

RADIATION ADVISORY COUNCIL
April 11, 2014
Minutes

ATTENDEES:

Robert Friedman, CHP
Susan Hiatt, Vice-Chair
Heather Kight-Isaly
David Kimberly, DDS, MD
John Olsen, MD
Robert Peterson, Jr.
Bill Thomas, CHP, CIH, Chair

ABSENT MEMBERS:

Timothy Angel, Ph.D., RS, CPM
Kerry Krugh, Ph.D
Larry Osher, DPM

ODH STAFF ATTENDEES:

James Castle
Jean Hardy
Mark Light

GUESTS:

Rick Sites

The Radiation Advisory Council (RAC) was called to order by Chair, Bill Thomas at 10:45 a.m., Friday, April 11, 2014, in the Ohio Department of Health, Basement Training Room A, located at 35 E. Chestnut St., Columbus, Ohio. There was a quorum present at this meeting.

Agenda Review –The RAC reviewed the Agenda. Bill Thomas asked that the committee reports be moved to the top of the agenda due to a delay in Mr. Peterson arriving. Bill Thomas then made a motion to approve the agenda as changed. John Olsen seconded the motion. The motion was passed.

Minutes of January 17, 2014 Meeting – The minutes of the January 17th meeting were reviewed. Bill Thomas had some additions to add to the minutes which will be reflected in the final January 2014 minutes. Bob Peterson made a motion to approve the minutes and Robert Friedman seconded the motion. There was no opposition heard and the motion passed.

Committee Reports

Radioactive Materials Committee – Susan Hiatt

Since the January RAC meeting, the Radioactive Materials Committee has met three times: February 11, March 11, and April 8.

At the February 11 meeting, the committee reviewed NRC comments on rule changes responsive to RATS 2012-3, and reviewed several rules in Chapter 3701:1-38, as part of the five-year rule review process.

At the March 11 meeting, the committee reviewed rules being changed in response to RATS 2012-4, which concerned manufacturing and distribution requirements and generally licensed devices.

At the April 8 meeting, the committee conducted a five-year review of most of the Chapter 3701:1-40 rules. The committee also approved, for the RAC's consideration today, rules 3701:1-43-01 and 43-07. These rules are being revised in response to legislative changes.

The next meeting will be held on May 13.

Radiation-Generating Equipment Committee – Larry Osher – No report on this committee.

Department Reports

Bureau of Radiation Protection, and X-Ray Program, James Castle

BRP personnel changes: Megan Barrow has been hired as a Health Physicist in the X-Ray section out of the Akron office. The BRP is now fully staffed for the first time since August 2007.

The outage at the Davis-Besse Nuclear Power Plant to replace the steam generators and two reactor coolant pump motors is ongoing.

- Hydro-demolition was used to cut the concrete of the shield building in the same area where the shield was cut to replace the reactor vessel head in 2011.
- Apparently when the shield cut was restored in 2011 an insufficient amount of concrete was used or the concrete settled and left a void on the inside surface of the concrete shield wall.
- The void is approximately 6 to 8 inches in height and 22 feet long.

- Plant personnel analyzed whether the shield building could perform its intended function with the void present, and their calculations determined that the void would not have affected the shield building's ability to function.
 - The NRC's review of the situation is still on-going. Concrete was poured last week to restore the shield building.

A dry run for the upcoming Hostile Action Exercise at the Beaver Valley Nuclear Power Plant was held on April 1. The FEMA graded exercise will be conducted on June 17.

Human research using x-rays. Plan to address at the April 18, 2014 REC meeting.

Security screening devices. Plan to address at the April 18, 2014 REC meeting.

Dermatologist using superficial therapy equipment to treat skin cancer. Plan to address at the April 18, 2014 REC meeting.

Public Guidance for rule 3701:1-66-04 is now available on the x-ray website.

