

April 6, 2022



TO: Distribution  
FROM: M. Quinn  
SUBJECT: Radiation Safety Subcommittee Meeting of April 6, 2022

MEMBERS (P=Present, A=Absent):

S. Borton	A	K. Graden	A	D. Newhart	P	J. Scott	A
J. Compton	P	D. Hahn	A	M. Quinn, Chair	P	M. Vincent	P
C. DuVall	P	H. Hall	P	B. Russell	P	M. Zientarski	P
J. Fulgham	A	D. Hockin	A	M. Schoell, Deputy Chair	P		
K. Gollwitzer	A	R. Madiar	P				

### New Business

1. **TeV Transfer Hall and F Sector Unauthorized Access** – M. Schoell reported that there was an unauthorized access into F Sector and Transfer Hall Monday 3/28/2022 in the evening. The event is still being investigated by the Security Department. More details will be shared with RSSC as we're able.

### Old Business Carried Forward

2. **Q309** – M. Schoell reported that the repair in March is holding, AD/MI working out details for repairs during the summer shutdown. RPO pulling documents (RWPs, survey maps, results, etc.) together for post-job documentation.
3. **RPP Review** – R. Madiar discussed the scope of this 2<sup>nd</sup> part: field visits to review implementation of ERPP and 458.1 and implementation of 835. The review will be conducted May 2-6<sup>th</sup>.
4. **MI-8 7Be** – M. Schoell reported that extent of condition surveys confirmed no Contamination Areas in the MI 8 Service Building and no need to extend Contamination Area boundaries within the 8 GeV enclosure. Additional surveys in MI-10 are being taken to confirm that boundary.
5. **Shielding Assessment Addendum** – W. Schmitt stated that Fermilab may benefit from additional guidance to be incorporated into the FRCM when shielding assessment addendum is required or when a revised shielding assessment is required. For example, increase in intensity for the muon campus. W. Schmitt will begin looking into revision.

No update during April meeting.

6. **PIP-II** – B. Russell reported that a Shielding Assessment was performed for the updated use of the PIP-II IT cave. RPO is working on a memo describing the new exemption for the cryomodule, notification will be sent to FSO. R. Madiar asked about the memo to close out previous exemption for PIP-II IT, which was approved by the FSO.
7. **FRCM Revisions** –

- Chapter 3 and 4 updated to introduce explicit policies regarding prohibition of eating/drinking in areas where sealed radioactive sources are used. Revisions will be posted for lab-wide review soon.
- FRCM Chapter 5 is under revision. Looking in particular on how the manual is laid out and where “should” and “shall” are used, and possible removal of procedures from the manual, etc.

No update during April meeting.

8. **Release & Clearance** – D. DuVall reported that policy and procedure has been finalized by RPS/RPO, and send to FSO for comment. RPS is starting to look into requirements and clearance process for addressing Universal Waste, working on Technical Basis document. R. Madiar reported that comments on the policy and procedure should be back in the next week or two.

Reminder group that the plan for our updated survey process would maintain Rad Workers performing restricted release surveys (coming out of enclosures, keeping material in posted area), with RCTs performing the clearance surveys.

9. **NW Blocks Excavation for LBNF** – Rachel was wondering if the blocks being excavated from the NW beamline are planned to go through release & clearance process and have that information documented. J. Fulgham commented that blocks and soil are surveyed as they’re excavated. Will use MMR in the future when blocks are moved to final location.

R. Madiar wondering how it’s documented on what is determined for survey needs through this process.

M. Quinn commented that documentation of information for the full process (i.e., material was here for this purpose for this time, excavated with these surveys, and moved here for this purpose, etc.) would be beneficial for future release & clearance of the material.

RPO will look into best options for archiving this information.

November – Not a lot of new information this month.

-Feb: New release and clearance process may incorporate this.

-April: no discussion on this topic this month.

10. **DOE O 420.2c Rewrite** – R. Madiar commented that the revision is still in progress, and recently working on further clarification for the “accelerator operations” definition and what all is involved and covered under accelerator operations. Will send out to RSSC to take a look at when it’s in Rev Comm.

11. **Unauthorized work in High Radiation Area within MI-30 -**

M. Schoell reported that the recommendations have been received from the Task Force.

1. Briefing

- a. RPO working with AD/Ops on implementing this recommendation.
- b. RPO goal is to have every entrant going into an enclosure

2. Electronic Dosimeters

- a. Instrumentation Team looking into what it would take to replace pocket dosimeters with electronic dosimeters.
- b. Biggest concern is quantity. Will need several hundred to replace all pocket dosimeters.

