Jun-05	10-Jun-05		P	SL_SEE	Hrs	40		4,228		4,228
1	09	01	05	02		Basis of Design Linac Facility	27-Jun-05	18-Jul-05		P	SL_SEE	Hrs	120		12,685		12,685
1	09	01	05	02		Schematic Design Review 1 Linac T1	10-Aug-05	16-Aug-05		P	SL_SEE	Hrs	40		4,228		4,228
1	09	01	05	02		Schematic Design Review 2 Linac T1	13-Sep-05	19-Sep-05		P	SL_SEE	Hrs	40		4,228		4,228
1	09	01	05	02		Final Schematic Design Review Linac T1	1-Nov-05	14-Nov-05		P	SL_SEE	Hrs	80		8,694		8,694
1	09	01	05	03		<b>CEF Engineering Title 2 (Linac Not Included)</b>							915	7,000	56,261	7,630	63,891
1	09	01	05	03		Telecom Requirements Beam Transport Hall	2-Dec-04	5-Jan-05		P	SL_SEE	Hrs	15		1,586		1,586
1	09	01	05	03		Telecom Requirements Undulator Facility	2-Dec-04	5-Jan-05		P	SL_SEE	Hrs	15		1,586		1,586
1	09	01	05	03		Telecom Requirements Front End Enclosure	2-Dec-04	5-Jan-05		P	SL_SEE	Hrs	15		1,586		1,586
1	09	01	05	03		Telecom Requirements Beam Dump	2-Dec-04	5-Jan-05		P	SL_SEE	Hrs	15		1,586		1,586
1	09	01	05	03		Telecom Requirements (NEH)	2-Dec-04	5-Jan-05		P	SL_SEE	Hrs	15		1,586		1,586
1	09	01	05	03		Telecom Requirements Tunnel	11-Jul-05	29-Jul-05		P	SL_SEE	Hrs	15		1,586		1,586
1	09	01	05	03		Telecom Requirements (FEH)	2-Dec-04	5-Jan-05		P	SL_SEE	Hrs	15		1,586		1,586
1	09	01	05	03		Telecom Requirements Beam Central Lab Office Ctr	2-Dec-04	5-Jan-05		P	SL_SEE	Hrs	15		1,586		1,586
1	09	01	05	03		HVAC Specialist	1-Feb-05	31-May-05		P	SL_SEPM	Hrs	672		41,987		41,987
1	09	01	05	03		Prepare Title 3 Bid Pkg - MMF (GC)	1-Apr-05	6-Apr-05		P	SL_CAMX	Hrs	20		-		-
1	09	01	05	03		Review of Bids - MMF (GC)	6-May-05	26-May-05		P	SL_CAMX	Hrs	10		-		-
1	09	01	05	03		Prep Title 3 Bid Pkg - MMF Mjr Elect Equip (LLP)	11-May-05	17-May-05		P	SL_CAMX	Hrs	30		-		-
1	09	01	05	03		Review of Bids - MMF Mjr Elect Equip (LLP)	3-Jun-05	6-Jun-05		P	SL_CAMX	Hrs	4		-		-
1	09	01	05	03		Reproduction	7-Apr-05	18-Apr-05		P	SL_MSSC	\$\$		3,500		3,815	3,815
1	09	01	05	03		Telecom Requirements Research Yard Mods	2-Dec-04	5-Jan-05		P	SL_SEE	Hrs	15		1,586		1,586
1	09	01	05	03		Review of Bids - Alcove/RF Hut	15-Apr-05	19-Apr-05		P	SL_CAMX	Hrs	10		-		-
1	09	01	05	03		Prep Title 3 Bid Pkg - S20 SS/MCC (LLP)	23-Feb-05	1-Mar-05		P	SL_CAMX	Hrs	30		-		-
1	09	01	05	03		Review of Bids - S20 SS/MCC (LLP)	1-Apr-05	28-Apr-05		P	SL_CAMX	Hrs	4		-		-
1	09	01	05	03		Reproduction	9-Mar-05	15-Mar-05		P	SL_MSSC	\$\$		3,500		3,815	3,815
1	09	01	05	04		<b>CEF Design Linac Facility Title 2</b>							932	-	97,750	-	97,750
1	09	01	05	04		User mtg.-interior layout details Linac Facility	1-Dec-05	12-Jan-06		P	SL_SEE	Hrs	40		4,347		4,347
1	09	01	05	04		User mtg.-interior layout details Linac Facility	1-Dec-05	12-Jan-06		P	SL_MDD	Hrs	40		2,580		2,580
1	09	01	05	04		User Review and Approval Linac Facility	13-Jan-06	3-Feb-06		P	SL_SEE	Hrs	40		4,347		4,347
1	09	01	05	04		User Review and Approval Linac Facility	13-Jan-06	3-Feb-06		P	SL_MDD	Hrs	40		2,580		2,580
1	09	01	05	04		Multi-Discipline Developmt Phase Linac Facility	7-Feb-06	4-Apr-06		P	SL_SEE	Hrs	116		12,606		12,606
1	09	01	05	04		User Review and Approval Linac Facility	5-Apr-06	18-Apr-06		P	SL_SEE	Hrs	40		4,347		4,347
1	09	01	05	04		Consultant Modify drwgs as necessary Linac Facil	19-Apr-06	2-May-06		P	SL_SEE	Hrs	80		8,694		8,694
1	09	01	05	04		Consultants provide 50% dwgs Linac Facility	3-May-06	3-May-06		P	SL_SEE	Hrs	8		869		869
