

LCLS MILESTONE DICTIONARY

MS #	MS ID	Milestone Title	Date	Act?	Milestone Completion Criteria
Level 1 Milestones					
1	MS1_PM000	CD0 - Approve Mission Need	6/17/2001	A	Completion of this milestone is defined as an approved Decision document signed by the Acquisition Executive (SC-1) from DOE.
2	MS1_PM005	CD1 - Approve Preliminary Baseline Range	10/16/2002	A	Completion of this milestone is defined as an approved Decision document signed by the Acquisition Executive (SC-1) from DOE.
3	MS1_PM015	CD2a - Approve Long-Lead Procurement Budget	7/30/2004	A	Completion of this milestone is defined as an approved Decision document signed by the Acquisition Executive (SC-1) from DOE.
4	MS1_PM025	CD3a - Approve Start of Long Lead Procurement	10/29/2004	A	Completion of this milestone is defined as an approved Decision document signed by the Acquisition Executive (SC-1) from DOE.
5	MS1_PM020	CD2b - Approve Performance Baseline	3/31/2005	A	Completion of this milestone is defined as an approved Decision document signed by the Acquisition Executive (SC-1) from DOE.
6	MS1_PM030	CD3b - Approve Start of Construction	2/28/2006		Completion of this milestone is defined as an approved Decision document signed by the Acquisition Executive (SC-1) from DOE.
7	MS1_PM035	CD4 - Approve Start of Operations	3/31/2009		Completion of this milestone is defined as an approved Decision document signed by the Acquisition Executive (SC-1) from DOE.
Level 2 Milestones					
Program Management					
8	MS2_PM045	Prelim Safety Assessment (PSAD) Doc Complete	4/30/2004	A	This milestone is complete when the DOE Stanford Site Office has received the PSAD report from LCLS.
9	MS2_PM035	DOE External Independent Review (EIR) Complete	6/15/2004	A	This milestone is complete when the LCLS team has conducted an External Independent Review (EIR) of the LCLS.
10	MS2_PM040	Fire Hazard Analysis Approved	5/31/2005		This milestone is complete when the DOE Stanford Site Office accepts the FHA report and issues their acceptance letter.
11	MS2_PM055	Prelim Safety Assessment (PSAD) Doc Approved	2/28/2006		This milestone is complete when the DOE Stanford Site Office accepts the PSAD report and issues their acceptance letter.
12	MS2_PM005	Final Safety Analysis Document (FSAD) Approved	3/31/2008		This milestone is complete when the DOE Stanford Site Office accepts the FSAD report and issues their acceptance letter.
13	MS2_PM030	LCLS ARR Complete (BTH thru FEH)	6/9/2008		This milestone is complete when the DOE Stanford Site Office accepts the ARR report and issues a letter authorizing operation.
Injector System					
14	MS2_IJ0027	Injector Laser Commissioning Review Complete	9/18/2006		This milestone establishes the plan for commissioning the Injector Laser.
15	MS2_IJ0010	Start Injector Commissioning (Drive Laser)	11/20/2006		This milestone is complete when the gun and accelerator sections and their RF systems are installed and RF conditioning begins.
16	MS2_IJ0030	Injector Accelerator Readiness Review (ARR) Comp	5/18/2007		This milestone is complete when the DOE Stanford Site Office accepts the ARR report and issues a letter authorizing operation.

