AGENDA

Meeting of Program Area Committee 2
Operational Radiation Safety
Sunday April 10, 2016; 8:30 AM
Diplomat Room
Hyatt Regency Bethesda
Bethesda, Maryland

8:30 AM	Welcome and opening remarks	Pryor
8:45	Status of SC 2-6, Radiation Safety Aspects of Nanotechnology.	Myers
9:00	Discussion on SC 2-7, Radiation Safety of Sealed Radioactive Sources recommendations for Cat 4 and 5 Sealed Sources	Shingleton
10:00	Future projects – approved scope statements; ideas for new ones	all
11:00	Remarks from the President and CC-1 Chairs; Feedback on draft CC-1 report	Kase/Cool
Noon	Lunch	
1:00 PM	Continue discussion of ideas for future projects	All
2:15	Summary of assignments	Pryor
2:30	Adjourn and move to general PAC session	All

Attendees: Ed Bailey, Chris Donahue, Eric Goldin, Dave Myers, John Poston, Kathy Pryor, Kathy Shingleton, Glenn Sturchio, Jim Willison, Jim Yusko. Guests: Don Cool, Ken Kase. Absent: John Frazier, Mike Littleton, Josh Walkowicz.

Kathy Pryor welcomed the group and introduced new member Jim Willison.

Update on SC 2-6 status:

Dave Myers provided an update on the status of SC 2-6, Radiation Safety Aspects of Nanotechnology. The document is currently undergoing Council review with comments due on April 11th. Dave noted that SC 2-6 had received 460 comments from the PAC 2/6 and peer review of the draft. Some PAC 2 committee members had suggested that the Report should just highlight the recommended modifications to standard RP programs when working with radioactive nanomaterials (RNP). However, the SC2-6 writing committee felt that since the audience for this report could include industrial hygienists who might be less familiar with standard RP practices (and for the sake of completeness), a summary of all of the basic elements of a standard radiation safety program was retained in the report. The SC2-6 writing committee did try to condense radiation safety program elements that don't need to be modified when working with RNP and refer to NCRP Reports for guidance whenever possible.

The biggest potential issue relates to the possible differences in the deposition of RNP in the respiratory tract and their transfer in and elimination from the body compared to larger particles. This could impact the parameters that are currently used in performing dose calculations based on bioassay measurements and these parameters may need to be adjusted following the inhalation of RNP. It was concluded that the existing models should be adequate for wound and ingestion routes of exposure.

Finally, the draft Report includes detailed information about the biokinetic properties of nanomaterials which could be helpful in interpreting the movement and elimination of RNP from the body.

SC 2-7 Report recommendation on Category 4 and 5 Sources:

Kathy Shingleton provided a set of graphs of IAEA Category 1 through 5 activity levels for select isotopes for the purpose of discussing our recommendation on specific licensing of Category 1 through 5 sources. Category 5 represents activity levels less than Category 4 and greater than exempt values. There was concern expressed that it would be inappropriate to require specific licensing for relatively trivial activity levels and may unduly burden those who do not already have existing licenses. Recommending regulatory controls equivalent to specific licensing for Category 4 and 5 sources represented a change from our draft that was sent out for peer review; and essentially eliminates application of a graded approach based on sealed source activity.

Generally licensed (GL) sources/devices receive very little oversight (if any) from regulatory authorities. Some higher activity GL sources/devices require registration, but this basically just allows the regulator to know where the source/device is reported as being located. Specific licensing imposes the requirement to know where the sources are and who has them.

Following discussion, the committee unanimously decided to drop the recommendation for specific licensing of Category 5 sources. The committee agreed to retain the recommendation for Category 4 sources in the draft for Council review, although some committee members remain concerned about the cost-benefit of the recommendation. Chris Donahue volunteered to revise the draft and to add a justification for the recommendation for specific licensing of Category 4 sources. Kathy Shingleton agreed to revise the graphs to highlight how Category 4 thresholds overlay onto DOE and NRC requirements and commonly used sources; we will provide the revised graphs as visual aids for the reviewers but will not include them in the report itself.