4 Misadministration occurred. 2 reported to Department and 2 not reported to the Department. Description of 1 report:

- Phone report 4/2/2014. Patient (A) to receive treatment plan to the pancreas received another patient's (patient B) rectal treatment plan for one field of treatment.
- The reason this occurred was because the therapist failed to properly identify the patient. Patient (B) rectal treatment was scheduled for 10:00am but showed up late. Patient (A) pancreas treatment scheduled for 10:30am showed up early. The machine was set-up for Patient (B) and Patient (A) was brought into the room and treated with patient (B) treatment.
- Based on several of the geometry factors (size and shape) of the patient and the geometrical factors of the set-up being so similar the dose was actually delivered to the appropriate area. The plan field dose was supposed to be 49cGy but the dose delivered was 42cGy.
- The radiation therapist discovered this after delivering the first field. The radiation therapist tried to contact the managing physician on 3/31/2014 but did not reach him/her until 4/1/2014. The event was not reported to other appropriate individuals (Direct of Radiation Oncology, Medical Director and Medical Physicist) until 10:17am on 4/2/2014.

Inspection Numbers

The Bureau of Radiation Protection inspected 1,875 x-ray units at 865 facilities. There were 19 On-site hospital inspections, 55 CRE annual audit reviews, 93 MQSA inspections, and 24 freestanding healthcare facility inspections.

Nuclear Materials Safety, Mark Light

During the 1ST quarter of 2014, 102 radioactive materials licensing actions were completed. This included 4 new, 19 renewals, 75 amendments, and 4 terminations. There are no overdue licenses.

<u>2014</u>		<u>YTD 2014</u>
102	Total	102
4	New	4
19	Renewal	19
4	Term.	4
75	Amend.	75
0	Abandon	0

During the 1ST quarter of 2014, 41 radioactive materials licensee inspections were performed and there were no significant violations. There are no overdue inspections.

YTD 41 inspections performed

During the 1st quarter of 2014, 6 incidents were recorded, 1 resulted in a medical event. This was discussed with the committee.

During a liver radioembolization procedure with Y-90 SIRTEX Sir-Speres on 1-24-14 an unanticipated shunting occurred and was identified during the procedure. The procedure for the right liver lobe was stopped when the shunting was identified. The after imaging the patient, the licensee determined the unintended dose to the gastric fundus was 11 Gy on 1-27-14.

Radon Testers: 302 (13 initial licenses approved to date in cy2014)

Radon Mitigation Specialists: 108 (6 initial licenses approved to date in cy2014)

Radon Contractors: 78 (4 initial licenses approved in cy 2014)

Radon tests performed in 2013 Q3 & Q4 = 14,797 (this is a 41% increase over same time period in 2012)

Radon Mitigation systems installed in 2013 Q3 & Q4 = 4,639 (this is a 34% increase over same time period in 2012)

Mitigation System Inspections performed by Staff in 2014 Q1 = 8

Rules: To be reviewed: 3701:1-43-01 AND 3701:1-43-07

Technical Support, Stephen Helmer – No Report

Old Business:

Review 2013 Annual Report – The 2013 annual report was reviewed. David Kimberly made a motion to approve the report, John Olsen seconded the motion. The motion was approved.

New Business:

Review Rules: 3701:1-43-01 – Definitions
3701:1-43-07 - Exemptions

Both rules were reviewed. Bob Peterson made a motion to approve both rules as written and David Kimberly seconded the motion. The motion was approved.

