COST PERFORMANCE REPORT
FORMAT 1 - WORK BREAKDOWN STRUCTURE

DOLLARS IN: Thousands

1. CONTRACTOR	2. CONTRACT	3. PROGRAM	4. REPORT PERIOD
a. NAME Lawrence Berkeley National Laboratory	**a. NAME** LBNL LHC	**a. NAME** US LHC Accelerator Project	**a. FROM** *(CCYYMMDD)* 20050701
b. LOCATION *(Address and ZIP code)* 1 Cyclotron Road, Berkeley, CA 94720	**b. NUMBER** 1		**b. TO** *(CCYYMMDD)* 20050731
	c. TYPE CPAF; **d. SHARE RATIO** 100/0 100/0	**b. PHASE** *(X one)* ☐ RDT&E ☐ PRODUCTION	

5. CONTRACT DATA

a. QUANTITY	b. NEGOTIATED COST	c. EST COST AUTH UNPRICED WORK	d. TARGET PROFIT/ FEE	e. TARGET PRICE	f. ESTIMATED PRICE	g. CONTRACT CEILING	h. ESTIMATED CONTRACT CEILING
PROD: 0 R&D: 0	$20,802.8	$0.0	$0.0 / 0.0%	$20,802.8	$20,802.8	$0.0	$0.0

6. ESTIMATED COST AT COMPLETION

	MANAGEMENT ESTIMATE AT COMPLETION (1)	CONTRACT BUDGET BASE (2)	VARIANCE (3)
a. BEST CASE	$20,802.8		
b. WORST CASE	$20,802.8		
c. MOST LIKELY	$20,802.8	$20,802.8	$0.0

7. AUTHORIZED CONTRACTOR REPRESENTATIVE

a. NAME *(Last, First, Middle Initial)*	b. TITLE	c. SIGNATURE	d. DATE *(CCYYMMDD)*
Joseph Rasson	LBNL Project Manager		20050823

8. PERFORMANCE DATA

ITEM		CURRENT PERIOD					CUMULATIVE TO DATE					REPROGRAM ADJUSTMENTS		AT COMPLETION		
		BUDGETED COST		ACTUAL	VARIANCE		BUDGETED COST		ACTUAL	VARIANCE						
		WORK SCHEDULED	WORK PERFORMED	COST WORK PERFORMED	SCHEDULE	COST	WORK SCHEDULED	WORK PERFORMED	COST WORK PERFORMED	SCHEDULE	COST	COST VARIANCE	BUDGET	BUDGETED	ESTIMATED	VARIANCE
(1)		(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
a. WBS ELEMENT																
1.1 - Interaction Region	2	143.9	115.2	204.5	-28.7	-89.3	15,029.7	14,819.0	14,926.1	-210.7	-107.2			15,091.2	15,091.2	0.0
1.1.1 - Quadrupoles	3	0.0	0.0	0.0	0.0	0.0	1,949.4	1,949.4	1,935.6	0.0	13.8			1,949.4	1,949.4	0.0
1.1.1.5 - Cable & Wedges	4	0.0	0.0	0.0	0.0	0.0	1,615.0	1,615.0	1,596.8	0.0	18.2			1,615.0	1,615.0	0.0
1.1.1.5.1 - CABLE DEVELOPMENT	5	0.0	0.0	0.0	0.0	0.0	1,196.5	1,196.5	1,173.6	0.0	22.9			1,196.5	1,196.5	0.0
1.1.1.5.2 - WEDGES FOR HGQ	5	0.0	0.0	0.0	0.0	0.0	418.5	418.5	423.2	0.0	-4.7			418.5	418.5	0.0
1.1.1.7 - EDIA	4	0.0	0.0	0.0	0.0	0.0	334.4	334.4	338.8	0.0	-4.4			334.4	334.4	0.0
1.1.1.7.5 - ANALYSIS AND QUENCH PROTECTION	5	0.0	0.0	0.0	0.0	0.0	334.4	334.4	338.8	0.0	-4.4			334.4	334.4	0.0
1.1.3 - Cryo Feedboxes	3	143.9	115.2	204.5	-28.7	-89.3	8,406.8	8,196.0	8,258.4	-210.7	-62.4			8,468.2	8,468.2	0.0
1.1.3.1 - Fabrication	4	140.1	113.3	204.5	-26.8	-91.2	5,038.9	4,924.3	4,849.3	-114.6	75.0			5,096.2	5,096.2	0.0
1.1.3.1.1 - Large Mechanical Procurement	5	137.4	111.8	203.3	-25.6	-91.5	2,671.5	2,574.1	2,510.9	-97.4	63.2			2,728.8	2,728.8	0.0
1.1.3.1.3 - Current Lead & Signal Hardware	5	0.0	0.0	0.0	0.0	0.0	685.5	685.5	722.8	0.0	-37.3			685.5	685.5	0.0
1.1.3.1.4 - Beam Tube Assemblies	5	0.0	0.0	0.0	0.0	0.0	45.1	45.1	42.0	0.0	3.1			45.1	45.1	0.0
1.1.3.1.5 - Current Leads Procurement	5	0.0	0.0	0.0	0.0	0.0	1,592.8	1,592.8	1,555.8	0.0	37.0			1,592.8	1,592.8	0.0
1.1.3.1.6 - GFM Integration at Vendor	5	0.0	1.4	1.2	1.4	0.2	23.0	21.6	17.8	-1.3	3.8			23.0	23.0	0.0
1.1.3.1.7 - Acceptance at CERN Dock	5	2.7	0.0	0.0	-2.7	0.0	21.1	5.2	0.0	-15.9	5.2			21.1	21.1	0.0
1.1.3.3 - EDIA	4	3.8	1.9	0.0	-1.9	1.9	3,367.8	3,271.8	3,409.1	-96.1	-137.4			3,372.1	3,372.1	0.0
1.1.3.3.1 - Project Engineering	5	0.0	0.0	0.0	0.0	0.0	400.7	383.3	79.8	-17.4	303.5			400.7	400.7	0.0