1	09	01	05	04		Design team coordination meeting Linac Facility	4-May-06	5-May-06		P	SL_SEE	Hrs	16		1,739		1,739
1	09	01	05	04		Consultnt issue update base plans Linac Facility	8-May-06	12-May-06		P	SL_SEE	Hrs	40		4,347		4,347
1	09	01	05	04		User Review Linac Facility	15-May-06	19-May-06		P	SL_SEE	Hrs	40		4,347		4,347
1	09	01	05	04		Construction Schedule Review - Linac Fac	0-Jan-00	12-May-06		P	SL_SEE	Hrs	-		-		-
1	09	01	05	04		Details & Specifications Linac Facility	22-May-06	5-Jun-06		P	SL_SEE	Hrs	80		8,694		8,694
1	09	01	05	04		100% Drawings& Specs f/Consultants Linac Facilit	6-Jun-06	23-Jun-06		P	SL_SEE	Hrs	123		12,171		12,171
1	09	01	05	04		Issue Drawings/Specs for cost est Linac Facility	26-Jun-06	30-Jun-06		P	SL_SEE	Hrs	40		4,347		4,347
1	09	01	05	04		Cost estimate Linac Facility	3-Jul-06	10-Jul-06		P	SL_SEE	Hrs	80		8,694		8,694
1	09	01	05	04		100% Design Development Submittal Linac Facility	11-Jul-06	17-Jul-06		P	SL_SEE	Hrs	40		4,347		4,347
1	09	01	05	04		SLAC Review Linac Facility	18-Jul-06	24-Jul-06		P	SL_SEE	Hrs	80		8,694		8,694
1	09	02				<b>Title 1 &amp; Title 2 Conventional Facilities</b>							120	2,711,932	10,967	2,856,004	2,866,971
1	09	02	02			<b>A &amp; E Services (S20, MMF, MMC not Incl)</b>							-	2,505,762	-	2,630,565	2,630,565
1	09	02	02	01		<b>Title 1 Design</b>							-	43,000	-	46,870	46,870
1	09	02	02	01		Geotech Study Tunnel	1-Oct-04	31-Jan-05		P	SL_MSPS	\$\$		43,000		46,870	46,870
1	09	02	02	02		<b>Title 2 Design</b>							-	2,462,762	-	2,583,695	2,583,695

LCLS TPC Detailed Cost Estimate (FY05FY09)

5/5/2005

WBS Level						LCLA DCE March-2005 Description	Early Start	Early Finish	OBS	Fund Type	Res Code	Units	Budgeted Quantity		Fully Burdened and Escalated Cost		
Run Time: 4/22/05 8:43am													Hours	\$	Labor	M&S	Total (No Conting)
1	09	02	02	02	6	30% Title 2 Design Review - RY through CLOC	1-Apr-05	27-Jun-05		P	SA_MSXX	\$\$		238,828		245,993	245,993
1	09	02	02	02		30% Title 2 Design Review - RY through CLOC	1-Apr-05	27-Jun-05		P	SA_MSSC	\$\$		500,000		545,000	545,000
1	09	02	02	02		60% Title 2 Design Review - RY through CLOC	28-Jun-05	30-Aug-05		P	SA_MSXX	\$\$		738,828		760,993	760,993
1	09	02	02	02		90% Title 2 Design Review - RY through CLOC	31-Aug-05	25-Oct-05		P	SA_MSXX	\$\$		738,828		770,654	770,654
1	09	02	02	02		100% Title 2 Design Review	26-Oct-05	1-Dec-05		P	SA_MSXX	\$\$		246,278		261,055	261,055
1	09	02	03			<b>A &amp; E Services - (S20, MMF,MCC)</b>							<b>120</b>	<b>206,170</b>	<b>10,967</b>	<b>225,439</b>	<b>236,406</b>
1	09	02	03	01		<b>Title 1 Design (Sector 20)</b>											
1	09	02	03	02		<b>Title 2 Design (Sector 20)</b>							<b>120</b>	<b>48,055</b>	<b>10,967</b>	<b>52,380</b>	<b>63,347</b>
1	09	02	03	02		S20 Title 2 Mechanical Design Support	1-Oct-04	14-Jan-05		P	SL_MDD	Hrs	40		2,510		2,510
1	09	02	03	02		Develop 90% Title 2 Dsn - Alcove/RF Hut (A/E)	25-Oct-04	24-Nov-04		P	SL_MSSC	\$\$		22,816		24,869	24,869
1	09	02	03	02		Submit 100% Title 2 Dsn - Alcove/RF Hut (A/E)	18-Jan-05	18-Jan-05		P	SL_MSSC	\$\$		6,519		7,106	7,106
1	09	02	03	02		MTH Engineering Services for Sector 20 LLP	14-Mar-05	31-May-05		P	SL_MSPS	\$\$		18,720		20,405	20,405
1	09	02	03	02		S20 Seismic Peer Review	29-Nov-04	10-Dec-04		P	SL_SEE	Hrs	80		8,457		8,457
1	09	02	03	03		<b>Title 1 Design (MMF)</b>											