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17	MS2_IJ0020	Start Injector Commissioning(UV Beam to Cathode)	7/20/2007		This milestone is complete when the first UV beam from the drive laser is sent to the gun photocathode.
Linac System					
18	MS2_LN020	Linac ARR (Li20-Li30) Complete	1/3/2008		Completion of this milestone allows electron beam to be injected onto the Linac Axis.
19	MS2_LN025	Start Linac (Li20-Li30) Commissioning	3/4/2008		This milestone starts commissioning of the Linac from Sector 20 through Sector 30 including BC1 and BC2.
20	MS2_LN015	Start Linac-to-Undulator (LTU) Commissioning	6/9/2008		This milestone is complete when electrons are delivered to LTU and LTU systems are first activated.
Undulator System					
21	MS2_UN010	Delivery of Undulator 1st Articles to MMF	7/3/2006		This milestone is complete when the undulator 1st articles have been received at SLAC.
22	MS2_UN005	MMF Qualified & Ready to Measure Prod Undulators	8/28/2006		This milestone marks the successful commissioning of the MMF, incl. the completion of the calibration of the test stands, and the acceptance sign-off by the APS project physicist.
23	MS2_UN025	Start Undulator Commissioning (1st Light)	8/18/2008		1st beam through the undulator system.
X-Ray Transport, Optics and Diagnostics System					
24	MS2_XT005	Start XTOD Commissioning	8/18/2008		This milestone is complete when x-rays are first delivered to the x-ray transport system.
X-Ray Endstations					
25	MS2_XE015	2-D Pixel Detector Production Start	1/3/2008		This milestone will begin after the Specifications, Design and Prototype has been accepted for Production.
26	MS2_XE005	Start XES Commissioning	8/18/2008		This milestone is complete when x-rays are first delivered to the XES system.
Conventional Facilities					
27	MS2BO_005	Sector 20 Alcove Beneficial Occupancy	7/21/2006		This milestone is complete when the LCLS CF group can release the facility or portion thereof for use by the system end user, prior to final acceptance.
28	MS2BO_025	Research Yards Mods Beneficial Occupancy	10/20/2006		This milestone is complete when the LCLS CF group can release the facility or portion thereof for use by the system end user, prior to final acceptance.
29	MS2BO_050	Near Experimental Hall Beneficial Occupancy	6/18/2007		This milestone is complete when the LCLS CF group can release the facility or portion thereof for use by the system end user, prior to final acceptance.
30	MS2BO_035	Undulator Facility Beneficial Occupancy	7/2/2007		This milestone is complete when the LCLS CF group can release the facility or portion thereof for use by the system end user, prior to final acceptance.
31	MS2BO_020	Linac Facility Beneficial Occupancy	7/11/2007		This milestone is complete when the LCLS CF group can release the facility or portion thereof for use by the system end user, prior to final acceptance.
32	MS2BO_060	Far Experimental Hall Beneficial Occupancy	9/4/2007		This milestone is complete when the LCLS CF group can release the facility or portion thereof for use by the system end user, prior to final acceptance.

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33	MS2BO_040	Front End Enclosure Beneficial Occupancy	10/5/2007		This milestone is complete when the LCLS CF group can release the facility or portion thereof for use by the system end user, prior to final acceptance.
34	MS2BO_055	X-Ray Transport Beneficial Occupancy	10/12/2007		This milestone is complete when the LCLS CF group can release the facility or portion thereof for use by the system end user, prior to final acceptance.
35	MS2BO_030	Beam Transport Hall Beneficial Occupancy	1/3/2008		This milestone is complete when the LCLS CF group can release the facility or portion thereof for use by the system end user, prior to final acceptance.
36	MS2BO_065	Central Lab Office Ctr Beneficial Occupancy	11/10/2008		This milestone is complete when the LCLS CF group can release the facility or portion thereof for use by the system end user, prior to final acceptance.
Level 3 Milestones					
Program Management					
37	MS3_PM025	Advanced Procurement Management Plan Complete	2/28/2004	A	This milestone is complete when a draft of the LCLS Advance Procurement Plan is complete.
38	MS3_PM031	Resource Loaded Cost & Schedule (Final) Complete	4/30/2004	A	This milestone is complete when the LCLS cost and schedule TEC and TPC baselines have been accepted by the LCLS Project Office.
39	MS3_PM035	1st Monthly Report (with Earned Value) Submitted	4/30/2004	A	This milestone is complete when the LCLS submits its first monthly report on the LCLS TEC and TPC using earned-value assessments.
40	MS3_PM042	Risk Management Plan Complete	4/30/2004	A	This milestone is complete when a draft of the LCLS Preliminary Safety Assessment Document is complete.
41	MS3_PM045	Prelim Safety Assessment Doc (PSAD) Submitted	4/30/2004	A	This milestone is complete when a draft of the LCLS Risk Management Plan is complete.
42	MS3_PM050	Project Mgmt Control Syst (PMCS) Review Complete	4/30/2004	A	This milestone is complete when the LCLS team has conducted an independent review of the LCLS PMCS System and Controls.
43	MS3_PM055	Project Mgmt Plan Complete	4/30/2004	A	This milestone is complete when a draft of the LCLS Project Management Plan is complete.
44	MSC_PM000	CRIT: Start Procurement Package - PMCS Support	10/1/2004	A	This milestone is complete when a draft Advance Procurement Plan for the PMCS Support Award is submitted to SLAC Purchasing.
45	MS3_PM040	Fire Hazard Analysis Review @ SLAC	4/29/2005		This milestone is complete when the DOE Stanford Site Office accepts the FHA report and conducts a review using the appropriate peer review at SLAC.
46	MSBS_115	FY05 Shutdown Start: HW Req'd for Installation	10/3/2005		This milestone is complete when date is reached; This date is defined by SLAC, all FY05 HW Req'd for installation must be ready
47	MSBS_120	FY05 Shutdown Over	10/31/2005		This milestone is complete when the date is reached; defines the end of the FY05 installation activities
48	MSBS_125	FY06 Shutdown Start: HW Req'd for Installation	8/1/2006		This milestone is complete when date is reached; This date is defined by SLAC, all FY06 HW Req'd for installation must be ready
49	MSBS_130	FY06 Shutdown Over	11/30/2006		This milestone is complete when the date is reached; defines the end of the FY06 installation activities