CC-1 draft report on Radiation Protection Guidance for the United States:

The committee briefly discussed impressions of the draft report from CC-1. The draft was provided to PAC members on March 30, 2016 and didn't allow time for an in-depth review by most committee members. A quick review of our input to CC-1 revealed that the recommendation to exclude dose constraints from the report appeared to have been adopted. However, a more detailed review indicates that two "dose criteria" were recommended for planned exposures in occupational settings: a 50 mSv "dose criteria" for optimization of practices and a 20 mSv "dose criteria" for control of occupational exposure. The draft report stated that the NCRP was not recommending any "dose limits", and instead recommended "dose criteria" in an effort to allow regulatory authorities flexibility in setting their own dose limits. Initial impressions from the committee included the following:

- The section on ethics was confusing and was unnecessary to the development of RP guidance. It should be eliminated or substantially revised to be much shorter.
- The section on communications was difficult to understand. The section advocated the use of plain language, but the rest of the draft report didn't follow this admonition.
- It was unclear as to who the audience for this report was supposed to be.

Ken Kase, Don Cool and Don Mayer visited the committee and discussed the status and path forward for the CC-1 draft report. Ken informed the committee that this draft represents a very rough preliminary draft, and has not received agreement of the CC-1 committee members yet. CC-1 plans to present the concepts in the draft to various professional societies (including the HPS) over the next few months. Ken requested a consolidated set of comments from each PAC by August 15th. Don Cool informed the committee that he was going to be taking over as a co-chair of CC-1. The committee asked Don about the rationale for eliminating the term "dose limits," and he explained that this was to allow for a single approach to be used across all exposure situations and categories of exposure.

Kathy Pryor agreed to set up a series of teleconferences for the committee to discuss our comments over the next few months. We will target late May through June to hold these teleconferences.

Future Projects for PAC-2:

The committee discussed possible future projects once the SC 2-7 report on sealed sources is finalized. We have some very old scope statements that were approved by the Board of Directors a number of years ago. These include air monitoring, the design of facilities and installed equipment for handling unsealed radioactive materials, and radiation protection guidelines for industrial accelerators and irradiators.

We have a relatively well developed scope statement for the safe use and handling of XRF analyzers. This scope has not been approved by the Board of Directors yet. Ed Bailey discussed whether or not this should be extended to the use of portable dental x-ray devices; this will likely be covered in the upcoming draft from PAC 4 on dental x-ray/CT practices. Jim Yusko agreed to review the most current scope statement on the XRF analyzers.

We also discussed the possibility of an update to Report No. 57 on instrumentation and monitoring methods. It was suggested that we consider treating portable and fixed instrumentation separately from personal monitoring. We should provide recommendations on the frequency of radiological surveillance, particularly for contamination monitoring of areas.

Glenn Sturchio suggested providing guidance on the handling of deceased patients who are contaminated with medical radionuclides. He mentioned that in Florida, deceased patients cannot be cremated if they contain radioactive material from medical procedures. This would likely need to be coordinated with PAC 4 and/or PAC 5. The Medical Health Physics section of the HPS was interested in this issue.

The committee discussed the idea of providing guidance on the release of materials and equipment from radiological control. This guidance is needed by operational health physicists, but there are regulatory and political components to establishing and implementing these types of contamination limits. We discussed the latest revision of ANSI/HPS-N13.12 which was intended to provide acceptable contamination limits for both surface and volumetric situations. Guidance on this topic may overlap with PAC 5. It might be helpful to discuss this with the chair of the ANSI/HPS-N13.12 working group.

Next Meeting: We will schedule teleconferences sometime during May/June to discuss the PAC-2 comments on the CC-1 draft report.

Action Items:

- **Chris Donahue** will revise the SC 2-7 draft to reflect the recommendation for regulatory control equivalent to specific licensing for Category 3 and 4 sources. **Completed – April 13, 2016**
- **Kathy Shingleton** will revise the graphs of Category 1 through 5 sources to be used as a visual aid for reviewers of the SC 2-7 report. **Due: April 22, 2016.**
- **Jim Yusko** will review the most recent scope statement on XRF Analyzers and update if necessary. **Due: May 31, 2016**
- **Kathy Pryor** will schedule teleconferences on the CC-1 report. **Due: April 29, 2016.**
- **Everybody –** will review the CC-1 draft report in advance of the teleconferences.