1	09	02	03	04		<b>Title 2 Design (MMF)</b>							<b>-</b>	<b>109,320</b>	<b>-</b>	<b>119,159</b>	<b>119,159</b>
1	09	02	03	04		MMF Develop 50% Title 2 Design (A/E)	1-Oct-04	25-Oct-04		P	SL_MSSC	\$\$		42,200		45,998	45,998
1	09	02	03	04		MMF Develop 90% Title 2 Design (A/E)	9-Nov-04	15-Dec-04		P	SL_MSSC	\$\$		37,600		40,984	40,984
1	09	02	03	04		MMF Seismic Peer Review	16-Dec-04	3-Jan-05		P	SL_MSPS	\$\$		4,400		4,796	4,796
1	09	02	03	04		MMF Submit 100% Title 2 Dsn Pkg (A/E)	4-Feb-05	4-Feb-05		P	SL_MSSC	\$\$		9,400		10,246	10,246
1	09	02	03	04		MTH Engineering Design for MMF LLP	8-Mar-05	10-May-05		P	SL_MSPS	\$\$		15,720		17,135	17,135
1	09	02	03	05		<b>Title 1 Design (MCC)</b>							<b>-</b>	<b>11,295</b>	<b>-</b>	<b>12,650</b>	<b>12,650</b>
1	09	02	03	05		MCC Schematic Design Review Title 1	17-Jan-06	17-Jan-06		P	SA_MSSC	\$\$		2,259		2,530	2,530
1	09	02	03	05		MCC Schematic Design Review 2	23-Feb-06	23-Feb-06		P	SA_MSSC	\$\$		2,259		2,530	2,530
1	09	02	03	05		MCC Final Schematic Design Complete	20-Mar-06	20-Mar-06		P	SA_MSSC	\$\$		4,518		5,060	5,060
1	09	02	03	05		MCC Design Title 1 Complete	20-Mar-06	20-Mar-06		P	SA_MSSC	\$\$		2,259		2,530	2,530
1	09	02	03	06		<b>Title 2 Design (MCC)</b>							<b>-</b>	<b>37,500</b>	<b>-</b>	<b>41,250</b>	<b>41,250</b>
1	09	02	03	06		MCC Design Review 1 w/Cost Est	26-May-06	26-May-06		P	SA_MSSC	\$\$		10,000		11,200	11,200
1	09	02	03	06		MCC Design Review 2	1-Oct-04	1-Oct-04		P	SA_MSSC	\$\$		10,000		10,900	10,900
1	09	02	03	06		MCC Final Design Review	1-Nov-04	1-Nov-04		P	SA_MSSC	\$\$		15,000		16,350	16,350
1	09	02	03	06		MCC Title 2 Complete	27-Jul-06	27-Jul-06		P	SA_MSSC	\$\$		2,500		2,800	2,800
1	09	03				<b>Construction-T3 Conventional Facilities</b>							<b>20,247</b>	<b>53,893,587</b>	<b>1,679,779</b>	<b>58,573,109</b>	<b>60,252,888</b>
1	09	03	01			<b>Sector 20 Injector Facilities</b>							<b>2,908</b>	<b>1,433,234</b>	<b>181,813</b>	<b>1,548,680</b>	<b>1,730,493</b>
1	09	03	01	01		<b>Site Preparation</b>							<b>1,952</b>	<b>352,953</b>	<b>121,961</b>	<b>381,542</b>	<b>503,503</b>
1	09	03	01	01		Remove Alcove Pump Room	3-Jan-05	1-Mar-05		L	SL_SEPM	Hrs	264		16,495		16,495
1	09	03	01	01		Rebuild and Relocate Alcove Pump Room	1-Jun-05	30-Sep-05		L	SL_SEPM	Hrs	1,496		93,470		93,470
1	09	03	01	01		RF Hut Clear Area	20-Jan-05	14-Apr-05		L	SL_SEPM	Hrs	192		11,996		11,996
1	09	03	01	01		Receive S20 SubStation/MtrCntlCntr	26-Aug-05	23-Sep-05		L	SA_MSEQ	\$\$		300,000		327,000	327,000
1	09	03	01	01		Demolition and Site Prep - Alcove/RF Hut	6-Jun-05	18-Jul-05		L	SA_MSXX	\$\$		52,953		54,542	54,542
1	09	03	01	02		<b>Structural</b>							<b>-</b>	<b>348,925</b>	<b>-</b>	<b>359,634</b>	<b>359,634</b>
1	09	03	01	02		Build RF Hut Shell	19-Jul-05	20-Sep-05		L	SA_MSXX	\$\$		127,145		130,959	130,959
1	09	03	01	02		Build Structure - S20 Alcove	19-Jul-05	4-Oct-05		L	SA_MSXX	\$\$		221,780		228,675	228,675
1	09	03	01	03		<b>Electrical</b>							<b>-</b>	<b>512,672</b>	<b>-</b>	<b>573,432</b>	<b>573,432</b>
1	09	03	01	03		Install Mechanical/Electrical	5-Oct-05	1-Dec-05		L	SA_MSXX	\$\$		12,672		13,432	13,432
1	09	03	01	03		Install Mechanical/Electrical	5-Oct-05	1-Dec-05		L	SA_MSSC	\$\$		500,000		560,000	560,000
1	09	03	01	04		<b>Utilities</b>							<b>896</b>	<b>-</b>	<b>55,982</b>	<b>-</b>	<b>55,982</b>
1	09	03	01	04		Alcove Remove Unused Utilities	3-Jan-05	17-May-05		L	SL_SEPM	Hrs	896		55,982		55,982