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50	MSBS_135	FY07 Shutdown Start: HW Req'd for Installation	9/4/2007		This milestone is complete when date is reached; This date is defined by SLAC, all FY07 HW Req'd for installation must be ready
51	MSBS_140	FY07 Shutdown Over	11/30/2007		This milestone is complete when the date is reached; defines the end of the FY07 installation activities
52	MS3_PM030	LCLS ARR Complete (BTH thru FEH)	5/9/2008		This milestone is complete when the DOE Stanford Site Office accepts the ARR report and issues a letter authorizing operation.
53	MSBS_145	FY08 Shutdown Start	6/2/2008		This milestone is complete when date is reached; This date is defined by SLAC
54	MSBS_150	FY08 Shutdown Over	8/29/2008		This milestone is complete when date is reached; This date is defined by SLAC
Injector System					
55	MSC_IJ000	CRIT: Release RFP for Drive Laser	10/15/2004	A	This milestone is complete when the RFP for the injector drive laser is released.
56	MS3_IJ095	Award of Drive Laser Contract Complete	5/17/2005		This milestone is complete when the drive laser contract is awarded to the selected vendor
57	MS3_IJ010	Wall Region Installation Complete	12/16/2005		This milestone is complete when the Injector beamline segment that crosses through the two shielding walls and is bounded by vacuum valves is installed in the accelerator housing.
58	MS3_CT150	Personnel Protection Design Complete	3/10/2006		This milestone is complete when the PPS system has been reviewed by both citizen and external review committees.
59	MS3_CT155	Machine Protection System First Article Complete	3/10/2006		This milestone is complete when the MPS has been built, tested, and is ready to deploy
60	MS3_IJ020	Heater Region Installation Complete	4/21/2006		This milestone is complete when the Injector beamline segment between the accelerator structures and the inner shielding wall is installed in the injector housing. This does not include the heater itself. The heater is installed in the heater region of a
61	MS3_IJ005	Drive Laser Available for Integration	5/19/2006		This milestone is complete when the drive laser has been installed and is available for integration into the injector system.
62	MS3_IJ085	Accelerator Region Installation Complete	7/18/2006		This milestone is complete when the Injector beamline segment including both accelerator structures is installed in the Injector housing.
63	MS3_IJ125	RF Gun Ready for Installation	8/11/2006		This milestone is complete when the RF gun is installed and aligned on the beamline.
64	MS3_IJ0027	Injector Laser Commissioning Review Complete	8/18/2006		This milestone establishes the plan for commissioning the Injector Laser.
65	MS3_IJ080	Gun Region Installation Complete	8/18/2006		This milestone is complete when the cathode load lock system is ready for installation on the gun.
66	MS3_IJ032	Laser Tables & Optical Paths Installation Comp	8/21/2006		This milestone is complete when the LCLS Drive Laser tables and Optical Paths have been installed.