- i. When looking at potential cost, ballpark 1,000 electronic dosimeters, to not have a mix of electronic and pocket dosimeters. This would cost \$500,000.
  - c. Other concern would be with issuing and tracking. How would this be done?
    - i. Matt working with IH Group how Personal Oxygen Monitors are handled to see if electronic dosimeters could follow the same model.
  - d. Would need to consider “alarm setting” configurations.
    - i. Have “default” configurations for RCTs and Fire Department.
    - ii. Would whoever issues them deal with enabling/disabling alarms, setting limits, etc.?
      1. Good thing to consider, will need to work out this level of detail.
      2. Initial impression is that it should not be RPCF.
3. Lights/Alarms
  4. Modifying General RWP to include some amount of work

12. **NM2 Enclosure Door Found Unlocked** – The HPI has concluded and can be found here: [https://www-esh.fnal.gov/pls/cert/hpi\\_rpt.html?hid=291](https://www-esh.fnal.gov/pls/cert/hpi_rpt.html?hid=291). Recommendations for RP include:
- OFI – Interlocked gates – open position notification
    - Interlocks determined that this would take significant resources to accomplish for amount of monitoring points, and recommended that implementing the other OFI would be more cost effective.

13. **Multiple Sump Issues Lately** – See previous RSSC minutes for full discussion on sump issues. Remaining questions/follow-up:
- What caused the alarm if the pump was working properly
  - Where the alarm was issued. Since it wasn’t seen in the MCR.
  - When dispatch received the alarm. (Appears to be ~9hrs between alarm and calls, unclear why.)
  - Re-look at options for barriers between Absorber area and the rest of the lower level to ensure water doesn’t flow into/out of posted Absorber Area.

M. Quinn suggested bring this up as a possible tripartite. If that doesn’t happen, RSSC should look into this in more detail.

September: this topic was not selected as a tripartite. This issue should remain as a focus topic for RSSC. M. Quinn will discuss this with A. Kenney about who best to ask to lead this effort.

14. **Unauthorized Movement of Radiological Postings** – Reminder email was sent out.
15. **Be-7** –M. Quinn reported that he is working on a proposed technical basis for exemption from 10CFR835 Appendix D value, to go from 1,000 to 30,000 dpm for the limit. RPO and RPS reviewing now. Once final, will be sent to FSO/DOE HQ. Matt/Rachel will need to determine how this is formally submitted. Rachel suggested memo from Matt/Amber to Site Office Manager.

M. Quinn will review exact language for which avenue this will take: exemption, exception, etc.

16. **Nevis Blocks** – M. Quinn commented that the statement of work was sent out, and several vendors submitted proposals. Project is currently reviewing proposals. Proposed plan is to dispose of these blocks as radioactive waste, as we don’t feel it’s feasible to clear them.

17. **DOE RPP Part 1 Review (April 2021)** – RPO and RPS continuing to work on Corrective Actions.
  - ERPP: FSO comments were addressed, updated version sent back for further FSO review.
  - Many items in the CAP relate to the Clearance & Release Technical Basis and procedures, so in the process of closing items out in iTrack. 125 items closed out so far.
  - MEI calculation justification: addressing comments from FSO, should resubmit before next RSSC meeting..
  
18. **MTA** – RPO resources very limited, and ITA experiments require a lot of time/attention for appropriate review before approving experiments and transfer of material. Working on filling vacant RSO position, which should help provide additional resources for ITA.
  
19. **Review “JULIE Excavation Waiver Prohibited Zone” Map in GIS** – The sawcutting HPI has concluded and can be found heres: [https://www-esh.fnal.gov/pls/cert/hpi\\_rpt.html?hid=289](https://www-esh.fnal.gov/pls/cert/hpi_rpt.html?hid=289). Recommendations for RP include:
  - OFI – Define and align excavation for FESHM, FRCM and Associated Training
  - OFI – Demarcation of no-dig zones
  
20. **Target Service Integration Building** – M. Shoell reported that the building is on hold while Project works out budgeting issues.
  
21. **DUNE** – No update for March. D. Newhart reported no updates. M. Vincent reported background monitoring is ongoing, dosimeters will be in place for a quarter at a time for 6 quarters. First results received, need to be reviewed and analyzed.
  