1	09	03	01	05		<b>HVAC</b>											
1	09	03	01	06		<b>Special System - Fire Protection</b>											
1	09	03	01	07		<b>Interior</b>							<b>-</b>	<b>130,888</b>	<b>-</b>	<b>138,741</b>	<b>138,741</b>
1	09	03	01	07		Install Interiors	2-Dec-05	30-Jan-06		C	SA_MSXX	\$\$		130,888		138,741	138,741
1	09	03	01	10		<b>Project Close Out Sector 20 Injector Facility</b>							<b>60</b>	<b>87,796</b>	<b>3,870</b>	<b>95,331</b>	<b>99,201</b>
1	09	03	01	10		Drawing Implementation to SLAC System- MMF	3-Oct-05	11-Jan-06		C	SL_MDD	Hrs	40		2,580		2,580
1	09	03	01	10		Drawing Implementation to SLAC System- S20	17-Jan-06	11-Apr-06		C	SL_MDD	Hrs	20		1,290		1,290
1	09	03	01	10		Building Commissioning Alcove	24-Feb-06	20-Apr-06		C	SA_MSXX	\$\$		50,000		53,000	53,000
1	09	03	01	10		Furnishings	21-Apr-06	30-Jun-06		C	SL_MSSC	\$\$		32,036		35,880	35,880
1	09	03	01	10		Testing	14-Apr-06	20-Apr-06		C	SL_MSSC	\$\$		5,760		6,451	6,451
1	09	03	02			<b>Magnetic Measurement Facility</b>							<b>720</b>	<b>1,962,553</b>	<b>57,142</b>	<b>2,098,098</b>	<b>2,155,240</b>
1	09	03	02	01		<b>Site Preparation</b>							<b>200</b>	<b>545,652</b>	<b>9,384</b>	<b>592,322</b>	<b>601,706</b>
1	09	03	02	01		MMF Relocate Stores - SLAC	9-May-05	5-Jul-05		L	SL_SEL	Hrs	200		9,384		9,384
1	09	03	02	01		MMF Relocate Stores - SLAC	9-May-05	5-Jul-05		L	SL_MSCS	\$\$		5,000		5,450	5,450
1	09	03	02	01		Install MMF Major Electrical Equip (LLP)	20-Jun-05	13-Sep-05		L	SA_MSEQ	\$\$		500,000		545,000	545,000
1	09	03	02	01		Demolition and Site Prep	14-Jun-05	5-Jul-05		L	SA_MSXX	\$\$		40,652		41,872	41,872
1	09	03	02	02		<b>Structural</b>							<b>160</b>	<b>164,644</b>	<b>13,090</b>	<b>169,583</b>	<b>182,673</b>
1	09	03	02	02		Build Structure and Foundation	6-Jul-05	7-Sep-05		L	SA_MSXX	\$\$		164,644		169,583	169,583

LCLS TPC Detailed Cost Estimate (FY05FY09)

5/5/2005

WBS Level						LCLA DCE March-2005 Description	Early Start	Early Finish	OBS	Fund Type	Res Code	Units	Budgeted Quantity		Fully Burdened and Escalated Cost			
Run Time: 4/22/05 8:43am													Hours	\$\$	Labor	M&S	Total (No Conting)	
1	09	03	02	02	03	MMF Certify Cranes	3-Nov-05	4-Nov-05		C	SL_TMUE	Hrs	160		13,090		13,090	
1	09	03	02	03	Electrical								360	861,656	34,668	926,000	960,668	
1	09	03	02	03	MMF Modify Bldg Lighting & Power etc. (LLP)	20-Jun-05	13-Sep-05		L	SL_TMUE	Hrs	360		34,668		34,668		
1	09	03	02	03	Install Mechanical/Electrical	27-Jul-05	2-Nov-05		L	SA_MSXX	\$\$			361,656		376,071		
1	09	03	02	03	Install Mechanical/Electrical	27-Jul-05	2-Nov-05		L	SA_MSSC	\$\$			500,000		549,929		
1	09	03	02	04	Utilities													
1	09	03	02	05	HVAC													
1	09	03	02	06	Special System - Fire Protection													
1	09	03	02	07	Interior													
1	09	03	02	07	Install Interiors and Cranes	27-Jul-05	2-Nov-05		L	SA_MSXX	\$\$			302,955		315,030	315,030	
1	09	03	02	10	Project Close Out Magnetic Measurement Facility													
1	09	03	02	10	Building Commissioning MMF	3-Nov-05	31-Jan-06		C	SA_MSXX	\$\$			302,955		315,030	315,030	
1	09	03	02	10	Furnishings	6-Feb-06	17-Apr-06		C	SL_MSSC	\$\$			31,886		35,712		
1	09	03	02	10	Testing and Balancing	1-Feb-06	2-Feb-06		C	SL_MSSC	\$\$			5,760		6,451		
1	09	03	03	Main Control Center Facilities Upgrade														
1	09	03	03	01	Site Preparation													
