

RADIATION ADVISORY COUNCIL
October 18, 2013
Minutes

ATTENDEES:

Timothy Angel, Ph.D., RS, CPM
Susan Hiatt, Vice-Chair
Phillip Jenkins, Ph.D., CHP
Heather Kight
Kerry Krugh, Ph.D
David Kimberly, DDS, MD
John Olsen, MD
Bill Thomas, CHP, CIH, Chair

ABSENT MEMBERS:

Larry Osher, DPM
Robert Peterson, Jr.

ODH STAFF ATTENDEES:

James Castle
Jean Hardy
Mark Light
Michael Snee
Karl VonAhn
Dennis Shiverdecker
David Lipp
Steve James

GUESTS:

Rick Sites

The Radiation Advisory Council (RAC) was called to order by Chair, Bill Thomas at 10:30 a.m., Friday, October 18, 2013, 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 – Agenda Review – The RAC reviewed the Agenda. There were no changes to the agenda. David Kimberly made a motion to approve the agenda, Phillip Jenkins seconded the motion. The motion was passed.

Minutes of April 19, 2013 Meeting – The minutes of the April 19, 2013 meeting were reviewed. There were no changes to the minutes. Tim Angel made a motion to approve the

minutes and David Kimberly seconded the motion. There was no opposition heard and the motion passed.

Committee Reports

Radioactive Materials Committee – Susan Hiatt

The Radioactive Materials Committee has met five times since the April RAC meeting: May 14, June 11, August 13, September 10, and October 8, 2013. At these meetings the committee approved the rules that are on the RAC agenda for approval. The committee initiated review of a new chapter of the Ohio Administrative Code, Chapter 3701:1-37, which will incorporate the NRC's new 10 CFR Part 37, regarding increased security for certain quantities of radioactive materials. This chapter was approved for public comment at the October meeting. The next RMC meeting is scheduled for January 14, 2014.

Radiation-Generating Equipment Committee – Kerry Krugh

The Radiation Generating Equipment Committee (REC) met several times since the last RAC meeting on April 19. The REC met on June 21, July 12, and October 4, 2013. Keeping with its five year rule review, the REC drafted revisions to the 3701:1-66-04 quality assurance, 3701:1-66-06 dental, 3701:1-66-08 mammography, and the 3701:1-66-11 bone densitometry rule. Originally scheduled for the July RAC, these rules are being presented today for RAC approval.

This past January, an expert subcommittee of the REC was formed to review the most recent guidelines with respect to CT scanning (e.g. cone beam CT, etc.), and at the June meeting, the REC started draft revisions to the 3701:1-66-10 computed tomography rule. This included a recommendation that Dental Cone Beam CT shall be addressed in the 66-10, and not the 66-06 dental rule. At the June REC, the review of public comments for the 66-10 CT rule was finally finished (with considerable debate over hybrid CT units). In light of considerable substantive changes, the revised CT rule was posted for a second public comment period. At the most recent October 4th REC, the agenda included review of public comments for 3701:1-66-07 fluoroscopy rule, the 66-10 CT rule, 66-01 definitions, and the 38-04 Inspection Schedule and Fee Rule.

In joint agreement with the Bureau, in the future, the REC will consider (open) the rules in a given chapter, until all have been considered, before moving to another chapter. The membership of the REC is stable. However, several vacancies exist, including Dentistry, and Veterinary medicine. Paul Johnson of CCF has expressed an interest in becoming a regular member of the REC. The text REC meeting is scheduled for November 8, 2013.

Department Reports

Bureau of Radiation Protection, Michael Snee, Chief

- Update on RAC membership: Dr. Douglas Martin from OSU has been recommended to the Governor's office to fill the open position vacated by Dr. Mayr. ODH is looking for nominations for someone to fill the public representative position.