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67	MS3_IJ0010	Start Injector Commissioning (Drive Laser)	10/18/2006		This milestone complete when the drive is installed and tested by the vendor at S20 Alcove.
68	MS3_IJ100	Insertion Region Installation Complete	10/27/2006		This milestone is complete when the Injector beamline segment that connects the injector wall beamline to the SLAC Accelerator is installed.
69	MS3_IJ105	Spectrometer Installation Complete	10/27/2006		This milestone is complete when the Injector straight-ahead-spectrometer is installed.
70	MS3_IJ110	Injector RF Subsystem Installation Complete	3/28/2007		This milestone is complete when the RF subsystem including the wave guide is installed.
71	MS3_IJ0030	Injector Accelerator Readiness Review (ARR) Comp	4/20/2007		This milestone is complete when the DOE Stanford Site Office accepts the ARR report and issues a letter authorizing operation.
72	MS3_CT090	PNET Integration Complete	5/30/2007		This milestone is complete when the existing SLC timing system information is put onto the LCLS Event Generator
73	MS3_IJ0020	Start Injector Commissioning(UV Beam to Cathode)	6/20/2007		This milestone is complete when the first UV beam from the drive laser is sent to the gun photocathode.
74	MS3_CT070	Injector Controls Installation Complete	10/19/2007		Milestone is complete when the LINAC control system commissioning is complete.
75	MS3_IJ115	Cathode Processing Station Installation Complete	11/6/2007		This milestone is complete when the Cathode Processing Station is installed in the Load Lock room at S20.
76	MS3_IJ120	Laser Heater Installation Complete	11/26/2007		This milestone is complete when the laser heater vacuum chamber, undulator and optical system are installed.
Linac System					
77	MSC_LN005	CRIT: Release RFP X-Band Klystron	2/25/2005		This milestone is complete after FY05 Long Lead Procurement funds are received and The RFP has been released.
78	MSC_LN000	CRIT: Rel RFP Linac Cableplant Installation Proc	11/8/2005		This milestone is complete after FY06 construction funds are received and once the cable plant installation contract RFP is released.
79	MSBS_090	Shutdown of FFTB Operations	6/1/2006		This milestone is complete when the FFTB ceases operations and is ready to be decommissioned and dismantled in preparation of the LCLS.
80	MS3_LN016	BC1/BC2 Magnets Ready for Installation	7/3/2006		This milestone is complete when the LCLS Linac BC2, components have been installed and checked out.
81	MS3_LN030	Linac Commissioning Review Complete - S20-30	10/3/2006		This milestone is complete when the commissioning plan for Linac sector 20 through 30 is formulated and has been formally reviewed and accepted.
82	MS3_LN010	X-Band Klystron Ready for Installation	11/22/2006		This milestone is complete when the fabrication and testing of the X-Band Klystron is complete.
83	MS3_LN012	BC1 Installation Complete	11/29/2006		This milestone is complete when LCLS Linac Subsystem BC1 meets minimum performance requirements.

