

US LHC Accelerator Project		Baseline Change Request
BCR Number	64	
WBS	1.1 Interaction Regions 1.2 RF Straight Section	
Title	Level 2 Delivery Milestones	
Change Control Level	2	
Originator	J. Strait	
Date	19 May 2004	

Description of change

The definitions of level 2 milestones for the delivery of US provided equipment to CERN are changed from arrival at CERN to readiness to ship to CERN. The needed arrival dates at CERN are set according to the CERN installation schedule, and are specified in Appendix 2 of the Implementing Arrangement, except that where the required delivery date is later than the end of FY2005, the date of 30 September 2005 has been used. The current level 2 delivery milestones are identical to those in Appendix 2. The new milestones are set to be 35 days before the required dates at CERN, based on the experience with shipping times for magnets and absorbers delivered to CERN by BNL and LBNL respectively. Where this would be beyond the end of FY2005, the date of 30 September 2005 is used. Specifically the old and new milestone definitions and dates are shown in Tables 1 and 2 respectively.

The dates used here are derived from the current official CERN installation schedule, LHC Project Document Number LHC-PM-MS-0005 rev. 1.7, 28 March 2003. CERN is currently working on a new version of their schedule, and these milestones will be updated, together with those specified in Appendix 2 of the Implementing Arrangement, once the new schedule is released.

Reason for change

Uncertainties related to CERN's installation and testing schedule, current backlog in testing at CERN, and international transport have caused the project, CERN and the JOG to reevaluate the appropriateness the basis of the "delivery milestones" established as US LHC Accelerator Project Controlled Milestones in 1998 as part of the Implementing Arrangement.

Based on recent discussions with CERN and the JOG, a decision was made to change the basis of the "delivery milestones." This approach is supported by CERN and the JOG and is consistent with changes to other project milestones made to decouple selected CERN and US LHC milestones in order to provide more control over activities necessary over project completion.

Changing the delivery basis of these Level 2 milestones has no impact on work scope or the parties' responsibilities.

Impact on other sub-systems

None.

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Impact on cost

None.

Impact on schedule

No impact to the CERN installation schedule or the US LHC Project Completion Milestone.

Other impacts (ES&H, etc.)

None.

Change Control Board recommendation (if required)

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Table 1. Current Level 2 Delivery Milestones.

Milestone No.	Title	Definition	Date
2-1.1-13C	Delivery of all inner triplet system components for IR8 left (MQX, DFBX, D1, D2)	Arrival at CERN of IR8 inner triplet system components (MQX, DFBX, D1, D2). MQX = Q1, Q2 and Q3.	24 Sep 04
2-1.1-16C	Delivery of all inner triplet system components for IR8 right (MQX, DFBX, D1, D2)	Arrival at CERN of IR8 Right inner triplet system components (MQX, DFBX, D1, D2). MQX = Q1, Q2, and Q3.	11 Mar 05
2-1.1-19C	Delivery of all inner triplet sys. components for IR1 left (MQX,DFBX,D2,TAS,TAN)	Arrival at CERN of IR1 Left inner triplet system components (MQX, DFBX, D2, TAS, TAN). MQX = Q1, Q2, and Q3.	11 Mar 05
2-1.1-23C	Delivery of all inner triplet sys. components for IR5 left (MQX,DFBX,D2,TAS,TAN)	Arrival at CERN of IR5 Left inner triplet system components (MQX, DFBX, D2, TAS, TAN). MQX = Q1, Q2, and Q3.	22 Jul 05
2-1.1-25C	Delivery of all inner triplet sys. components for IR5 right(MQX,DFBX,D2,TAS,TAN)	Arrival at CERN of IR5 Right inner triplet system components (MQX, DFBX, D2, TAS, TAN). MQX = Q1, Q2, and Q3.	30 Sep 05
2-1.1-26C	Delivery of all inner triplet system components for IR2 right (MQX, DFBX, D1, D2)	Arrival at CERN of IR2 Right inner triplet system components (MQX, DFBX, D1, D2). MQX = Q1, Q2, and Q3.	29 Oct 04
2-1.1-27C	Delivery of all inner triplet sys. components for IR1 right(MQX,DFBX,D2,TAS,TAN)	Arrival at CERN of IR1 Right inner triplet system components (MQX, DFBX, D2, TAS, TAN). MQX = Q1, Q2, and Q3.	30 Sep 05
2-1.1-32C	Delivery of all inner triplet system components for IR2 left (MQX, DFBX, D1, D2)	Arrival at CERN of IR2 Left inner triplet system components (MQX, DFBX, D1, D2). MQX = Q1, Q2, and Q3.	30 Sep 05
2-1.2-4C	Delivery of D3, D4 for IR4 right	Arrival at CERN of D3 and D4 for IR4 Right	22 Jul 05
2-1.2-6C	Delivery of D3, D4 for IR4 left	Arrival at CERN of D3 and D4B for IR4 Left	23 Sep 05

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Table 2. New Level 2 Delivery Milestones.