1	09	03	03	01	MCC Clear Area Unload Racks	3-Oct-06	16-Oct-06		C	SL_SEL	Hrs	320		400	19,796	230,000	249,796	
1	09	03	03	01	MCC Clear Area Remove Storage Racks	17-Oct-06	23-Oct-06		C	SL_SEL	Hrs	80			3,959		3,959	
1	09	03	03	01	MCC Title 3 Construction	24-Oct-06	19-Mar-07		C	SA_MSSC	\$\$			200,000		230,000	230,000	
1	09	03	03	02	Structural													
1	09	03	03	03	Electrical													
1	09	03	03	04	Utilities													
1	09	03	03	05	HVAC													
1	09	03	03	06	Special System - Fire Protection													
1	09	03	03	07	Interior													
1	09	03	03	10	Project Close Out Main Control Center Facility													
1	09	03	03	10	Drawing Implementation to SLAC System	3-Apr-07	16-Apr-07		C	SL_MDD	Hrs	40		40	2,647	95,749	98,396	
1	09	03	03	10	Furnishings	20-Mar-07	29-May-07		C	SL_MSSC	\$\$			75,000		86,250	86,250	
1	09	03	03	10	Testing	20-Mar-07	29-Mar-07		C	SL_MSSC	\$\$			5,760		6,624		
1	09	03	03	10	Reproduction	20-Mar-07	29-Mar-07		C	SL_MSSC	\$\$			2,500		2,875		
1	09	03	04	Linac Facility														
1	09	03	04	03	Electrical													
1	09	03	04	03	Install Interior Utilities Electrical	21-Sep-06	11-Apr-07		C	SL_TMUE	Hrs	320		3,860	26,824	114,838	128,652	
1	09	03	04	03	Install Interior Utilities Electrical	21-Sep-06	11-Apr-07		C	SL_TMUE	Hrs	960			97,374		97,374	
1	09	03	04	03	Install Interior Utilities Electrical	21-Sep-06	11-Apr-07		C	SL_SEPM	Hrs	1,280			84,237		84,237	
1	09	03	04	03	Install Interior Utilities Electrical	21-Sep-06	11-Apr-07		C	SA_MSSC	\$\$			100,000		114,838		
1	09	03	04	04	Utilities													
1	09	03	04	04	Install Utilities Linac Facility	21-Sep-06	11-Apr-07		C	SL_TMUE	Hrs	180		1,260	14,425	103,264	117,689	
1	09	03	04	04	Install Utilities Linac Facility	21-Sep-06	11-Apr-07		C	SL_TMUP	Hrs	360			34,970		34,970	
1	09	03	04	04	Install Utilities Linac Facility	21-Sep-06	11-Apr-07		C	SL_TMUE	Hrs	360			30,177		30,177	
1	09	03	04	04	Install Utilities Linac Facility	21-Sep-06	11-Apr-07		C	SL_SEPM	Hrs	360			23,692		23,692	
1	09	03	04	04	Install Utilities Linac Facility	21-Sep-06	11-Apr-07		C	SA_MSXX	\$\$			157,528		171,451		
1	09	03	04	04	Install Utilities Linac Facility	21-Sep-06	11-Apr-07		C	SA_MSSC	\$\$			50,000		57,419		
1	09	03	04	04	Install Utilities Linac Facility	21-Sep-06	11-Apr-07		C	SA_MSEQ	\$\$			250,000		287,096		
1	09	03	04	06	Special System - Fire Protection													
1	09	03	04	10	Project Close Out Linac Facility													
1	09	03	04	10	Building Commissioning Linac Facility	29-Mar-07	11-Apr-07		C	SA_MSSC	\$\$			40	100,000	2,647	115,000	117,647
1	09	03	04	10	Project Punch List Linac Facility	5-Apr-07	18-Apr-07		C	SA_MSSC	\$\$			50,000		57,500	57,500	
1	09	03	04	10	Drawing Implementation to SLAC System	12-Apr-07	25-Apr-07		C	SL_MDD	Hrs	40			2,647		2,647	
1	09	03	05	Research Yard/B102,B211,B113 & Storage Trailers														
1	09	03	05	01	Site Preparation													
1	09	03	05	01	Relocate person in Builds # 102	15-Feb-06	15-Mar-06		C	SL_SEL	Hrs	640		5,177	30,874	396,561	437,435	
1	09	03	05	01	T3 Construction Research Yard Mods	16-Mar-06	6-Jul-06		C	SA_MSXX	\$\$			1,605,111		1,701,418	1,701,418	
1	09	03	05	01	UTR Support for Construction	16-Mar-06	14-Jul-06		C	SL_UTR	Hrs	1,127			122,471		122,471	
1	09	03	05	01	Site Preparation CEF													
1	09	03	05	01	Sitework Research Yard Mods (SEM)	30-Mar-06	12-Apr-06		C	SL_SEPM	Hrs	800		800	51,384		51,384	
