FINAL Minutes of the Radiation Protection Advisory Committee (RPAC) Meeting
Virtual Meeting Via Teams
December 9, 2022

Meeting called to order at 9:01 a.m.

Members in Attendance:

Marian Wolford
Todd Mobley
Joseph Och
Nathaniel Burden
Steven King
Chrysan Cronin
Janice Anne
John Keklak
Aaron Fisher
Anthony Montagnese
Margaret Blackwood

Members Absent:

Keith Salador
Peter Smith
Shawn McNeeley
Summer Kaplan
Victor Rizzo

DEP Staff in Attendance:

Dwight Shearer
John Chippo
Lisa Funk
Roy Huhn
Stephanie Banning
Josh Myers
Terry Derstine
Maria Coons
Michelle Russo
David Gaisior
Christopher Heckert
Abbey Cadden
Denise Bleiler
Barbara Bookser
Dyran Altenburg

Guests in Attendance:

Kendall Berry
David Allard
Karen Colucci
Eric Gingold

Introduction; Adoption of Agenda; Approval of Minutes:

Minutes: The agenda for this meeting was adopted and the minutes with minimal corrections from the March 3, 2022 meeting were approved.

Open Floor:

No members of the public registered to provide public comment. Mr. Allard, now a member of the public, wanted everyone to know that he enjoyed working with the bureau and he was lucky to have a great staff. He also wanted to thank the RPAC Committee for all their support over the years.

An RPAC member wanted to recognize and make everyone aware that Joseph Nardi had recently passed away. He had been very involved in the health physics society and in our western PA Chapter which is also a sponsoring organization.

An RPAC member had a comment on behalf of a colleague concerned about the apparent prohibition against nursing personnel stepping on/off a fluoroscopic switch on the direct verbal command of a physician in the middle of actively performing an interventional procedure. The concern was related to the fact that radiologic technologists are simply not available to perform fluoroscope operations at many sites during such procedures and while physicians can operate fluoroscopic equipment, having to find and step on the footswitch while focused on the interventional manipulation can be a distraction that poses a potential patient safety risk. The request was that DEP consider this situation related to possible future regulatory relief for this specific situation . This issue will be put into the bureau regulatory "parking lot" for review.

Program Updates:

Bureau Director Shearer provided a brief update on his new role and past work history.

In 2023, BRP will be focusing on improving our customer service. Personnel changes are coming due to staff turnovers, retirements, and new transitions. Customer service changes will include adding a resource email account to increase communications with the public, they can use this in place of an individual's email address. We will also be replacing all telephone numbers on our fact sheets and regulations with a 1-800 number to help increase the ease of communications with the Bureau.

Approximately 95% of all Inspections are now being performed with the use of iPads through our new e-Inspection platform. X-ray inspections will be the last to go to this platform due to software issues and linking them to an iPad. RAM inspections are currently performed using iPads with only minor issues. Future challenges include equipment compatibility and maintaining software.

Paperwork and other related documents are now being scanned into the OnBase system. Our workflow management is also going through OnBase. One of the issues we have with scanning RAM documents into the OnBase system is the confidentiality we must keep. We need to find ways to keep these documents private within the OnBase system.

Radiation Control: Things are continuing to move pretty smoothly in Rad Control. Over the next couple years our goal is to try to balance out license renewals as we have a rather large upcoming amount coming due in 2024. We may offer either an expedited renewal or provide a renewal extension to assist with this, so we don't end up with any backlog.

Decommissioning/Environmental Surveillance: TMI has been defueled and currently is in the license change and amendments phase. We are moving our monitoring of TENORM from the Radiation Control division to the Decommissioning division. TENORM monitoring includes leachate, landfills, brine spreading on roads, and evaporators.

Radon: January is Radon Action Month. We've filmed a public service announcement to air on social media sites and news broadcasts detailing a lung cancers survival. We are hoping to get a great number of hits. Bob Lewis, our Radon program manager, wrote a paper on radon dispersion at ground level from residential housing and he hopes to get it published and peer reviewed. Radon is also providing a lot of outreach to the public.

Nuclear Safety: It has taken over two years to purchase software and the equipment that will use this software is now getting purchased. This equipment and software will provide data in live time and we will retrofit the emergency response vehicles with the equipment to give us the ability to drop deployable probes during drills.

Review of Nuclear Material Events Database (NMED) and Medical Reportable Events (MRE)

There were 14 NMED events since the last RPAC meeting. One was a security-related event, one was the inability to retract a radiography source, five were lost/stolen items, one was a broken shutter, one was a generator breakthrough event, and five were medical events.

There were four MRE events. One event involved an error in generating a patient's treatment schedule. The second involved the mixing up of delivery treatment area due to inadequate patient verification techniques. Thirdly, a therapist failed to complete the required lateral shift for the last fraction of treatment resulting in only 5-10% of the target receiving the prescribed dose. Finally, a fraction was not manually entered into the treatment system correctly after a computer connection was lost resulting in an extra dose to the patient.

Information Notice

We issued one information notice this year. We were informed that the US Government Accountability Office (GAO) performed an undercover investigation based on the NRC's and Agreement States' license verification process for Category 3 materials. In 2020, the GAO set up five shell companies that sold radioactive materials, including creating company websites, but did not establish or rent storefronts or other physical locations. The GAO then altered the images of NRC and Agreement State licenses found on the internet to authorize up to Category 3 quantities of radioactive materials for these fictitious companies. Using the counterfeited licenses, the GAO was successfully able to receive their orders in three of the five cases. The official report has not been issued yet and the states at fault are still unknown. The NRC is currently updating regulations on license verification of generators of the materials and on the licensees who possess Category 3 materials. In early 2023, the regulations will be available for public comment.