22. **2021 10 CFR 835 Triennial** – M. Quinn reported that a vendor has been selected to perform this assessment, working on getting assessment scheduled. The plan is for this to review all Parts of 10 CFR 835.
  
23. **Eating/Drinking Near Source Boxes** – M. Schoell reported that the downposting plan was approved to downpost some areas from RMA/CA to CA. RPO is working through list of areas to be reviewed/downposted, working with area occupants & managers to discuss needed changes.
  
24. **Dose to Public FSO Concerns** – M. Quinn reported that the Lab received a letter from the FSO with concerns around certain areas on site and postings/notifications to people of those areas. ESH/RP will develop a plan and respond to the letter within the month. ESH and FSO will meet to ensure everyone is on the same page with the requested plan.
  
25. **Neutron Generators** –
  - DT for Mu2e: D. Hahn reported that she spoke with Frank Porter, they are still working on gathering documentation. Continuing to work through RP Form 113.
  - DD for NEXUS: Continuing to work on gathering documentation and working through RP Form 113.

M. Vincent has requested DOELAP application back and will be resubmitting with a change

including neutron generators in accreditation.

26. **Safety Assessment Document review** – M. Schoell reported that the SBN, Proton and TeV Chapters have finished their review and still need to be submitted to the D/S, CSO and Director approval as SAD Rev 22 soon. No ASE revisions required.

Upcoming:

- SY120 and NM for SpinQuest updates.
  - Potential proposed changes for MTA will require SAD changes (working on Shielding Assessment now), and unknown if this will need ASE change (only needed if ASE limit needs to be updated).
  - FAST Proton injection will also require SAD update, which will require ASE update as well.
27. **Accelerator Readiness** – M. Schoell is finalizing the ARR determination process. Shared new form and flowchart with the committee.
28. **Contamination in Enclosures** – RPO continues to work on compiling results from 2021 build-up and decontamination surveys, and is performing an ALARA evaluation on frequency of routine decons. A summary of the surveys and the outcome of the ALARA evaluation will be shared with the committee as soon as possible.
29. **SARP** – M. Quinn reported that SARP is reviewing the PIP-II Preliminary Shielding Assessment.
30. **RPCF** – M. Zientarski reported on multiple RPCF activities:
- Meeting with the Fire Department on implementation of new electronic dosimeters. Will maintain current dose rate and accumulated dose alarms. Emergency kit at Site 40 has electronic dosimetry, RPCF still trying to understand requirements for these electronic dosimeters. M. Schoell though RPO responded to questions regarding alarm limits, will confirm. RPCF will work with FD and RCTs on training for the new dosimeters.
  - OWL has undergone a design change due to supply chain issues, which will actually help work on FOX design in tandem. Design change won't change OWL functionality, Mark will plan to do a presentation on the OWL at the May RSSC meeting, since there are a lot of new members.
31. **Dosimetry** – M. Vincent reported on multiple Dosimetry program activities:
- DOELAP application, updating to include LBNF Far Site and neutron generators.
  - Submitted REMS report to DOE.
  - DOELAP onsite assessment schedule for week of July 11<sup>th</sup>.
  - Continuing to work on dosimetry APEX database.

### ALARA Topics

32. RPO working on creating and updating ALARA procedures. New Job-Plan ALARA Procedure describes process for determining for when a job falls into a “job-plan” category or an “ALARA” category. Updaing associated RP Form 71.

### Operations

Continuing to run normally now that MI Q309 is holding.

Currently in maintenance access, with Booster and Linac performing studies.

**PLACE AND DATE FOR THE NEXT MEETING: THE NEXT MEETING IS SCHEDULED TO BE MAY 4, 2022 AT 2:00 PM CENTRAL. THIS MEETING MAY CONFLICT WITH THE RPP PART 2 REVIEW SCHEDULED FOR THAT WEEK, SO BE ON THE LOOKOUT FOR RESCHEDULED MEETING VIA OUTLOOK. THE MEETING WILL BE CONDUCTED VIA ZOOM (MEETING INFORMATION WITHIN OUTLOOK CALENDAR EVENT).**

**FY22 Minutes: [ESH DocDB 6738](#)**

**Distribution via E-Mail–**

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Raymond Lewis	Nicole Gee
Others Present	DSOs (esh_dso@fnal.gov)
RPO Department	