1	09	03	05	01	Site Preparation G/C													
1	09	03	05	02	Structural													
1	09	03	05	02	Structural CEF													
1	09	03	05	02	Modify Bldg #102 Research Yard Mods (CEF)	17-Mar-06	30-Mar-06		C	SL_SEPM	Hrs	400			56,436		56,436	
1	09	03	05	02	Concrete Pad Research Yard Mods (CEF)	6-Apr-06	19-Apr-06		C	SL_TMUC	Hrs	400			25,692		25,692	
1	09	03	05	02	Structural G/C													
1	09	03	05	03	Electrical													
1	09	03	05	03	Electrical CEF													

LCLS TPC Detailed Cost Estimate (FY05FY09)

5/5/2005

WBS Level						LCLA DCE March-2005 Description	Early Start	Early Finish	OBS	Fund Type	Res Code	Units	Budgeted Quantity		Fully Burdened and Escalated Cost		
Run Time: 4/22/05 8:43am													Hours	\$\$	Labor	M&S	Total (No Conting)
1	09	03	05	03	01	Instl Interior Utilities Electrical (CEF)	13-Apr-06	26-Apr-06		C	SL_TMUE	Hrs	550		54,450		54,450
1	09	03	05	03	02	Electrical G/C											
1	09	03	05	04		Utilities							500	-	32,115	-	32,115
1	09	03	05	04	01	Utilities CEF							500	-	32,115	-	32,115
1	09	03	05	04	01	Install Underground Research Yard Mods (CEF )	23-Mar-06	5-Apr-06		C	SL_SEPM	Hrs	500		32,115		32,115
1	09	03	05	04	02	Utilities G/C											
1	09	03	05	05		HVAC							500	-	32,115	-	32,115
1	09	03	05	05	01	HVAC CEF							500	-	32,115	-	32,115
1	09	03	05	05	01	Instl Interior Utilities HVAC (CEF )	20-Apr-06	3-May-06		C	SL_SEPM	Hrs	500		32,115		32,115
1	09	03	05	05	02	HVAC G/C											
1	09	03	05	06		Special System - Fire Protection							200	-	12,846	-	12,846
1	09	03	05	06	01	Special System - Fire Protection CEF							200	-	12,846	-	12,846
1	09	03	05	06	01	Instl Interior Utilities Fire Protection (CEF)	27-Apr-06	10-May-06		C	SL_SEPM	Hrs	200		12,846		12,846
1	09	03	05	06	02	Special System - Fire Protection											
1	09	03	05	07		Interior											
1	09	03	05	07	01	Interior CEF											
1	09	03	05	07	02	Interior G/C											
1	09	03	05	10		Project Close Out Reasearch Yard							60	1,515,000	3,870	1,737,300	1,741,170
1	09	03	05	10		DWG Implementation to SLAC System RY to CLOC	16-Mar-06	22-Mar-06		C	SL_MDD	Hrs	20		1,290		1,290
1	09	03	05	10		Drawing Implementation to SLAC System	17-Jul-06	28-Jul-06		C	SL_MDD	Hrs	40		2,580		2,580
1	09	03	05	10		Furnishings - RY through CLOC	2-Jul-07	25-Sep-07		C	SL_MSSC	\$\$		1,350,000		1,552,500	1,552,500
1	09	03	05	10		Testing	17-Jul-06	11-Sep-06		C	SL_MSSC	\$\$		100,000		112,000	112,000
1	09	03	05	10		Reproduction	17-Jul-06	11-Sep-06		C	SL_MSSC	\$\$		65,000		72,800	72,800
1	09	03	06			Access Road & Beam Transport Hall							3,947	7,960,065	391,399	8,661,520	9,052,919
1	09	03	06			T3 Constr Beam Transport Hall&Access Roads PH 1	17-Jul-06	29-Sep-06		C	SA_MSXX	\$\$		1,000,000		1,060,000	1,060,000
1	09	03	06			T3 Constr Beam Transport Hall&Access Roads PH 2	2-Oct-06	25-Sep-07		C	SA_MSXX	\$\$		6,519,065		7,105,781	7,105,781
1	09	03	06			UTR Support for Construction	17-Jul-06	25-Sep-07		C	SL_UTR	Hrs	2,947		327,029		327,029
1	09	03	06	01		Site Preparation							960	441,000	61,661	495,739	557,400
1	09	03	06	01		FFTB Remove Utilities	21-Jul-06	17-Aug-06		C	SL_SEPM	Hrs	960		61,661		61,661
1	09	03	06	01		EP Soil Disposal	17-Mar-06	31-Oct-06		C	SA_MSSC	\$\$		441,000		495,739	495,739
1	09	03	06	02		Structural											
1	09	03	06	03		Electrical											
1	09	03	06	04		Utilities											
