

Memo

date: January 6, 2010
to: RSC
from: D. Beavis 
subject: Exceptions Granted for RHIC Shielding

During the inspection of the RHIC shielding the engineers noted several items that were exceptions to the crack inspection criteria on the RSC check-off list. A list of these were provided to me as RSC Chair.

The exceptions noted by the engineers were inspected by me on the afternoon of January 5, 2011. After inspection and discussion with one of the inspecting engineers the items were signed off by the engineer and noted "with exceptions". I then initialed and dated that note. The following comments/justification is given below:

1. The half inch gap for the keyways is acceptable (IR2 truck door). The check-off list has the issue of cracks removed for this item since it is not a two layer wall.
2. The 4 ft cable ways (IR2) have a crack along the shield wall. These cracks have never had a specified size limit. Based on judgment these cracks should be fine.
3. The 4 O'clock north track entrance has a 0.5 inch gap where a limit of 3/8 inch is specified. The wall is now a two layered wall and the area is inside a locked fence.
4. A 0.5 inch vertical crack was found at the right side of the STAR shield wall about 12 feet above the ground. The area is posted as not to work at heights so the crack limit of 3/8 inch was waived. No permission should be granted at work near this crack above ground level with the beam on without further consideration of the potential dose in an beam accident.
5. There are a total of four exception noted for the PHENIX movable shield door. The bottom level crack was judged to be acceptable. The other three problem areas are very high in the building. The area will be posted as no working above 12 feet to avoid personnel getting in close proximity to the cracks. No waivers should be granted for access on the assembly hall roof with further evaluation of the cracks.
6. The 10 O'clock port has additional shielding to reduce cracks. This shielding was added some time in the past. Either the shielding drawings should be updated to include this shielding or a better solution would be to use non-curved blocks so that the cracks would not be an issue.
7. Also the shielding drawing for the IR2 truck portal needs to be finalized.

cc: A. Drees
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RSC RHIC File