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84	MS3_LN013	Start BC1 Commissioning	11/29/2006		This milestone is complete when electrons are delivered to BC1 and BC1 systems are first activated.
85	MS3_LN020	Linac ARR (Li20-Li30) Complete	12/3/2007		Completion of this milestone allows electron beam to be injected onto the Linac Axis.
86	MS3_LN011	BC2 Installation Complete	1/30/2008		This milestone is complete when LCLS Linac Subsystem BC2 meets minimum performance requirements.
87	MS3_LN025	Start Linac (Li20-Li30) Commissioning	2/4/2008		This milestone starts beam commissioning of the Linac from Sector 20 through Sector 30 including BC1 and BC2.
88	MS3_LN032	Linac Commissioning Review Complete - LTU	3/7/2008		This milestone is complete when the commissioning plan for Linac LTU is formulated and has been formally reviewed and accepted.
89	MS3_CT075	Linac Controls Ready for Installation	3/18/2008		This milestone is complete when the control system is ready to operate the LINAC
90	MS3_CT080	LTU Controls Ready for Installation	3/18/2008		This milestone is complete when the components for linac LTU controls are ready for installation
91	MS3_LN055	E-Dump Component Installation Complete	4/25/2008		This milestone is complete when the LCLS Linac E-Dump components have been installed and checked out.
92	MS3_LN035	LTU Component Installation Complete	5/7/2008		This milestone is complete when the LCLS Linac LTU components have been installed and checked out.
93	MS3_LN015	Start Linac-to-Undulator (LTU) Commissioning	5/9/2008		This milestone starts after installation of the LTU is complete and the beam authorization sheet for LTU is signed.
Undulator System					
94	MSC_UN005	CRIT: Release RFP Ti Strongback	1/14/2005		Comments of the internal design review have been incorporated into the bid package for the Ti Strongbacks and the RFP has been released.
95	MSC_UN015	CRIT: Release RFP Magnet Poles	3/22/2005		The RFP for the procurement of the magnet poles has been released..
96	MSC_UN010	CRIT: Release RFP Magnet Blocks	4/13/2005		The RFP for the procurement of the magnet blocks has been released.
97	MSC_UN020	CRIT: Release RFP Magnet Assemblies - 1st Art	4/14/2005		The RFP for the procurement of the Mag Assy & Supt has been released.
98	MS3_UN028	Award of 1st Articles Mag Assy to Vendors Comp	8/9/2005		The award for the 1st article magnet assembly has been made to a vendor.
99	MSC_UN030	CRIT: Release RFP - Fixed Supports	10/17/2005		This milestone is complete when the RFP for the Undulator supports has been released.
100	MSC_UN016	CRIT: Release RFP - Quadrupoles	2/28/2006		Thr RFP for the procurement of the quadrupoles has been released.

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101	MS3_UN018	Undulator Mock-up Completed	4/28/2006		A complete mock-up of the undulator has been assembled and preliminary tests have begun. The 2nd undulator mock-up will include the fixed support, the cradle assembly with undulator or undulator equivalent and all other actual or prototype
102	MS3_UN006	1st Article Vendor A Undulator 1 Rcvd @ SLAC	6/2/2006		1st article undulator from vendor A has arrived at SLAC.
103	MS3_UN010	1st Article Vendor B Undulator 2 Rcvd @ SLAC	6/2/2006		1st article undulator from vendor B has arrived at SLAC
104	MS3_UN005	MMF Qualified & Ready to Measure Prod Undulators	7/28/2006		This milestone marks the successful commissioning of the MMF, incl. the completion of the calibration of the test stands, and the acceptance sign-off by the APS project physicist.
105	MS3_UN015	25% production undulators received	7/28/2006		The 10th production undulator has been received at SLAC.
106	MS3_UN022	50% production undulators received	10/17/2006		The 20th production undulator has been received at SLAC.
107	MS3_UN027	75% production undulators received	1/3/2007		The 30th production undulator has been received at SLAC.
108	MS3_UN040	Hydrostatic Level System Complete	3/2/2007		This milestone marks the date when the HLS is ready to take measurements.
109	MS3_UN029	Undulator Production Units (33) Received	3/9/2007		This milestone is complete when the 33rd production undulator has been received at SLAC.
110	MS3_UN042	Wire Monitoring System Complete	3/7/2008		This milestone marks the date when the WMS is ready to take measurements.
111	MS3_UN020	Undulator System Installation Complete	7/17/2008		All undulator system installation, alignment, and basic checkout is complete, and the system is ready for beam.
112	MS3_UN025	Start Undulator Commissioning (1st Light)	7/18/2008		1st beam through the undulator system
X-Ray Transport, Optics and Diagnostics System					
113	MS3_XT035	Spectral Measurement Design Review Complete	6/7/2006		This milestone is complete when the designs of the spectral measurement instruments have been certified as ready for procurement.
114	MS3_XT015	Flipper Mirror Design Review Complete	7/5/2006		This milestone is complete when the design package for the Flipper Mirror assembly has been approved as ready for procurement.
115	MS3_XT020	Gas Attenuator Design Review Complete	11/13/2006		This milestone is complete when the design package for the gas attenuator system has been approved as ready for procurement.
116	MS3_XT025	Solid Attenuator Ready to Ship to SLAC	6/12/2007		This milestone is complete when the solid attenuator system has been completed by the vendor and is ready to ship to SLAC.
117	MS3_XT043	Start XTOD Installation in Near Hall	7/23/2007		This milestone is complete when the NEH has been certified as ready for installation of x-ray transport and optics components.

