

LQCD – CHANGE REQUEST

Log number (provided by project office): [CR06_03]		
1) DATE: [origination date] June 13, 2006	2) Laboratory/WBS: [Highest level of WBS affected] Changes to the baseline established in the BY07 submission of Exhibit 300.	3) ORIGINATOR: Don Holmgren, FNAL
4) WBS DESCRIPTION OF PRIMARY AFFECTED TASKS: This change request addresses the movement of funds from DME category (equipment) to steady state category (labor and consumables).		
5) TECHNICAL DESCRIPTION AND PRIMARY MOTIVATION OF CHANGE: The primary motivations for this change request are to accommodate the higher than expected labor costs for the operations of the Lattice QCD facilities at all three laboratories, and to accommodate the identified need in FY07 for consumables (computer tapes). Both result in the movement of funds from the DME to the steady state category. Specifically, the original labor profile of 4.0, 4.4, and 4.4 FTE in FY07-FY09, respectively, will be changed to 4.85, 5.10, and 5.10 FTE. The increases reflect the need for additional system administration, reflecting the operational experience gained in FY06, plus 0.1 FTE each in FY07 and FY08 to perform directed prototyping in support of the hardware acquisitions in those years. The need for the latter arises from the news that the SciDAC-2 grant will not support prototyping efforts for this project (hardware prototyping was a major component of the SciDAC-1 grant). The total cost impact of the additional labor, plus a correction in the labor rate at BNL, is approximately \$116K, \$94K, and \$103K in FY07-FY09, respectively. The project must assume the costs of providing blank tapes to the storage facilities at JLab and FNAL. In FY07, an assessment of tape costs based upon estimates of storage requirements from the principal investigator of each allocated scientific project, including an extrapolation for the new allocations that will begin in June of 2007, resulted in a cost of approximately \$80K for 275 Tbytes of storage (\$290/Tbyte). The need to increase labor in FY07 was presented at the May 25, 2006, DOE Project Progress Review. In their preliminary comments, the reviewers supported the proposed manpower change, citing previous concerns from the 2005 review that the project was understaffed and noting that the reduction in delivered Tflops is minor compared to the science risk of insufficient support. The review committee recommended analyzing FY08 and FY09 manpower needs as well, advising the project to request at this time manpower increases for all three years.		
6) ASSESSMENT OF COST IMPACT (identify any change in resources needed as reflected in the WBS) Estimated M&S Cost Increase (\$): \$80K Estimated Labor Cost Increase (\$): \$116K (FY07), \$94K (FY08), \$103K (FY09) Estimated scientific impact (high, medium, and low): Low. In FY07, FY08, and FY09, the planned capacities of the new LQCD systems will drop as a result of this shift in funding by 0.3, 0.3, and 0.4 Tflops, respectively, an aggregate decrease of 8% over the life of the project. This will impact the “delivered” Tflops by 0.1, 0.4, and 0.7 Tflops-yrs, respectively, in FY07-FY09, and aggregate decrease of 3% over the life of the project.		
7) ASSESSMENT OF SCHEDULE IMPACT AND AFFECTED MILESTONES (identify slip or stretch of work or change in plan): This change request directly impacts the M&S and labor cost distribution. There is not net change to the total project funding. It will impact scientific deliverables (see discussion of scientific impact in #6 above).		
8) SECONDARY IMPACT AND OTHER COMMENTS: Upon approval for this CR, the planning WBS for FY07 will be revised and will be incorporated the LQCD WBS and baselined for FY07.		

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9) APPROVALS REQUIRED (approving authorities are PM, CCB (CCB chair signs for the CCB) and CPM)

LQCD Project Manager Don Holmgren _____ Signature / Date: July 3, 2006

LQCD CCB Chair Bob Sugar (see verification e-mails below) _____ Signature / Date: July 20, 2006

LQCD Contract Project Manager (not needed) _____ Signature / Date

10) APPROVAL STATUS [Filled by the Project Office]

CR approved (Yes/No)?