Next meeting of the RAC: July 18, 2014

Adjourn: The meeting adjourned at 12:00pm

RADIATION ADVISORY COUNCIL
January 17, 2014
Minutes

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Timothy Angel, Ph.D., RS, CPM
Robert Friedman, CHP
Heather Kight-Isaly, DC
John Olsen, MD
Larry Osher, DPM
Robert Peterson, Jr.
Bill Thomas, CHP, CIH, Chair

ABSENT MEMBERS:

Susan Hiatt, Vice-Chair
Kerry Krugh, Ph.D
David Kimberly, DDS, MD

ODH STAFF ATTENDEES:

James Castle
Jean Hardy
Stephen Helmer
Mark Light
Michael Snee

GUESTS:

Rick Sites
Doug Draper
Linnea Hopewell
Gene Mink
Ashrat Morgana

The Radiation Advisory Council (RAC) was called to order by Chair, Bill Thomas at 10:33 a.m., Friday, January 17, 2014, in the Ohio Department of Health, Basement Training Room A, located at 35 E. Chestnut St., Columbus, Ohio. Roll call was taken. There was a quorum present at this meeting.

Agenda Review –The RAC reviewed the Agenda. Tim Angel requested that “New Business” be discussed before Department Reports. Tim Angel then made a motion to approve the agenda as changed. John Olsen seconded the motion. The motion was passed.

Minutes of October 18, 2013 Meeting – The minutes of the October 18, 2013 meeting were reviewed. There were no changes to the minutes. Tim Angel made a motion to approve the minutes and John Olsen seconded the motion. There was no opposition heard and the motion passed.

Committee Reports

Radioactive Materials Committee – Bill Thomas

The Radioactive Materials Committee met on January 14, 2014. The committee reviewed several rules in 3701:1-37, Security of Radioactive Materials. Comments from members of the public were reviewed. None of the public comments resulted in any changes to the rules. The Bureau plans to develop a guidance document which should be helpful to licensees. In addition, the Bureau is planning a series of public informational meetings on this new chapter to be held in the second quarter of 2014.

The Committee also reviewed proposed changes to Rules 3701:1-43, Technologically Enhanced Naturally Occurring Radioactive Materials (TENORM). The major change was to emphasize that drill cuttings are not TENORM. The changes to 3701:1-43 were sent out for public comment. The next meeting is scheduled for Feb 11, 2014.

Radiation-Generating Equipment Committee – Larry Osher

The Radiation Generating Equipment Committee met once, on November 15, 2013, since the last quarterly RAC meeting of October 18, 2013. However, regarding the five (5) rules being presented to the RAC, most of those draft changes took place during the October, 2013 meeting. At that time, the REC concluded its review of the public comments to Fluoroscopy rule 3701:1-66-07 and CT rule 3701:1-66-10, ultimately resulting in the suggestion to move the shielding requirements from these rules to one place in the 3701:1-66-02 General Administration Requirements rule. In light of these substantive changes, the decision was made to send the Fluoroscopy and CT rules were sent out for public comments a second time. In addition, draft revisions made to the Definitions rule 3701:1-66-01, General Administration Requirements rule 3701:1-66-02 and General Diagnostic Radiographic Equipment rule 3701:1-66-05 were also sent out for public comment. All public comments were then reviewed at the November REC meeting. This resulted in a significant number of changes, and therefore these rules were sent out a second time for public comments. All rules are scheduled to be reviewed at the January, 2014 meeting. No further public comments were received, and the January 10 REC meeting was subsequently cancelled. Therefore, all five (5) draft rules are presented for approval by the RAC.

There are several changes to the membership of the REC. Specifically, appointing Ms. Nicole A Harris, from Case Western CWRU as a Medical Physicist and Ms. Linnea Hopewell to be appointed as the radiography representative on the REC. Ms. Nina Kowalczyk will remain on the committee, although she is be unable to participate in the near future.

The next meeting for the REC is scheduled to be April 18, 2014.

New Business:

Review of the 2013 Annual Report – The 2013 annual report was reviewed. Additional information is needed from Mike Snee. The annual report will be reviewed and voted on in the April RAC meeting.

Election of RAC officers – Bill Thomas was nominated for the Chair position and Susan Hiatt was nominated for the Vice-Chair position. Tim Angel motioned to accept both positions as nominated, Bob Peterson seconded the motion. There was no opposition heard and the motion passed.

