

February 5, 2020



TO: Distribution
FROM: M. Quinn
SUBJECT: Radiation Safety Subcommittee Meeting of February 5, 2020

MEMBERS (P=Present, A=Absent):

S. Borton	A	M. Quinn, Chair	P	K. Graden	P	N. Chelidze	P
D. Cossairt	A	J. Compton	A	D. Hockin	P	D. Reitzner	A
D. Hahn	P	S. McGimpsey	P	W. Schmitt	A	M. Schoell, Deputy Chair	P
K. Vaziri	A	P. Sedory	A	M. Zientarski	P	K. Gollwitzer	P
R. Madiar	A	D. Newhart	P	C. Mansfield	A		

Others Present: J. Fulgham

New Business:

- RAF New Lab Technician** Jayson Hext started Monday 2/3/2020. Yay! Will have his office at RAF.
- NuMI Tanker** D. Hockin has first tanker full from NuMI condensate holding. Would like to have four tankers before shipping, to save on shipping fees (~\$6500 per trip). Plenty of room at Site 40 for totes to store before going into tankers.
- Radiological Worker Training** Practical factors training slides were updated, helps with flow and reducing time for “lecture” portion of the training and allowing for more time for the hands on portion. Classroom (Virtual) updates completed. Nicole Gee working on making word/PDF handout from the slides. Once that’s done, updated Classroom will go into production.

Old Business Carried Forward from the December 2019 Meeting

- ARR Muon Campus 13 W Beam** to the Diagnostic Absorber scheduled for February 18-20, 2020. SA with SARP. SAD about to go out for review. Commissioning & Ops plan with AD for review. Power supply testing & interlock work ongoing.
- Mixed Waste Shipment** D. Hockin reported that HCTT is planning on shipping out some mixed waste this year. Would like to use micro shield to survey. T. Busch has 2-3 drums of equipment, including phones that will need to be dismantled, and D. Hockin has a few pallets (CDF detector, lead shot from Meson Shield building across from SBSB, material from IB-2 Boneyard). Would like to have this shipment by mid-summer. Will need to coordinate time with RPO RCTs for their portion before start of 2020 shutdown, starting in June. **No update.**
- 10 CFR 835 Assessment** M. Quinn will schedule time in early February with D. Hahn, W. Schmitt, D. Newhart, and J. Compton to start planning this review. **No update.**

7. **LBNF S. McGimpsey** working on creating flowchart for surveying/training requirements for excavation on/near berms. Will try to present next Month. Joel reported ordering new “No Excavation” signs.
8. **Safety Assessment Document reviews** –M. Schoell reported Muon Campus SAD chapter being edited, will go to SAD Review Committee soon. Other chapters under review: MTA->ITA, 1039. **No update.**
9. **MI-40 sump pump failure** - The HPI for the MI-40 region sump pump failure is complete. J. Compton reported that he’s doing HPI presentation for IPS tomorrow. ~12 recommendations that need to get assigned in iTrack. **No update.**
10. **Origins of Alignment Surveys** –W. Schmitt reported that FRCM Ch 8 revisions drafted, ready to go out for review.
11. **IERC** –N. Chelidze reported that TLM studies were completed successfully, TLMs were interlocked and Running Conditions updated. Work allowed when beam running. Currently no work going on outside by contractors. **No update.**
12. **Shutdown** –N. Chelidze presented “Post Shutdown Dose Summary”. See attached slides.
13. **Review of Radiological Training** – See above.
14. **Contamination in Enclosures** – S. McGimpsey presentd “Contamination – A Summary – Past, Present & Future”. See attached slides.

J. Fulgham added some history: during Main Ring era, did contamination studies and did not see any Be-7 in MI. Be-7 started to be seen after installation of the marble around the collimators. Reminder to all to monitor areas that have marble in beamline in the enclosures: Booster absorber, 8 GeV collimators, MI-30 collimators, Delivery Ring (future for Mu2e), PIP-II (future), etc.

Questions/discussion:

- While working in the area, investigating movement of contamination during work, was any contamination found on PPE? Assumed that it would be, so automatically collected it in a rad bag. Evidence of contamination being picked up on shoecovers, but not tracked/redeposited.
- What is the lowest level of activity detectable on the multi-cell wipe counter? Still need to run counting statistics, and need calibration sources. Think it will be in the 1000dpm/100cm².
- Are we posted correctly (Contamination Area), and are we letting people into that area appropriately (PPE)? Posting – Booster, MI-30 & 8 GeV are posted as High Radiation Area and Contamination Area across the aisles. Have not seen anything in the High Contamination Area levels. However, aisles have been decontaminated and do not have contamination levels above Contamination Area thresholds. Beamline and floor beneath the beamline are still above Contamination Area thresholds, but ropes/chains/postings do not hold up in the higher radiation fields. Could depost aisle and place postings across the beamline magnets, but would need way to maintain postings while keeping RCT doses ALARA. Concerns that

posting ropes/chains/postings on just the beamline components, this doesn't ensure that the contamination is contained within the posted boundary.

- Is there a rigid barrier requirement? Yes – for over 1 R/hr. We have these levels in the MI-30 collimator region. Also for help controlling Contamination Areas to help ensure the contamination is contained within the posted boundary.
- Do the buildup studies (only one set of results back so far) point to needing to change practices now? No – we know we can clean it, we know that things won't get stirred up from walking through the area after decontamination.
- Will we need to decontaminate areas prior to any work in these areas? Would be an ALARA concern, especially for 1-2 day access days, because of limited cool-off and increased dose to RCTs.
- Will review RWPs to ensure consistent requirements for access into these areas.
- Currently waiting for 40 wipes from RAF from January surveys, and an additional ~70 wipes from February 5 surveys.
- Will continue to update RSSC during monthly meetings: build-up surveys, wipe-counter progress, etc.

15. **Revisions to Manual Chapters on Water and Air** – M. Quinn Ch 3 & 11 received comments from lab-wide review, received and reviewing comments. Will be ready to be published soon.
16. **SARP** – K. Gollwitzer finalizing Muon Campus shielding assessment, hope to be done this week. M. Quinn reported that MTA/ITA assessment will be to SARP soon.
17. **ITA** - S. McGimpsey reported that there is a thin spot in the shielding, which would be an issue for samples being on the “front porch” in front of the cave rather than inside the cave, so working on options with RPS and beamline physicists: rep rate limiter, lower operating limits, additional fencing, requiring all samples go in the cave/disallowing samples in the front porch area, etc. W. Schmitt reported that the rep rate limiter looks like the most feasible option. S. McGimpsey also working on what the requirements are for post-irradiation handling of the material (where to store, for how long, what restrictions are in place, etc.).

ALARA Topics

Operations

PLACE AND DATE FOR THE NEXT MEETING: THE NEXT MEETING WILL BE ON MARCH 4, 2020 AT 2:00 PM IN THE CROSS GALLERY HUDDLE.

Distribution via E-Mail–

Amber Kenney – Chief Safety Officer	Mike Bonkalski – Deputy Chief Safety Officer
Eric McHugh	Bridget Iverson
Raymond Lewis	Nicole Gee
Others Present	Subcommittee Members