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		BUDGETED COST		ACTUAL	VARIANCE		BUDGETED COST		ACTUAL	VARIANCE						
		WORK SCHEDULED	WORK PERFORMED	COST WORK PERFORMED	SCHEDULE	COST	WORK SCHEDULED	WORK PERFORMED	COST WORK PERFORMED	SCHEDULE	COST	COST VARIANCE	BUDGET	BUDGETED	ESTIMATED	VARIANCE
(1)		(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
a. WBS ELEMENT																
1.1.3.3.11 - CUMM ACTUALS THRU MAY-02	5	0.0	0.0	0.0	0.0	0.0	2,275.3	2,275.3	2,226.1	0.0	49.2			2,275.3	2,275.3	0.0
1.1.3.3.2 - Engineering Design	5	0.0	0.0	0.0	0.0	0.0	109.6	109.6	488.9	0.0	-379.3			109.6	109.6	0.0
1.1.3.3.3 - Mechanical Design	5	0.0	0.0	0.0	0.0	0.0	338.3	335.6	363.1	-2.7	-27.5			338.3	338.3	0.0
1.1.3.3.4 - Engineering Modeling & Analysis	5	0.0	0.0	0.0	0.0	0.0	5.9	5.9	83.2	0.0	-77.3			5.9	5.9	0.0
1.1.3.3.5 - Test & Acceptance Oversight	5	0.0	0.0	0.0	0.0	0.0	81.6	59.8	3.3	-21.7	56.5			81.6	81.6	0.0
1.1.3.3.6 - Lambda Plate R&D, Fab & Asssy	5	0.0	0.0	0.0	0.0	0.0	38.5	38.5	0.0	0.0	38.5			38.5	38.5	0.0
1.1.3.3.7 - Interface Requirement Mgmt.	5	0.0	1.9	0.0	1.9	1.9	38.3	38.3	5.6	0.0	32.7			38.3	38.3	0.0
1.1.3.3.8 - Fab & Acceptance Plans	5	0.0	0.0	0.0	0.0	0.0	5.9	5.9	17.1	0.0	-11.2			5.9	5.9	0.0
1.1.3.3.9 - Receiving at CERN	5	3.8	0.0	0.0	-3.8	0.0	73.7	19.5	142.0	-54.2	-122.5			77.9	77.9	0.0
1.1.4 - ABSORBERS	3	0.0	0.0	0.0	0.0	0.0	4,673.5	4,673.5	4,732.1	0.0	-58.6			4,673.5	4,673.5	0.0
1.1.4.1 - FABRICATION	4	0.0	0.0	0.0	0.0	0.0	3,004.4	3,004.4	3,030.6	0.0	-26.2			3,004.4	3,004.4	0.0
1.1.4.1.1 - IR NEUTRAL ABSORBER (TAN) FAB	5	0.0	0.0	0.0	0.0	0.0	1,379.2	1,379.2	1,284.3	0.0	94.9			1,379.2	1,379.2	0.0
1.1.4.1.2 - IR QUAD ABSORBER (TAS) FABRICATION	5	0.0	0.0	0.0	0.0	0.0	711.5	711.5	721.2	0.0	-9.7			711.5	711.5	0.0
1.1.4.1.5 - INSTRUMENTATION FAB	5	0.0	0.0	0.0	0.0	0.0	194.7	194.7	194.4	0.0	0.3			194.7	194.7	0.0