- The BRP will have an IMPEP audit by the US Nuclear Regulatory Commission (NRC) 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 that will be reviewed include:
 - ✓ 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 BRP contracted with the USDOT for training on radioactive material transportation training. The class was held in June.
- The BRP hosted a USNRC training class on the National Materials Events Database (NMED). NMED is the database that all reportable materials events are entered for tracking and analysis purposes. The class was held in August.
- A FEMA graded emergency exercise was held at the Davis-Besse Nuclear Power Station on May 13-14. Of the 15 criteria the state exercised 14 were successfully demonstrated. The only unsuccessful criteria concerned a field monitoring team and was cited as an Area Requiring Corrective Action (ARCA). A sample cartridge was inadvertently not loaded in the air sampler prior to collecting the air sample.
- BRP personnel changes. Tony Pulcrano, a long time supervisor in the X-ray section, retired in June. Dennis Shiverdecker has been selected to fill the supervisor position. Curtis Heath has been hired as a Health Physicist in the X-ray section. Colleen Ford has been hired as an Administrative Professional in the X-ray registration unit.
- On October 30 BRP and National Nuclear Security Administration (NNSA) personnel will conduct 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 Ohio radioactive material licensees.

Nuclear Materials Safety, Mark Light

During the 3rd quarter of 2013, 103 radioactive materials licensing actions were completed. This included 5 new, 15 renewals, 77 amendments, and 6 terminations. There are no overdue licenses.

YTD 2013		3rd Qtr
376	Total	135
16	New	8
120	Renewal	39
21	Term.	5
217	Amend.	83
2	Abandon	0

During the 3rd quarter of 2013, 50 radioactive materials licensee inspections were performed and there were no significant violations. There are no overdue inspections.

During the 3rd quarter of 2013, 1 incident was recorded.

Radon Program

Mark Light presented an overview of the 2013 events and accomplishments of the ODH staff.

X-Ray Program, James Castle

James Castle presented an overview of the x-ray program for the last quarter.

1st Quarter FY 2014 Report (July – September 2013)

Facility Type	Facilities Inspected	Tubes Inspected
01 Chiropractic Office	81	81
02 Dental Office	342	1149
03 Physician Office	75	105
04 Podiatry Office	32	32
05 Veterinary Office	79	101
06 Mobile Health Care	4	19
07 Registered Hospital	20	N/A
08 Non-Registered Hospital	3	3
09 Educational Institution	16	142
10 Clinic	75	177
11 Government Agency	12	28
12 Assembler/Maintainer / RGE	6	N/A
13 Corporate Office	5	6

14 Manufacturer	53	87
15 Laboratory / Testing / R&D	22	35
16 Correctional Facility	6	11
17 Public Utility	2	6
18 Engineer / Contractor	7	31
22 Recycling / Scrap / Waste	11	14
Total	851	2027

67 - CRE annual audit reviews:
83 - MQSA inspections
32 - Freestanding healthcare facility inspections

Therapy Inspections:

Changes in inspection
Patient treatment plans
Verification systems Mosaic and Aria
Reportable and non-reportable incidents

Jim Castle is participating in hospital and therapy inspections in order to develop consistent inspections and procedures.

Misadministrations:

There were no radiation therapy misadministration's reported this quarter.

However, during an inspection at OSU, 8 unreported misadministrations were found.

7 wrong site
1 Wrong patient

The Bureau of Radiation Protection sent a notice out on Bradiation that actual harm to the patient is not factored into the reporting requirements for misadministrations.

General X-ray Machine Operator Examination:

The GXMO examination contract was awarded to RadEd for the contract period starting July 1, 2013. The Department's examination committee began reviewing the examination question on October 10, 2013 to assure congruency with the education curriculum.

RadPRO SecurPass – Digital Security Screening System was being used at Hamilton County Sheriff's Office. The use of this unit has stopped based on it not meeting the state requirement that exposing human-beings to radiation must be for medical or dental purposes as authorized by a license practitioner within his or her scope of practice.

Technical Support, David Lipp

Emergency Management

Vibrant Response Exercise - About fifty State of Ohio employees, including Mike Snee and eight member from Technical Support participated in the Department of Defense's Vibrant Response exercise at Camp Atterbury, Indiana. The state participated from August 9 through August 16. The exercise simulated a 10 kiloton improvised nuclear device detonating in Columbus, Ohio, near crew stadium and proceeded in real time. For the State, one aspect that was demonstrated was the time delay that would be expected for Federal resources to arrive. In addition to the Army, Navy, Air Force, and the State of Ohio, other participating organizations included the National Guard, FEMA, U.S. EPA, U.S. DOE, U.S. Dept. of Agriculture, U.S. FDA, and CDC. In all, over 3,000 personnel participated either at the "State of Ohio" emergency operations center set up at Camp Atterbury or the thousands of troops participating in response and recovery operations at the Muskatatuk Urban Training Center south of Camp Atterbury.