Review Rules – The RAC reviewed several rules, as follows. The rules, upon approval, were submitted to the Director for review by the Ohio Public Health Advisory Board.

Chapter 3701:1-37, Physical Protection of Category One and Category Two Quantities of Radioactive Material. No changes were made to the proposed rule. Larry Osher made a motion to approve the rule. Tim Angel seconded the motion. The motion was approved.

Chapter 3701:1-40-07, Radiation Protection Requirements: Carriers. No changes were made to the proposed rule. Bob Peterson made a motion to approve the rule. Larry Osher seconded the motion. The motion was approved.

Portions of Chapter 3701:1-66, Radiation Generating Equipment Requirements and Quality Assurance Standards, were reviewed. The specific rules included, 66-01, Definitions, 66-02, General administration requirements for handlers of radiation-generating equipment, 66-05, General purpose radiographic equipment, 66-07, Fluoroscopic radiation generating equipment, and 66-10, Computed tomography radiation-generating equipment. No changes were made to the proposed rules. Tim Angel made a motion to approve the rules. John Olsen seconded the motion. The motion was approved.

Department Reports

Bureau of Radiation Protection, Michael Snee, Chief

- The US Nuclear Regulatory Commission (NRC) conducted their IMPEP audit of the BRP the week of December 9. IMPEP, or the Integrated Materials Performance Evaluation Program, is a process to review Agreement State and NRC Regional radioactive materials programs. The IMPEP process employs a team of NRC and Agreement State staff to assess both Agreement State and NRC Regional radioactive materials licensing and inspection programs. Specific areas reviewed included:
 - ✓ Technical Staffing and Training
 - ✓ Status of Materials Inspection Program
 - ✓ Technical Quality of Inspections
 - ✓ Technical Quality of Licensing Actions
 - ✓ Technical Quality of Incident and Allegation Activities

✓ Sealed Source and Device Evaluation Program

The preliminary results of the audit give the highest possible ratings on all of the areas reviewed. Areas that were highlighted as particularly good were incident response, rule compatibility, and inspections. The IMPEP team also noted a “good practice” in the BRP’s Bureau Medical Event Review Team.

- On October 30, BRP and National Nuclear Security Administration (NNSA) personnel conducted a meeting on radioactive material security at the Fawcett Center on the OSU campus. Attendees at the October 30 meeting will include BRP, NNSA, Ohio Homeland Security, and FBI personnel along with representatives from thirty Ohio radioactive material licensees. Since the meeting eight licensees have made arrangements for a security assessment by NNSA.
- The BRP provided training sessions for Ohio Homeland Security personnel on November 18 and December 17 on radioactive material use and security in Ohio.
- January is National Radon Action Month. There is a feature link on the ODH website with information on radon and home testing.
- The Utility Radiological Safety Board met on January 13. Items discussed included the upcoming Hostile Action Exercise to be conducted at Beaver Valley Nuclear Power Plant on June 17; the upcoming outage at the Davis-Besse Nuclear Power Plant that will involve the replacement of the steam generators and two reactor coolant pump motors; the July URSB meeting will be held at the Perry Nuclear Power Plant with the possibility of a tour of the plant.
- BRP personnel changes. Cindy Grant from the Toledo office has been promoted to a Senior Health Physicist in the X-ray section. Erick Ziegler has been hired as a Health Physicist in the Radioactive Material section. Melody Carr has been hired as an Administrative Professional in the X-ray registration unit.

Nuclear Materials Safety, Mark Light

During the 4th quarter of 2013, 122 radioactive materials licensing actions were completed. This included 3 new, 20 renewals, 97 amendments, and 2 terminations. There are no overdue licenses.

YTD 2013		4th Qtr
496	Total	122
19	New	3
140	Renewal	20
22	Term.	2
313	Amend.	97
2	Abandon	0

During the 4rd quarter of 2013, 51 radioactive materials licensee inspections were performed and there were no significant violations. There are no overdue inspections. For year 2013, 147 Inspections were conducted, and 38 GL Audits.

