

C-AD

Issued: April 12, 2013

DB

Radiation

Safety

Minutes of RSC Subcommittee of April 2, 2013

Committee

Subject: Review of VTF before first X-Ray Generation

Present: D. Beavis, B. Van Kuik, E.T. Lessard, R. Karol, A. Etkin, S. Pontieri, Q. Wu, J. Reich, and S. Belomestnykh

The VTF is expected to test the first cavity with RF by the end of the month. Materials describing the potential x-rays from the cavity being tested were described in a recent note¹ that had been distributed to the committee.

S. Belomestnykh presented a brief overview of the first cavity test, which is the 56 MHz cavity for RHIC. This is the first RF test of the cavity both on and off site. The company that fabricated the cavity did not have the facilities to conduct the tests at their site. Sergey noted (see slide 6) that the end of the cavity where electrons will be energetic is at the bottom and not the position used in the calculation of reference 1. There has been a change in orientation since the initial considerations for this cavity. This change in orientation will reduce the x-rays substantially below the numbers represented in reference 1.

D. Beavis provided a brief Powerpoint presentation showing photos of the shielding and excerpts from reference 1. The chipmunks will be positioned with one directly over the axis of the cavity on the roof. The other will be located near the utility port. After the meeting, Steve P. and D. Beavis met to discuss the specific locations. The dose rates are expected to be sufficiently low that the chipmunks are not required, but it is prudent to have them in place, since there have been no radiation measurements at the facility. The chipmunks are part of the facility design which is intended to test higher voltage cavities in the future. The posting of area in Building 912 which houses VTF is posted as a Radiation Area and not Controlled Area as presented in reference 3.

The Dewars for the small blockhouse are transported between the two blockhouses. This area will be posed as no entry without HP until radiation measurements are conducted on one or two of the cracks on VTF wall. RCTs can escort personnel through the corridor before the measurements are complete.

After the meeting the verbiage of the signs on ladders was discussed and new signs will be made and posted on the VTF walls.

The committee finds the notification of the rigging supervisor coupled with work planning to prevent the crane cab from being over the block house during the planned operations sufficient to protect personnel in the crane cab.

The committee recommends that VTF is ready to operate with the 56 MHz cavity in VTF once the RSC check-off list is completed.

References

1. D. Beavis, "Update on VTF Shielding and Radiation Protection", March 25, 2013; http://www.c-ad.bnl.gov/esfd/RSC/Memos/VTF_Sheilding_032513.pdf
2. S. Belomestnykh Powerpoint presentation, "[Introduction to the 56 MHz Cavity](#)", April 2, 2013.
3. D. Beavis PowerPoint Presentation, "[VTF](#)", April 2, 2013.

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Present
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RSC Minutes File
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