1.1.4.1.6 - ABSORBER ASSEMBLY	5	0.0	0.0	0.0	0.0	0.0	430.8	430.8	514.0	0.0	-83.2			430.8	430.8	0.0
1.1.4.1.7 - ABSORBER TEST	5	0.0	0.0	0.0	0.0	0.0	288.2	288.2	316.7	0.0	-28.5			288.2	288.2	0.0
1.1.4.2 - Shipping	4	0.0	0.0	0.0	0.0	0.0	155.1	155.1	97.8	0.0	57.3			155.1	155.1	0.0
1.1.4.2.1 - NEUTRAL ABSORBER (TAN) SHIPPING	5	0.0	0.0	0.0	0.0	0.0	114.3	114.3	61.4	0.0	52.9			114.3	114.3	0.0
1.1.4.2.2 - IR QUAD ABSORBER (TAS) SHIPPING	5	0.0	0.0	0.0	0.0	0.0	30.0	30.0	25.7	0.0	4.3			30.0	30.0	0.0
1.1.4.2.6 - INSTRUMENTATION SHIPPING	5	0.0	0.0	0.0	0.0	0.0	10.7	10.7	10.7	0.0	-0.0			10.7	10.7	0.0
1.1.4.3 - EDIA	4	0.0	0.0	0.0	0.0	0.0	1,456.7	1,456.7	1,537.6	0.0	-80.9			1,456.7	1,456.7	0.0
1.1.4.3.1 - IR NEUTRAL BEAM ABSORBER (TAN) EDIA	5	0.0	0.0	0.0	0.0	0.0	717.1	717.1	715.5	0.0	1.6			717.1	717.1	0.0
1.1.4.3.3 - QUAD ABSORBER (TAS) EDIA	5	0.0	0.0	0.0	0.0	0.0	507.7	507.7	590.2	0.0	-82.4			507.7	507.7	0.0
1.1.4.3.6 - INSTRUMENTATION EDIA	5	0.0	0.0	0.0	0.0	0.0	231.9	231.9	231.9	0.0	0.0			231.9	231.9	0.0
1.1.4.4 - Instrumentation	4	0.0	0.0	0.0	0.0	0.0	57.3	57.3	66.2	0.0	-8.9			57.3	57.3	0.0
1.3 - SC Wire & Cable	2	0.0	0.0	0.0	0.0	0.0	936.2	936.2	936.4	0.0	-0.2			936.2	936.2	0.0
1.3.2 - Cable Prod S'pt	3	0.0	0.0	0.0	0.0	0.0	936.2	936.2	936.4	0.0	-0.2			936.2	936.2	0.0
1.3.2.1 - Dipole Cable RD	4	0.0	0.0	0.0	0.0	0.0	298.1	298.1	299.6	0.0	-1.4			298.1	298.1	0.0
1.3.2.1.1 - CORED CABLES	5	0.0	0.0	0.0	0.0	0.0	36.5	36.5	36.5	0.0	0.0			36.5	36.5	0.0
1.3.2.1.2 - COMPACTION CABLES	5	0.0	0.0	0.0	0.0	0.0	43.0	43.0	43.0	0.0	0.0			43.0	43.0	0.0
1.3.2.1.3 - COATED CABLES	5	0.0	0.0	0.0	0.0	0.0	34.0	34.0	34.0	0.0	-0.0			34.0	34.0	0.0
1.3.2.1.4 - SUPPORT ITEMS	5	0.0	0.0	0.0	0.0	0.0	184.6	184.6	186.1	0.0	-1.4			184.6	184.6	0.0
1.3.2.2 - Cable Meas S'pt	4	0.0	0.0	0.0	0.0	0.0	428.4	428.4	423.3	0.0	5.1			428.4	428.4	0.0
1.3.2.3 - Cable Mfg S'pt	4	0.0	0.0	0.0	0.0	0.0	9.7	9.7	5.5	0.0	4.2			9.7	9.7	0.0