Radon
Licenses

4th Qtr 2013	YTD 2013
88 Total	350 Total
17 New	89 New
54 Renewal	178 Renewal
2 Termination	4 Termination
15 Amendments	79 Amendments
0 Abandoned	0 Abandoned

Radon Mitigation System Inspections:

8 - 4th quarter inspections completed
39 - total inspections completed for 2013

X-Ray Program, James Castle

Facility Type	Facilities Inspected	Tubes Inspected
01 Chiropractic Office	4	65
02 Dental Office	285	991
03 Physician Office	83	134
04 Podiatry Office	37	37
05 Veterinary Office	79	105
06 Mobile Health Care	7	24
07 Registered Hospital	27	0
08 Non-Registered Hospital	36	5
09 Educational Institution	14	52
10 Clinic	77	255
11 Government Agency	10	17
12 Assembler/Maintainer / RGE	14	0

13 Corporate Office	5	5
14 Manufacturer	56	138
15 Laboratory / Testing / R&D	32	80
16 Correctional Facility	7	19
18 Engineer / Contractor	3	3
19 Transportation Company	1	2
21 RGE Manufacturer	1	1
22 Recycling / Scrap / Waste	7	12
Total	812	1945

38 - CRE annual audit reviews:
84 - MQSA inspections
29 - Freestanding healthcare facility inspections

Misadministrations:

OSU Arthur James Cancer Center

A therapy patient was prescribed two fractions of treatment per week. It was discovered on 11/18/2013 that the patient had received 3 fractions in the first week, which exceed their weekly prescribed dose by more than 30 percent. The oncologist was notified and they will be adjusting the patient’s remaining fractions to maintain the treatment’s prescribed dose.

Mount Carmel West

A patient receiving spine treatment received two fractions to the wrong site, one on 12/26/2013 and the other on 12/27/2013. This was due to a mislabeled set-up of the SID resulting in an 8cm displacement from the iso-center. The dose to the area has not been estimated but the treatment dose was approximately 300cGy per fraction.

Wayne Cancer/Radiation Oncology

Two patients were scheduled for Head & Neck IMRT on 12/31/2013. One patient was scheduled for 9:45AM and one for 10:00AM. The 10:00AM patient arrived early that day and the therapist was notified. The therapist pulled up the 10:00AM patient's plan; however, the 9:45AM patient showed up and was brought back to the room. The patient's ID was not verified so the wrong treatment plan was administered.

Technical Support, Stephen Helmer

- Nuclear Power Plant - updates
 - NRC is replacing KI in 2014
 - Current Emergency Worker KI is extended to August 2014
 - Public KI expires in October/December 2014
 - NRC scheduling delivery of EM worker KI first in April
 - NRC scheduling delivery of Public KI sometime before Oct/Dec

- Current supply from IOSAT will be replaced with THYROSAFE tablets
- THYROSAFE will be sending 65 mg tablets for both EW's & Public
- There is an FDA process to test tablets for extensions if needed
- Technical Support has been working with ODNR with TENORM issues involving Hydraulic Fracturing or Fracking in the Oil & Gas industry. ODNR has exclusive authority to regulate the industry.
- Technical Support continues to work on the Radiation Response Volunteer Corp (RRVC) and associated work with Community Reception Centers (CRC's).
- Federal Sites Oversight
 - DOE Portsmouth Site
- DOE Legacy Management Sites
 - Fernald
 - Mound
 - Piqua - BRP has an opportunity to walk down this site with DOE Legacy Management this year
- FUSRAP Sites (Army Corps. of Engineers)
 - Painesville
 - Harshaw
 - Luckey sites

Old Business: None

Next meeting of the RAC: April 11, 2014

Adjourn: The meeting adjourned at 12:09pm