Meeting on possible access via the PSB in order to do civil engineering work related to the upgrade of the LBE/LBS lines

Present:

J. Borburgh, J.-P. Corso, J. Coupard , K. Hanke, D. Hay, J.-B. Lallement, A. Lombardi, B. Mikulec, M. Vretenar, W. Weterings

The discussion was triggered by a L4BCC on 2 October 2012, during which scenarios for the upgrade of the LBE/LBS line were discussed. In terms of beam dynamics, installation of the LBS dump a scenario was preferred where the LBS line goes down into the earth which necessitates significant civil engineering work. As for the access to the area, two options were presented: access through the PS tunnel and access through the Booster. From a sheer transport point of view, the access via the Booster appears easier and is preferred. This meeting was meant to evaluate the feasibility of such an operation, and the impact on the work in the PSB.

W. Weterings presented the most recent planning for the work on the BI line. This planning includes only work done by the ABT group and not work done by other groups (e.g. magnets, beam instrumentation etc.). Furthermore it was made time driven (assuming that a slot of 3 months would be available) and not work driven. The planning considers only the modification of the Booster injection, and does not take into account the recent decision to do the injection upgrade and the 2 GeV upgrade in the same shutdown. This planning assumes 1 month of radiation cool-down and 3 months of work.

It was agreed that the existing planning needs to be updated with realistic time estimates and including all activities, and assuming that injection upgrade and 2 GeV upgrade will both happen in the same shutdown (LS2). It should not include for the moment a possible access to LBE/LBS through the Booster. All further discussions should use this planning as a basis. The new planning will be worked on during LS1 and not be available before mid-2013.

B. Mikulec will work with all involved equipment and infrastructure groups, D. Hay and P. Bonnal on the new planning.

During the discussion it became clear that the assumption that the BI line will be dismantled in the frame of the Booster injection upgrade anyway is not entirely correct. In fact, single components like the distributor and the septum will be replaced, but in particular the part of the line close to the wall is not planned to be dismantled and would therefore have to be added up to the work required for the LBE/LBS works.

The time needed to do the civil engineering work was roughly estimated at the L4BCC as follows:

- one month to dismount first part of BI line up to BI.DIS and take down the existing wall
- two months for civil engineering works on the LBE/LBS and transport of L4 equipment
- two weeks to build a new wall

In the discussion it was pointed out that during the removal of the wall and the civil engineering work no vacuum work can take place in parallel in the Booster because of the dust. However, work

in the SMV area can go on in parallel with the transport of L4 elements. The total time with no work possible in the PSB area can therefore be estimated to about two months. This time would therefore need to be added to the present planning. M. Vretenar will confirm the time lines with transport and with civil engineering, and will enquiry on the dust protection systems that can be put in place.

M. Vretenar and A. Lombardi state that arguments are very strong to retain the option where the LBS line is directed into the ground as baseline scenario in the LIU-L4 project.

K. Hanke and B. Mikulec state that both options to access via the PS and via the PSB need to be kept open for the moment and that a careful comparison taking into account scheduling and resources is needed. A final decision based on the additional time that is added on to the revised planning must be taken by the management.

We will tentatively meet again around mid-2013 when the constraints and time lines are better known.