Beam Thickness vs. Slice Thickness

We received an email from a physicist who wanted to know when our regulations refer to slice thickness, if it is referring to the reconstructed slice thickness or the radiation beam thickness. According to the physicist, the accrediting bodies, and the ACR, slice thickness has been removed as a required check. When using older scanners, the beam thickness equaled the slice thickness. When using newer scanners, they can scan with the full beam width and they can

reconstruct slices in a whole range of variations since you're collecting volume imaging data and not individual slice data as you did with the older scanners. While beam width may be more meaningful, when using imaging, neither one of these is valid nor clinically relevant with newer scanners. An RPAC member stated the ACR accreditation hasn't changed since 2018 and still requires slice thickness and the criteria +/- radiation beam width. Another member noted that in 2019 the ACR was updated to remove slice thickness using only beam thickness now. Part of our regulatory requirement states it must be evaluated by a qualified expert and a qualified expert would know the difference between reconstructed slice thickness accuracy versus an evaluation width sensitivity profile. Mr. Shearer stated that per our regulations the total error between the indicated and actual slice thickness may not exceed +2 mm. An RPAC member stated they interpret this as the reconstructed slice thickness. The questions was raised …Is software needed to reconstruct and technically measure? The technology and/or the software has gotten to the point where the definition for actual slice thickness should be updated. Slice thickness is measured as an annual check. An FAQ can be done to update the definition. This FAQ will be based on current definitions be the AAPM and ACR and will remain in our "parking lot" until a consensus is achieved and our regulations can be revised to include these FAQs.

Presentation of Draft final-form Annex: Chapter 218 Fees

The final fee package was presented on June 14. The RPAC Committee received this a few weeks ago. This package will be presented to the EQB next spring once the legislative committees are reformed. We are required to present these fees every three years per our statute. Soon, our program costs will exceed the revenues needed to sustain the program and this fee increase will ensure the integrity of the program for the next several years. The radiation producing machine fees have not been updated since 2009. The radioactive materials were last updated in 2017; however, program personnel costs have continued to increase. The program costs for radiation producing machines will exceed the revenues in 2023 and radioactive materials will exceed their revenues in 2024. A 30% increase in fees is necessary to maintain the program until 2027. Within the next several years we will also need to update our X-ray survey equipment which will come at a significant cost. We did move the chiropractors to a different category which includes podiatrists, dentists, and veterinarians. On the radioactive material side, a 10% increase is necessary to sustain the program until 2027. The full list of fees was provided to the committee and it is also in the Annex. Five comments were received on the entire package. One was not related to the package. The other four were general comments requesting fee reductions and data corrections from IRRC. Our fees will still be 23% lower compared with the NRC's fees once the increase takes effect, which will be 90 days after the fees are published in the PA Bulletin, tentatively next Fall.

Status update on Non-medical X-ray Rule for Chapters 225, 227, and 228

The EQB meeting for the final rules for our regulations was held in November. The final rules were unanimously approved. The next step is for the final rules to be presented to the IRRC for their final approval. The date of the next IRRC meeting has not been finalized. Once the meeting takes place and approval is given, the final rules will be published in the PA Bulletin and the regulations will go into effect 30 days after the published date.

Open Floor

An RPAC member received a question from one of his clients regarding the CR/DR regulation, specifically station monitoring under 221.50(c)(4). This client received a communication from DEP suggesting specific ways to complete this task (using a SMPTE pattern). The member noted the regulation does not specify how the monitor is checked and use of a SMPTE is not required or even available at many sites. This then leads to the question of whether the DEP was specifically looking for use of SMPTE patterns to comply with the regulation. We are not.

A member raised concerns regarding mammography inspections. He stated they follow the ACR format for all equipment that is used in mammography inspections. This format comes with certain FDA rules and regulations. During a recent inspection, they asked the inspector if repeat analysis is necessary, as the ACR format does not require it anymore. Bureau Director Shearer stated that since we have a contract with the FDA, the inspector should be acting with the extension of a person of the FDA at that time. In theory, however, after they conclude the FDA inspection, they could return as a state inspector to inspect an X-ray unit registered by the state if it falls under the state regulations for X-ray units.

BRP will review this issue for possible changes. The RPAC Committee also noted that they would question why ACR decided not to require this anymore. Once this information is noted then we can place that against our regulations to see if this should be changed or not.

An RPAC member raised awareness to an issue on the radioactive materials inspections side. Eastern region radioactive material inspections seem to have become compliance-based and are taking inordinate amounts of time to prepare and complete inspections. Is this level of detail necessary? We hope to move to a more performance-based inspection and become more customer focused and plan to try and have inspections more equalized over all regions in the future.

An RPAC member asked if fracking is one our concerns and if it something we cover? Bureau Director Shearer stated we do not regulate TENORM, but we do monitor landfills, leachate, bring spreading, and evaporators.

The meeting adjourned at 12:00 p.m.

The next RPAC meetings will be held April 27, 2023 and October 19, 2023. The meeting format is to be determined.