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118	MSC_XT001	CRIT: Release RFP for Ion Gauges	9/6/2007		The RFP for the procurement of the Ion Gauges has been released.
119	MSC_XT002	CRIT: Release RFP for Ion Pumps	9/6/2007		The RFP for the procurement of the Ion Pumps has been released.
120	MS3_XT030	Indirect Imager Ready to Ship to SLAC	9/10/2007		This milestone is complete when the indirect imager system has been completed by the vendor and is ready to ship to SLAC.
121	MS3_XT007	Tunnel Mech/Vac Design Review Complete	10/26/2007		This milestone is complete when the LCLS X-TOD transport tunnel hardware design is complete.
122	MS3_XT009	Far Hall Mech/Vac Design Review Complete	12/10/2007		This milestone is complete when the design of the mechanical and vacuum assemblies of the Endstation Systems that are located in the Far Experimental Hall has been approved as ready for procurement.
123	MS3_XT040	Solid Attenuator Installation Complete	12/14/2007		This milestone is complete when the solid attenuator system has been installed, tested with x-rays, and certified as meeting system requirements.
124	MS3_XT045	Gas Attenuator Installation Complete	12/14/2007		This milestone is complete when the gas attenuator system has been installed, tested with x-rays, and certified as meeting system requirements.
125	MS3_XT055	XT Controls System Tests Complete	1/30/2008		Milestone is complete when the LINAC control system is ready to support commissioning.
126	MS3_XT080	Start Front End Enclosure Checkout	3/4/2008		This milestone is complete when the XTOD instrumentation has been installed through the FEE and it is possible to pump down the beam line through the FEE, and the XTOD instrumentation can be powered up.
127	MS3_XT000	FEE Mechanical/Vacuum Installation Complete	5/2/2008		This milestone is complete when the mechanical and vacuum components of the Endstation Systems have been installed and certified as operational in the FEE.
128	MS3_XT060	Total Energy Measurement Installation Complete	5/28/2008		This milestone is complete when the total energy measurement system has been installed, tested with x-rays, and certified as meeting system requirements.
129	MS3_XT066	Start Near Experimental Hall Checkout	6/12/2008		This milestone is complete when the XTOD instrumentation and vacuum systems have been installed in the first hutch, and it is possible to have an unobstructed vacuum pathway from the FEE through the first hutch, and the XTOD instrumentation can be powered on.
130	MS3_XT071	Start Far Experimental Hall Checkout	6/12/2008		This milestone is complete when the XTOD instrumentation and vacuum systems have been installed in the first hutch, and it is possible to have an unobstructed vacuum pathway from the tumble through the first hutch, and the XTOD instrumentation can be powered on.
131	MS3_XT050	Tunnel Mech/Vac Installation Complete	9/15/2008		This milestone is complete when the LCLS X-TOD transport tunnel hardware has been installed and is ready for x-rays.
X-Ray Endstations					
132	MS3_XE030	Complete 2-D X-Ray Detector Statement of Work	12/1/2004		This milestone is complete when a Statement of Work has been prepared for the 2-D X-ray Detector development program, and approved by project management.
133	MS3_XE035	Award Initial Funding for 2-D X-Ray Detector	3/11/2005		This milestone is complete when an MOU or contract is signed with an outside party, commencing the first phase of development of the 2-D X-ray detector.