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		WORK SCHEDULED	WORK PERFORMED	COST WORK PERFORMED	SCHEDULE	COST	WORK SCHEDULED	WORK PERFORMED	COST WORK PERFORMED	SCHEDULE	COST	COST VARIANCE	BUDGET	BUDGETED	ESTIMATED	VARIANCE
(1)		(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
a. WBS ELEMENT																
1.3.2.4 - EDIA	4	0.0	0.0	0.0	0.0	0.0	200.0	200.0	208.1	0.0	-8.1			200.0	200.0	0.0
1.4 - Accel Physics	2	0.0	0.0	0.0	0.0	0.0	626.2	626.2	628.3	0.0	-2.0			626.2	626.2	0.0
1.4.3 - LBNL Physics	3	0.0	0.0	0.0	0.0	0.0	626.2	626.2	628.3	0.0	-2.0			626.2	626.2	0.0
1.4.3.1 - ACCELERATOR PHYSICS	4	0.0	0.0	0.0	0.0	0.0	535.2	535.2	537.3	0.0	-2.0			535.2	535.2	0.0
1.4.3.4 - FY97 Costs	4	0.0	0.0	0.0	0.0	0.0	91.0	91.0	91.0	0.0	-0.0			91.0	91.0	0.0
1.5 - Project Mgt	2	2.7	2.7	0.4	0.0	2.3	1,525.3	1,525.3	1,456.6	0.0	68.7			1,531.2	1,531.2	0.0
1.5.1 - US LHC PM	3	2.7	2.7	0.3	0.0	2.4	33.8	33.8	21.6	0.0	12.2			39.6	39.6	0.0
1.5.1.5 - LBNL C/S MANAGER	4	2.7	2.7	0.3	0.0	2.4	33.8	33.8	21.6	0.0	12.2			39.6	39.6	0.0
1.5.4 - LBNL PM	3	0.0	0.0	0.1	0.0	-0.1	1,491.5	1,491.5	1,435.0	0.0	56.5			1,491.5	1,491.5	0.0
1.5.4.1 - EDIA	4	0.0	0.0	0.0	0.0	0.0	791.4	791.4	807.1	0.0	-15.7			791.4	791.4	0.0
1.5.4.2 - Travel	4	0.0	0.0	0.0	0.0	0.0	474.2	474.2	391.0	0.0	83.2			474.2	474.2	0.0
1.5.4.2.1 - QUADS TRAVEL	5	0.0	0.0	0.0	0.0	0.0	9.3	9.3	11.6	0.0	-2.3			9.3	9.3	0.0
1.5.4.2.2 - CRYO TRAVEL	5	0.0	0.0	0.0	0.0	0.0	137.4	137.4	79.6	0.0	57.8			137.4	137.4	0.0
1.5.4.2.3 - ABSORBER TRAVEL	5	0.0	0.0	0.0	0.0	0.0	73.5	73.5	63.9	0.0	9.6			73.5	73.5	0.0
1.5.4.2.4 - CABLE TRAVEL	5	0.0	0.0	0.0	0.0	0.0	7.0	7.0	3.0	0.0	4.0			7.0	7.0	0.0
1.5.4.2.5 - ACCEL PHYSICS TRAVEL	5	0.0	0.0	0.0	0.0	0.0	127.6	127.6	127.8	0.0	-0.3			127.6	127.6	0.0
1.5.4.2.6 - PROJ MANAGEMENT TRAVEL	5	0.0	0.0	0.0	0.0	0.0	119.6	119.6	105.0	0.0	14.5			119.6	119.6	0.0
1.5.4.3 - General Expenses	4	0.0	0.0	0.1	0.0	-0.1	226.0	226.0	236.9	0.0	-11.0			226.0	226.0	0.0
1.5.4.3.1 - GENERAL PROJECT EXP	5	0.0	0.0	0.1	0.0	-0.1	226.0	226.0	236.9	0.0	-11.0			226.0	226.0	0.0
[OH] - OVERHEAD	2	0.2	0.1	0.0	-0.2	0.1	265.6	264.3	281.9	-1.4	-17.7			265.6	265.6	0.0
b. COST OF MONEY	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0	0.0
c. GENERAL & ADMINISTRATIVE	2	1.3	1.0	0.4	-0.3	0.6	2,350.4	2,331.5	2,319.4	-18.9	12.1			2,352.4	2,352.4	0.0
d. UNDISTRIBUTED BUDGET	2													0.0	0.0	0.0
e. SUBTOTAL *(Performance Measurement Baseline)*		148.1	119.0	205.4	-29.1	-86.3	20,733.5	20,502.5	20,548.7	-231.0	-46.3	0.0	0.0	20,802.8	20,802.8	0.0
f. MANAGEMENT RESERVE	2												0.0	0.0		
g. TOTAL		148.1	119.0	205.4	-29.1	-86.3	20,733.5	20,502.5	20,548.7	-231.0	-46.3	0.0	0.0	20,802.8		
9. RECONCILIATION TO CONTRACT BUDGET BASE																
a. VARIANCE ADJUSTMENT										0.0	0.0					
b. TOTAL CONTRACT VARIANCE										-231.0	-46.3			20,802.8	20,802.8	-0.0