1	09	03	06	05		HVAC											
1	09	03	06	06		Special System- Fire Protection											
1	09	03	06	07		Interior											
1	09	03	06	10		Project Close Out Beam Trans Hall							40	-	2,709	-	2,709
1	09	03	06	10		Drawing Implementation to SLAC System	28-Sep-07	11-Oct-07		C	SL_MDD	Hrs	40		2,709		2,709
1	09	03	07			Undulator Hall							40	4,635,735	2,647	4,982,657	4,985,304
1	09	03	07			T3 Construction Undulator Facility	16-Mar-06	30-Apr-07		C	SA_MSXX	\$\$		4,635,735		4,982,657	4,982,657
1	09	03	07	01		Site Preparation											
1	09	03	07	02		Structural											
1	09	03	07	03		Electrical											
1	09	03	07	04		Utilities											
1	09	03	07	05		HVAC											
1	09	03	07	06		Special System - Fire Protection											
1	09	03	07	07		Interior											
1	09	03	07	09		Tunneling											
1	09	03	07	10		Project Close Out Undulator Hall							40	-	2,647	-	2,647
1	09	03	07	10		Drawing Implementation to SLAC System	6-Apr-07	19-Apr-07		C	SL_MDD	Hrs	40		2,647		2,647
1	09	03	08			Front End Enclosure							40	1,211,928	2,647	1,316,502	1,319,149
1	09	03	08			T3 Construction Front End Encl - Phase 1	16-Mar-06	10-May-06		C	SA_MSXX	\$\$		150,000		159,000	159,000
1	09	03	08			T3 Construction Front End Encl - Phase 2	9-Oct-06	6-Jul-07		C	SA_MSXX	\$\$		1,061,928		1,157,502	1,157,502
1	09	03	08	01		Site Preparation											
1	09	03	08	02		Structural											
1	09	03	08	03		Electrical											
1	09	03	08	04		Utilities											
1	09	03	08	05		HVAC											
1	09	03	08	06		Special System - Fire Protection											
1	09	03	08	07		Interior											
1	09	03	08	09		Tunneling											
1	09	03	08	10		Project Close Out Front End Enclosure							40	-	2,647	-	2,647
1	09	03	08	10		Drawing Implementation to SLAC System	7-Jun-07	20-Jun-07		C	SL_MDD	Hrs	40		2,647		2,647
1	09	03	09			Beam Dump							40	1,173,978	2,647	1,276,036	1,278,683



LCLS TPC Detailed Cost Estimate (FY05FY09)

5/5/2005

WBS Level						LCLA DCE March-2005 Description	Early Start	Early Finish	OBS	Fund Type	Res Code	Units	Budgeted Quantity		Fully Burdened and Escalated Cost			
Run Time: 4/22/05 8:43am													Hours	\$	Labor	M&S	Total (No Conting)	
1	2	3	4	5	6	T3 Construction Beam Dump - Phase 1	16-Mar-06	10-May-06		C	SA_MSXX	\$\$		120,000			127,200	127,200
1	09	03	09			T3 Construction Beam Dump - Phase 2	9-Oct-06	7-Aug-07		C	SA_MSXX	\$\$		1,010,892			1,101,872	1,101,872
1	09	03	09	01		<b>Site Preparation</b>												
1	09	03	09	02		<b>Structural</b>												
1	09	03	09	03		<b>Electrical</b>							-	43,086	-	46,964	46,964	
1	09	03	09	03		Install Steel Shielding	20-Jul-07	2-Aug-07		C	SL_MSXX	\$\$		43,086		46,964	46,964	
1	09	03	09	04		<b>Utilities</b>												
1	09	03	09	06		<b>Special System (Fire Protection) Beam Dump</b>												
1	09	03	09	09		<b>Tunneling</b>												
1	09	03	09	10		<b>Project Close Out Beam Dump</b>							40	-	2,647	-	2,647	
1	09	03	09	10		Drawing Implementation to SLAC System	6-Jul-07	19-Jul-07		C	SL_MDD	Hrs	40		2,647		2,647	
1	09	03	10			<b>Near Experimental Hall</b>							680	9,153,806	43,754	9,841,929	9,885,683	
1	09	03	10			T3 Construction Near Experimental Hall - Phase 1	16-Mar-06	29-Sep-06		C	SA_MSXX	\$\$		4,424,000		4,689,440	4,689,440	
1	09	03	10			T3 Construction Near Experimental Hall - Phase 2	2-Oct-06	12-Mar-07		C	SA_MSXX	\$\$		4,629,806		5,046,489	5,046,489	