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134	MS3_XE040	FY-06 Design Review - 2-D X-Ray Detector	11/20/2006		This milestone is complete upon completion (with written report) of the first formal design review of the 2-D X-ray detector development project.
135	MS3_XE012	XE Network Design Review Complete	5/11/2007		This milestone is complete when an external review of the network layout has been completed to provide the required capacity and response for communication to the operator, data archiving, machine protection, and 120 Hz fast feedback.
136	MS3_XE020	XE Laser System Final Design Review Complete	7/3/2007		This milestone is complete when the laser system final design review is finished and the XE laser contract is ready to be awarded.
137	MS3_XE025	Award NH and FH Oscillator Laser/Pump	8/10/2007		This milestone is complete when the first contract for the laser oscillator/pump system to be located in the NEH is signed.
138	MS3_XE017	Final Design Review Beamline Control Complete	9/4/2007		Milestone is complete when the external review of the hardware and software design for each of the beamline control components is finished.
139	MS3_XE060	Start XE Installation in Far Hall	10/8/2007		This milestone is complete upon initiation of installation of the Endstation Systems in the FEH.
140	MS3_XE015	2-D Pixel Detector Production Start	12/3/2007		This milestone will begin after the specifications, design and prototype has been accepted for production.
141	MS3_XE005	Start XES Checkout	3/4/2008		XES will begin checkout of mechanical, vacuum, network controls, PPS and MPS after beneficial occupancy notice is received.
142	MS3_XE080	XE Laser Operating in Near Hall	4/22/2008		This milestone is complete upon completion of acceptance tests for the laser oscillator and amplifier system in the NEH.
143	MS3_XE050	XE Laser Operating in Far Hall	5/14/2008		This milestone is complete upon completion of acceptance tests for the laser oscillator and amplifier system in the FEH.
144	MS3_XE065	XE Beamline Control Complete	7/8/2008		Milestone is complete when all beamline control components have been installed and tested and an acceptance test completed.
145	MS3_XE075	XE Mechanical & Vacuum Installation Complete	9/23/2008		This milestone is complete when the LCLS X-Ray Endstation beamline hardware is ready to accept x-rays.
146	MS3_XE070	Network & Cable Installation Complete	10/10/2008		Milestone is complete when the facility network is installed to the MCC and ready for operation
147	MS3_XE085	Complete Acceptance Tests for X-Ray Detectors	1/20/2009		This milestone is complete when acceptance tests have been completed for all the x-ray detectors of the Endstation Systems.

Conventional Facilities

148	MS3_CF000	A&E Serv (S20, MMF, MCC not incl) Title 1 Comp	4/30/2004	A	This milestone is complete after a Title I review has been completed and all action (or corrective action) items have been resolved.
149	MS3_CF002	A&E Serv Sector 20 Title 1 Complete	4/30/2004	A	This milestone is complete after a Title I review has been completed and all action (or corrective action) items have been resolved.
150	MS3_CF022	A&E Services MMF Title 1 Complete	4/30/2004	A	This milestone is complete after a final Title I review has been completed and all action (or corrective action) items have been resolved.

