

Dear All,

A meeting was finally held between Hallman and folks in ONP for discussing the KPP. The message from Helmut and subsequent message i.e SVs reply to Helmut, and two e-mail between Steve and me are enclosed below. Please read carefully. The bottom-line we have to make changes to the PEP and the ESAAB review will be delayed. I also believe we have to make changes to the schedule, but maybe this can be avoided. The way the verification is discussed by Helmut below, make the definition of KPP messy and dependent on scenario's, but maybe someone can help with a clever formulation. Most work on this will have to wait until next week since key people are out on office and on travel for the remainder of the week.

Flemming

**From:** Marsiske, Helmut [mailto:Helmut.Marsiske@science.doe.gov] **Sent:** Wednesday, September 14, 2011 7:12 PM **To:** Vigdor, Steven **Cc:** Gillo, Jehanne; Hallman, Timothy **Subject:** RE: Resolution of KPP issue for STAR HFT

Dear Steve,

we met today to discuss the issue of KPPs and, in particular, their verification method. There is general agreement that verification with beam is very much preferred. There is also an acknowledgement that making it a requirement would expose the project to schedule risks that are beyond anybody's control. Thus, a decision was taken to formulate the requirements such that every attempt shall be made to achieve installation of the HFT system prior to RHIC Run-14 and to attempt KPP verification with beam data. Should this fail, the KPPs could be demonstrated by a detailed, realistic full-system MC simulation, in conjunction with the measurement of pertinent sub-system functional parameters obtained through bench tests, surveys, and meeting design specifications. In case external circumstances do not allow (complete) HFT installation prior to Run-14 and MC demonstration becomes necessary, provisions should be made for extensive PXL-only testing with (Run-14) beam so as to verify as many aspects of that sub-system as possible (e.g., electronics, DAQ, mechanics, cooling, etc.).

All of this requires changes to the project documentation that cannot be finalized in time for a September 22<sup>nd</sup> ESAAB. We are cognizant of the CD-2/3 approval time pressures the project is under and will reschedule the ESAAB as quickly as possible.

In addition, we want to modify the approach to the post-CD-4 effort that is needed to turn the HFT into a fully-performing physics instrument, i.e., the effort that is needed to bring the HFT system to optimal performance with beam. We would like BNL to start developing a detailed, project-like plan to achieve this in a timely way, which should include (the equivalent of) a resource-loaded WBS, milestones, and deliverables. This plan would not be a prerequisite to CD-2/3 approval. We will give you further guidance on this in the near future.

Best,

Helmut

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On Sep 14, 2011, at 7:33 PM, Vigdor, Steven wrote:  
Dear Helmut,

Thanks for the resolution. Flemming and Lloyd will work with you to modify the documentation as needed. It sounds to me as though your resolution is consistent with the spirit of the KPP's as already considered, so I hope the modifications to the documentation remain minor and do not cause substantial delay in the ESAAB scheduling or reconsiderations by OPA. We will await your further guidance about just what you want for post-CD4 optimization of the HFT.

Best regards,  
Steve

Hi Steve,

I cannot say I am happy with this, since it does delay the ESAAB review and release of funds final fabrication. It does though acknowledge the external caveats that should not be in a project, and does not push the CD-4 dates any longer than nesc. I will be curious to see what OPA has to say one this. If done reasonable the formulation of the PEP and the KPP should not be too difficult.

I do believe we have to revisit and revise the budget since at minimum some people will have to stay on project through the run-14 run and until as possible CD-4 date late 2014, early 2015.

I see the last point as something we as a STAR and BNL, not the HFT project as such be responsible for. It is very much along the lines of the plans that Spiros Margetis has been initiating and that we have in fact been discussing with Helmut and Gulshan at the review. There is a good outline from what is required, and in fact Gulshan and Spiros discussed this at the review.

The commitments from institutions to such plans are of course very much subject to resources that the ONP allocates to the STAR institutions, and as such these commitments from both sides are needed to achieve this goal.

best regards  
Flemming

Hi Flemming,

I agree with you, and am also not quite happy with this outcome. But I do think we can make minimal changes to meet this criterion, since we have already said that the desired goal is clearly to test with beam, we just don't want to be held accountable for that at CD-4. Maybe this is the best we could hope for at this point – having delayed things this much, ONP had to request some change to justify their delays. Let's just get this done quickly.

Steve