1	09	03	10	01		<b>Site Preparation</b>							640	100,000	41,107	106,000	147,107	
1	09	03	10	01		Remove SLC Gas Pad	16-Mar-06	29-Mar-06		C	SL_SEPM	Hrs	640		41,107		41,107	
1	09	03	10	01		Remove SLC Gas Pad	16-Mar-06	29-Mar-06		C	SL_MSXX	\$\$		100,000		106,000	106,000	
1	09	03	10	02		<b>Structural</b>												
1	09	03	10	03		<b>Electrical</b>												
1	09	03	10	04		<b>Utilities</b>												
1	09	03	10	05		<b>HVAC</b>												
1	09	03	10	06		<b>Special System - Fire Protection</b>												
1	09	03	10	07		<b>Interior</b>												
1	09	03	10	10		<b>Project Close Out Near Experimental Hall</b>							40	-	2,647	-	2,647	
1	09	03	10	10		Drawing Implementation to SLAC System	12-Jan-07	26-Jan-07		C	SL_MDD	Hrs	40		2,647		2,647	
1	09	03	11			<b>X-Ray Transport &amp; Diagnostic Hall</b>							40	3,993,902	2,647	4,308,627	4,311,274	
1	09	03	11			T3 Construction X-Ray Transport Diagnostics	27-Apr-06	6-Jul-07		C	SA_MSXX	\$\$		3,993,902		4,308,627	4,308,627	
1	09	03	11	01		<b>Site Preparation</b>												
1	09	03	11	02		<b>Structural</b>												
1	09	03	11	03		<b>Electrical</b>												
1	09	03	11	04		<b>Utilities</b>												
1	09	03	11	05		<b>HVAC</b>												
1	09	03	11	06		<b>Special System - Fire Protection</b>												
1	09	03	11	07		<b>Interiors</b>												
1	09	03	11	09		<b>Tunneling</b>												
1	09	03	11	10		<b>Project Close Out X-Ray Transport &amp; Diagnostic</b>							40	-	2,647	-	2,647	
1	09	03	11	10		Drawing Implementation to SLAC System	9-Jul-07	20-Jul-07		C	SL_MDD	Hrs	40		2,647		2,647	
1	09	03	12			<b>Far Experimental Hall</b>							40	6,154,696	2,647	6,647,587	6,650,234	
1	09	03	12			T3 Construction Far Experimental Hall	9-Jun-06	4-Jun-07		C	SA_MSXX	\$\$		6,154,696		6,647,587	6,647,587	
1	09	03	12	02		<b>Structural</b>												
1	09	03	12	03		<b>Electrical</b>												
1	09	03	12	04		<b>Utilities</b>												
1	09	03	12	05		<b>HVAC</b>												
1	09	03	12	06		<b>Special System - Fire Protection</b>												
1	09	03	12	07		<b>Interiors</b>												
1	09	03	12	09		<b>Tunneling</b>												
1	09	03	12	10		<b>Project Close Out Far Experimental Hall</b>							40	-	2,647	-	2,647	
1	09	03	12	10		Drawing Implementation to SLAC System	15-May-07	29-May-07		C	SL_MDD	Hrs	40		2,647		2,647	
1	09	03	13			<b>Central Laboratory Office Complex (CLOC)</b>							2,315	12,152,791	259,086	13,381,202	13,640,288	
1	09	03	13			T3 Construction Central Lab Office Center	14-Nov-06	23-May-08		C	SA_MSXX	\$\$		11,652,791		12,799,873	12,799,873	
1	09	03	13			T3 Construction Central Lab Office Center	14-Nov-06	23-May-08		C	SA_MSSC	\$\$		500,000		581,329	581,329	
1	09	03	13			UTR Support for Construction	14-Nov-06	16-May-08		C	SL_UTR	Hrs	2,275		256,370		256,370	
1	09	03	13	01		<b>Site Preparation</b>												
1	09	03	13	02		<b>Structural</b>												
1	09	03	13	03		<b>Electrical</b>												
1	09	03	13	04		<b>Utilities</b>												
1	09	03	13	05		<b>HVAC</b>												
1	09	03	13	06		<b>Special System - Fire Protection</b>												
1	09	03	13	07		<b>Interior</b>												
1	09	03	13	10		<b>Project Close Out Central Laboratory Office Complex (CLOC)</b>							40	-	2,716	-	2,716	
1	09	03	13	10		Drawing Implementation to SLAC System	1-Jul-08	15-Jul-08		C	SL_MDD	Hrs	40		2,716		2,716	
1	09	04																
1	09	04	02															