RRVC

- Training in development
- Administrative issues
 - Loss of Sarah, Tim trained as Administrator
 - Review of system resulted in "cleanup" and limiting approvals by local/regional MRC administrators
 - Further enhancements being developed with regard to forms and communications
- Currently 25 "approved", 27 "researching"
- CRCPD Task Force for Volunteer Development
- Union County grant deliverables – Resource Typing and recruitment

CRC

- Northeast Central Ohio (NECO), CRC Pilot Project
 - Developed NECO Region Incident Management Document (IMD) to establish ground rules for sharing of plans and resources across jurisdictions
 - CRC process flow revamped from CDC model, assignments made to local agencies for development of process procedures associated with each area of a CRC
 - Issues identified and under consideration
 - Treatment of family units
 - Authority to hold contaminated personal property (including cars)
 - Development of FAQs and generation of a brochure
 - Preliminary CRC PPE list developed
 - Development of a template Information Sheet for members of the public entering/exiting a CRC – process, basic radiation, event information, etc. (victim handouts)
- Green County CRC Training, November 7 and 8, 2013 – BRP observing

Potassium Iodide (KI) - ODH will coordinate with the NRC to replace KI tablets the three 10 mile EPZ around the Davis Besse, Perry, and Columbiana County area of Beaver Valley.

Federal Sites Oversight

DOE Portsmouth Site

Gaseous Diffusion Site D&D - We are currently reviewing on the Waste Disposition Remedial Investigations and Feasibility Studies (RI/FS) for the proposed on-site burial cell. DOE would like to have a final draft go out for public comment during the Spring 2014.

Depleted Uranium Hexafluoride Project - Running with no problems or issues

American Centrifuge Project - Still in the demonstration of technology phase.

DOE Legacy Management Sites

Fernald - We participate in the quarterly site walk-downs with DOE Legacy Management staff.

Mound - The radiological clean-up of the site is completed. We still participate in the annual site walk-down. A final project is still on-going that involves a VOC soil plume.

Piqua - BRP has made a request to accompany DOE Legacy Management staff on the next site walk-down of the Piqua reactor.

FUSRAP Sites (Army Corps. of Engineers)

Painesville - BRP is waiting on Army Corp. to send their official final survey results. Current target completion plan has been moved again to early 2014.

Harshaw - Groundwater monitoring still shows no real change in contaminate concentrations. It appears that no radionuclides leaving the site. BRP is waiting on the proposed plan which Army Corp. hopes to finish in 2014.

Luckey sites - Army Corp. is now using DOE beryllium limits rather than OSHA's. DOE's limits are about 1/10 the OSHA standards which has caused issues with contractors and a beryllium exposure monitoring program. BRP does not have a program in place so no BRP staff will go on-site until the beryllium levels have been cleaned up. OEPA has a beryllium monitoring and protection program and can still access to the site for the state.

Special Projects and Assignments

BRP has been providing ongoing assistance to ODNR with TENORM issues involving Hydraulic Fracturing or Fracking in the Oil and Gas industry. The Ohio Revised Code give ODNR the exclusive authority to regulate the industry, including the disposal of waste, so BRP has been asked to assist them in rule writing to address their regulation of TENORM in the Oil and Gas industry through the ODNR permitting system.