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151	MS3_CF010	A&E Services Sector 20 Title 2 Complete	3/18/2005	A	This milestone is complete after a final Title II review has been completed and all action (or corrective action) items have been resolved.
152	MSC_CF005	CRIT: Rel RFP T3 Const. Pkg. RF Hut & S20/Alcove	4/1/2005		This milestone is complete when the RFP for the Title 3 construction of the RF Hut and Alcove has been released.
153	MSC_CF010	CRIT: Release RFP T3 Construction Contract (MMF)	4/14/2005		This milestone is complete when the RFP for the Title 3 construction of the MMF has been released.
154	MSC_CF020	CRIT: Release RFP Construction Mgmt Pkg (CM)	5/4/2005		This milestone is complete when the RFP for the Construction Management Contract has been released.
155	MS3_CF015	A&E Services MMF Title 2 Complete	5/31/2005		This milestone is complete after a final Title II review has been completed and all action (or corrective action) items have been resolved.
156	MS3_CF065	Award of S20 Title 3 Complete	8/5/2005		This milestone is complete after a contract award has been issued to a successful General Contractor
157	MS3_CF066	Award of MMF Title 3 Complete	8/5/2005		This milestone is complete after a contract award has been issued to a successful General Contractor
158	MS3_CF060	Award of Construction Management Contract Complete	8/30/2005		This milestone is complete after a contract award has been issued to a successful Construction Management
159	MSC_CF000	CRIT: Release RFP T3 Construct (RY-CLOC)	9/6/2005		This milestone is complete when the pre-qualifications and pre-selection phases have commenced and the RFP has been released.
160	MSBO_010	Magnetic Msmt Facility(MMF) Beneficial Occupancy	11/23/2005		This milestone is complete when the LCLS CF group can release the facility or portion thereof for use by the system end user, prior to final acceptance.
161	MSBO_000	RF Hut Beneficial Occupancy	12/7/2005		This milestone is complete when the LCLS CF group can release the facility or portion thereof for use by the system end user, prior to final acceptance.
162	MS3_CF005	A&E Serv (S20, MMF, MCC not incl) Title 2 Comp	1/20/2006		This milestone is complete after a final Title II review has been completed and all action (or corrective action) items have been resolved.
163	MSC_CF006	CRIT: Release RFP T3 Construction Pkg (Linac)	1/24/2006		This milestone is complete when the RFP for the Title 3 construction of the Linac has been released.
164	MSBO_010	Magnetic Msmt Facility(MMF) Beneficial Occupancy	4/3/2006		This milestone marks the date when the MMF becomes available for the installation of equipment
165	MS3_CF020	A&E Services MCC Title 1 Comp	5/19/2006		This milestone is complete after a final Title I review has been completed and all action (or corrective action) items have been resolved.
166	MS3BO_005	Sector 20 Alcove Beneficial Occupancy	6/21/2006		This milestone is complete when the LCLS CF group can release the facility or portion thereof for use by the system end user, prior to final acceptance.
167	MSC_CF015	CRIT: Release RFP T3 Construction Package (MCC)	8/11/2006		This milestone is complete when the RFP for the Title 3 construction of the MMC has been released.
168	MS3BO_025	Research Yards Mods Beneficial Occupancy	9/21/2006		This milestone is complete when the LCLS CF group can release the facility or portion thereof for use by the system end user, prior to final acceptance.

LCLS MILESTONE DICTIONARY

MS #	MS ID	Milestone Title	Date	Act?	Milestone Completion Criteria
169	MS3_CF025	A&E Services MCC Title 2 Comp	9/27/2006		This milestone is complete after a final Title II review has been completed and all action (or corrective action) items have been resolved.
170	MS3BO_035	Undulator Facility Beneficial Occupancy	5/3/2007		This milestone is complete when the LCLS CF group can release the facility or portion thereof for use by the system end user, prior to final acceptance.
171	MSBO_015	Main Control Center (MCC) Beneficial Occupancy	5/16/2007		This milestone is complete when the LCLS CF group can release the facility or portion thereof for use by the system end user, prior to final acceptance.
172	MS3BO_050	Near Experimental Hall Beneficial Occupancy	5/18/2007		This milestone is complete when the LCLS CF group can release the facility or portion thereof for use by the system end user, prior to final acceptance.
173	MS3BO_020	Linac Facility Beneficial Occupancy	6/11/2007		This milestone is complete when the LCLS CF group can release the facility or portion thereof for use by the system end user, prior to final acceptance.
174	MS3BO_060	Far Experimental Hall Beneficial Occupancy	8/3/2007		This milestone is complete when the LCLS CF group can release the facility or portion thereof for use by the system end user, prior to final acceptance.
175	MS3BO_040	Front End Enclosure Beneficial Occupancy	9/5/2007		This milestone is complete when the LCLS CF group can release the facility or portion thereof for use by the system end user, prior to final acceptance.
176	MS3BO_055	X-Ray Transport Beneficial Occupancy	9/13/2007		This milestone is complete when the LCLS CF group can release the facility or portion thereof for use by the system end user, prior to final acceptance.
177	MSBO_045	Beam Dump Beneficial Occupancy	10/9/2007		This milestone is complete when LCLS Conventional Facilities allows installation activities to begin in the Beam Dump enclosure.
178	MS3BO_030	Beam Transport Hall Beneficial Occupancy	12/3/2007		This milestone is complete when the LCLS CF group can release the facility or portion thereof for use by the system end user, prior to final acceptance.
179	MS3BO_065	Central Lab Office Ctr Beneficial Occupancy	10/10/2008		This milestone is complete when the LCLS CF group can release the facility or portion thereof for use by the system end user, prior to final acceptance.