If yes, date of approval:

If no, provide a brief list of reasons for rejection :

Signature / Date

Once the approving authority makes the decision, this person approves it by signing in the section 9 of this form or rejects it by listing reasons for rejection and initializing it. Please send an e-mail verification to bakulb@fnal.gov and FAX the signed copy to 630 840-6345.

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Approval e-mails:

From: "Robert Sugar" <sugar@physics.ucsb.edu>
To: "Don Holmgren" <djholm@fnal.gov>
Cc: "Bakul Banerjee" <bakulb@fnal.gov>
Subject: Fwd: Revised LQCD change control request documents
Date: Thursday, July 20, 2006 9:57 AM

Hi Don,

With Vicky's approval, all members of the Change Control Board have now approved the two changes you recommended. They can be considered adopted. Thanks for your work on it.

Best,
Bob

Begin forwarded message:

> From: Victoria White <white@fnal.gov>
> Date: July 20, 2006 6:13:51 AM PDT
> To: "'Don Holmgren'" <djholm@fnal.gov>, "'Bob Sugar'"
> <sugar@savar.physics.ucsb.edu>, "'Tom Schlagel'"
> <schlagel@bnl.gov>, "'Steven Gottlieb'" <sg@indiana.edu>, "'Roy
> Whitney'" <whitney@jlab.org>
> Cc: "'Bakul Banerjee'" <bakulb@fnal.gov>
> Subject: RE: Revised LQCD change control request documents
>
> Dear Don and Bob,
>
> I approve of each of these changes.
>
> Vicky
>
>
> -----Original Message-----
> From: Don Holmgren [mailto:djholm@fnal.gov]
> Sent: Monday, July 03, 2006 4:38 PM
> To: Bob Sugar; Vicky White; Tom Schlagel; Steven Gottlieb; Roy Whitney
> Cc: Bakul Banerjee; Don Holmgren
> Subject: Revised LQCD change control request documents
>
>
> Dear LQCD CCB Members -
>
> When the LQCD CCB met by phone on June 14, we considered two change
> requests:
> o a schedule change for the Fermilab FY06 cluster, "Kaon"
> o shifts in fund distribution in the FY07-FY09 budgets
>
> Both requests were tabled pending further discussions.
>
> The "Kaon" cluster purchase order was issued to the vendor on June
> 19th.

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- > Last week, I learned from the "Kaon" cluster vendor that they will
- > be able
- > to complete delivery in August. The first rack of twenty nodes
- > will be
- > delivered to FNAL in mid-July, and an additional four racks will be
- > available by late July. The remaining racks will be delivered by
- > the end of
- > August.
- >
- > Given this delivery schedule, the revised date for "release to
- > production"
- > in the original change request of November 1, 2006, is still valid.
- >
- > As agreed during the June 14 CCB meeting, I have modified the
- > budget change
- > request so that only FY07 is affected. Also, the requested shift
- > in funds
- > from equipment to operating no longer includes labor for
- > prototyping (to be
- > covered by the base budgets) or the costs for tapes for storage.
- > JLab and
- > FNAL have agreed to cover projected tape costs in FY07 from their
- > existing
- > tape inventories and base budgets. We will re-examine tape costs next
- > spring.
- >
- > The requested shift in funds in FY07 is \$102K. The increase in labor
- > profile funded by this shift is 0.75 FTE (from 4.0 FTE to
- > 4.75 FTE). The decrease in computing capacity, resulting from the
- > decrease
- > of \$102K in equipment funds, is 0.2 TFlops (2.9 TFlops, instead of 3.1
- > TFlops). Because the FY06 clusters will exceed the goal for that
- > year (goal
- > was 2.0 TFlops, projected capacity is 0.3
- > (JLab) + 2.0 (FNAL) = 2.3 TFlops), this change will not affect the
- > "delivered TFlops-yrs" milestones.
- >
- > I have attached .doc and .pdf versions of both change requests.
- > Please send your approval or disapproval for each change request to
- > the
- > chairman, Bob Sugar.
- >
- > Don Holmgren
- >