Old Business: None

Next meeting of the RAC: January 17, 2014

Adjourn: The meeting adjourned at 12:20pm

RADIATION ADVISORY COUNCIL
January 18, 2013
Minutes

ATTENDEES:

Timothy Angel, Ph.D., RS, CPM
Susan Hiatt, Vice-Chair
Phillip Jenkins, Ph.D., CHP
David Kimberly, DDS, MD
Kerry Krugh, Ph.D
Nina Mayr, MD
John Olsen, MD
Robert Peterson, Jr.
Daniel Swanson
Bill Thomas, CHP, CIH, Chair

ABSENT MEMBERS:

Heather Kight
Lawrence Osher, DPM

ODH STAFF ATTENDEES:

James Castle
Jean Hardy
Stephen Helmer
Mark Light
Michael Snee
Dwight Leeseberg
Karl Von Ahn

GUEST:

LeAnn Fisher
Annalisa Hartlaub
Jody Jones
Rick Sites

The Radiation Advisory Council (RAC) was called to order by Chair, Bill Thomas at 10:35 a.m., Friday, January 18, 2013, 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. There were no changes to the agenda. Phillip Jenkins made a motion to approve the agenda, David Kimberly seconded the motion. The motion was passed.

Minutes of November 9, 2012 Meeting – The minutes of the November 9, 2012 meeting were reviewed. There were several changes to the minutes. Bob Peterson made a motion to approve the minutes with changes and Tim Angel seconded the motion. There was no opposition heard and the motion passed.

Committee Reports

Radioactive Materials Committee – Susan Hiatt

The Radioactive Materials Committee (RMC) met on January 8, 2013. The RMC reviewed notice, 2012-3, issued by the U.S. Nuclear Regulatory Commission Regulatory Assessment Tracking System (RATS). Specifically, the Rules 3701:1-38-14, -44-14 and Appendix, and -44-18 were discussed. While these rules had been previously considered by the committee, new comments by the USNRC made it expedient to make the new revisions and submit the rules for public comment. The revised rules were approved and submitted for public comment. The RMC will meet next on February 12, 2013.

Radiation-Generating Equipment Committee – Kerry Krugh

The Radiation Generating Equipment Committee met on December 7, 2012. The REC discussed the General X-ray Machine Operator (GXMO) examination. The REC provided two members to support two staff members to review the examination questions for congruency with the topics in rule 3701-72-03 of the O.A.C. and the ODH GUIDANCE FOR GXMO EDUCATIONAL PROGRAMS. This review was completed on January 11. The REC revised the Quality Assurance, Rule 3701:1-66-04. The REC approved the revised text and recommended that the rule be sent out for public comment.

The REC is scheduled to meet on February 22 to discuss the dental rule 3701:1-66-06, fluoroscopy rule 3701:1-66-07, mammography rule 3701:1-66-08, computed tomography rule 3701:1-66-10 and bone densitometry rule 3701:1-66-11.

Department Reports

Bureau of Radiation Protection, Michael Snee, Chief

- Pam Matura who filled the “Member of the Public” representative to the RAC resigned on November 30. The bureau is open to nominations to fill this post. We will solicit nominations through BRadiation.
- The terms of three members of the REC and two members of the RMC expire in the near future. If the members agree to serve another term the bureau can have a Director’s Journal Entry reappointing them signed within a couple of days.
- The terms of three members of the RAC expire in September. They will need to be reappointed by the Governor.
- The bureau is drafting proposed changes to various sections of Revised Code Chapter 3748 to present to the RAC for comment at the April meeting.

- An update on the status of the Ohio Public Health Advisory Board was provided.

Nuclear Materials Safety, Mark Light

One section vacancy exists, a Senior Health Physicist in the Medical Section.

During the 4th quarter of 2012, 103 radioactive materials licensing actions were completed. This included 5 new, 15 renewals, 77 amendments, and 6 terminations. There are no overdue licenses.

<u>2012</u>		<u>YTD 2012</u>
103	Total	443
5	New	13
15	Renewal	92
6	Term.	22
77	Amend.	310
0	Abandon	6

During the 4th quarter of 2012, 43 radioactive materials licensee inspections were performed and there were no significant violations. There are no overdue inspections. The Bureau completed 153 inspections in 2012.

During the 4th quarter of 2012, 9 incidents were recorded, 1 Medical equipment malfunction involved an adjudication order, 1 resulted in a damaged gauge. These incidents were discussed with the RMC.