Milestone No.	Title	Definition	Date
2-1.1-13C	All inner triplet system components for IR8 left (MQX, DFBX, D1, D2) ready to ship	All IR8 left inner triplet system components (MQX, DFBX, D1, D2) approved for shipment from the relevant lab (FNAL for MQX, BNL for D1, D2) or vendor (DFBX). MQX = Q1, Q2 and Q3.	20 Aug 04
2-1.1-16C	All inner triplet system components for IR8 right (MQX, DFBX, D1, D2) ready to ship	All IR8 right inner triplet system components (MQX, DFBX, D1, D2) approved for shipment from the relevant lab (FNAL for MQX, BNL for D1, D2) or vendor (DFBX). MQX = Q1, Q2, and Q3.	4 Feb 05
2-1.1-19C	All inner triplet sys. components for IR1 left (MQX,DFBX,D2,TAS,TAN) ready to ship	All IR1 left inner triplet system components (MQX, DFBX, D2, TAS, TAN) approved for shipment from the relevant lab (FNAL for MQX, BNL for D2) or vendor (DFBX). MQX = Q1, Q2, and Q3.	4 Feb 05
2-1.1-23C	All inner triplet sys. components for IR5 left (MQX,DFBX,D2,TAS,TAN) ready to ship	All IR5 left inner triplet system components (MQX, DFBX, D2, TAS, TAN) approved for shipment from the relevant lab (FNAL for MQX, BNL for D2) or vendor (DFBX). MQX = Q1, Q2, and Q3.	17 Jun 05
2-1.1-25C	All inner triplet sys. components for IR5 right(MQX,DFBX,D2,TAS,TAN) ready to ship	IR5 right inner triplet system components (MQX, DFBX, D2, TAS, TAN) approved for shipment from the relevant lab (FNAL for MQX, BNL for D2) or vendor (DFBX). MQX = Q1, Q2, and Q3.	30 Sep 05
2-1.1-26C	All inner triplet system components for IR2 right (MQX, DFBX, D1, D2) ready to ship	All IR2 right inner triplet system components (MQX, DFBX, D1, D2) approved for shipment from the relevant lab (FNAL for MQX, BNL for D1, D2) or vendor (DFBX). MQX = Q1, Q2, and Q3.	24 Sep 04
2-1.1-27C	All inner triplet sys. components for IR1 right(MQX,DFBX,D2,TAS,TAN) ready to ship	All IR1 right inner triplet system components (MQX, DFBX, D2, TAS, TAN) approved for shipment from the relevant lab (FNAL for MQX, BNL for D2) or vendor (DFBX). MQX = Q1, Q2, and Q3.	30 Sep 05
2-1.1-32C	All inner triplet system components for IR2 left (MQX, DFBX, D1, D2) ready to ship	All IR2 left inner triplet system components (MQX, DFBX, D1, D2) approved for shipment from the relevant lab (FNAL for MQX, BNL for D1, D2) or vendor (DFBX). MQX = Q1, Q2, and Q3.	30 Sep 05
2-1.2-4C	D3, D4 for IR4 right ready to ship	All D3 and D4 for IR4 Right approved for shipment from BNL.	17 Jun 05
2-1.2-6C	D3, D4 for IR4 left ready to ship	All D3 and D4 for IR4 Left approved for shipment from BNL.	19 Aug 05

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Approvals

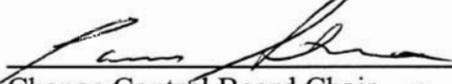
CERN approval of the changes in these milestones is documented in attachment 1.

WBS Level 3 Manager

Date

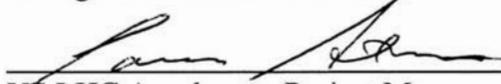
Laboratory Project Manager

Date



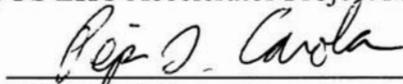
Change Control Board Chair

26 May 04
Date



US LHC Accelerator Project Manager

26 May 04
Date



DOE LHC Project Director

5/26/04
Date

Joint Oversight Group (DOE Co-Chair)

Date

Subject: RE: Delivery Milestones
From: Lyn Evans <Lyn.Evans@cern.ch>
Date: Fri, 21 May 2004 10:50:36 +0200
To: strait@fnal.gov

Hi Jim, I approve.
I will be at FNAL from 1 to 3 June. I hope that we can meet. Regards. Lyn

-----Original Message-----

From: strait@fnal.gov
Sent: Friday, 21 May, 2004 12:07 AM
To: Lyn Evans; Philip Bryant
Cc: Ranko Ostojic
Subject: Delivery Milestones

Lyn, Phil,

We have a set of milestones in Appendix 2 of the Implementing Arrangement, which are derived from the official LHC Installation schedule, and which specify the dates by which our equipment for each half IR must be delivered to CERN. We have a corresponding set of milestones that we use to track the progress of our Project and on which we report to DOE. Up to now, these two sets of milestones have been identical.

We have decided, jointly with DOE, that it would be a more appropriate measure of our progress for internal reporting purposes to make our milestones correspond to when equipment is shipped from the US labs. We have written a BCR to make this change, a copy of which is attached. We have set these milestones to be 35 days before the corresponding milestones in Appendix 2 of Implementing Arrangement, based on our experience with the shipping of BNL dipoles and LBNL absorbers so far. Our Project Management Plan requires that we obtain CERN approval for the changes of these milestones, since they are linked to your schedule. Your approval can be documented by a reply to this e-mail, and it will become an attachment to the BCR. Of course, if you have any questions or need further information before giving approval, please ask.

Best regards,
Jim