Rules: TBRed 3701-39-02.1 (rescission), 3701:1-54-02 (fee rule)
 RATS 2011-1 rules 3701:1-38-01, 3701:1-40-14, 3701:1-40-15, 3701:1-44-15, and
 3701:1-49-03 awaiting NRC Review
 3701:1-40-3 to OPHAB

X-Ray, James Castle

The Bureau of Radiation Protection inspected 1,571 tubes at 712 facilities. There were 20 On-site hospital inspections, 87 CRE annual audit reviews, 88 MQSA inspections, and 29 freestanding healthcare facility inspections.

Two Misadministrations Reported:

1. Patient A, being treated for right breast cancer, was treated with patient B's right breast treatment plan.
 - This occurred because patient B's treatment plan was pulled up on the computer screen prior to getting patient B for treatment. However, patient B was not there and patient A was brought back to the room for treatment. Patient A received patient B's right breast treatment.
 - The therapist did not follow established procedure

- The fields were similar and the estimated daily dose deviation was 9% or 17cGy.
 - Corrective Action
 - Implemented additional process patient self-identification on the computer screen.
 - Associates who deviate from process will be addressed through performance management process.
2. A patient receiving prostrate treatment to consist of 45 fractions (25 fractions to prostate and lymph nodes and 20 fractions to only the prostate) received 34 fractions correctly to the primary site (prostate) but due to a 180 degree rotation in collimator the secondary site (lymph nodes) did not receive any intended dose and the inner thighs received 4500cGy.
- Inspection occurred 1-7-2013 the exact cause is still under investigation.

Some concerns have been raised regarding the pass/fail rate of the GXMO examination. On January 11, 2013, the Ohio Department of Health, Bureau of Radiation Protection implemented its first step toward resolution by exercising its right under contract to have an ODH examination committee (made up of two ODH members and two experts from the radiation education field) review the vendors examination questions for congruency with the topics in rule 3701-72-03 of the Ohio Administrative Code and the ODH GUIDANCE FOR GXMO EDUCATIONAL PROGRAMS. This evaluation of the questions used the P Value, Point biserial correlation coefficient, and Kuder Richardson 20 (KR2) reliability coefficient. Some examination questions were modified and further evaluation of these revised examination questions will determine the next step in addressing the issue.

Chad Lehman, the new Health Physics Supervisor in the X-Ray section was introduced to the RAC. Chad began his new position in November, 2012.

Technical Support, Stephen Helmer

1. Nuclear Power Plants
 - The Utility Radiological Safety Board (URSB) statutory meeting was on January 14, 2013. Budget negotiations are expected to begin to determine emergency response funding for the next two state fiscal years.
 - First Energy provided their new MIDAS dose assessment software to the state for review and use. Training was provided on January 15, 2013.
 - There was Federal Emergency Management Agency (FEMA) Region V planning presentation provided to ODH staff and other response agencies. FEMA provided updates on Federal response capabilities related to Improvised Nuclear Device (IND) disasters. The presentation was provided on January 16, 2013.
2. Technical Support section is working on a NORM (naturally occurring radioactive material) TENORM (technically enhanced naturally occurring radioactive material) fact sheet. It is currently in draft form. Its purpose is to clarify the radiological issues related to NORM including TENORM as it relates to the oil & gas industry. This fact sheet will be posted on the ODH website when it is reviewed and approved.
3. BRP Oil & Gas industry involvement
 - Meetings continue between ODNR (primary regulator), OEPA, and ODH

- BRP has obtained sampling and analysis from some oil pads. This is expected to continue. The ODH Lab is analyzing the samples we have.
 - BRP is currently visiting a few deep well injection sites in Ohio.
 - BRP is working with OEPA to coordinate information and guidance to municipal landfills receiving some of the waste related to this industry.
 - BRP provided Summit Labs (Ohio radiochemistry laboratory) contact information to CRCPD.
 - BRP attended a Battelle meeting with ODNR and Ohio EPA to consider possible alternatives to deep well injection.
4. Technical Support continues to work on the Radiation Response Volunteer Corp (RRVC) and associated work with Community Reception Centers (CRC's). Our staff observed a CRC exercise in Kansas this past year. A number of counties in northeast Ohio are interested in demonstrating a similar exercise here in Ohio. This initiative is tentative, but BRP is looking to help support this effort should the local health departments decide to pursue this.

Old Business: None

New Business:

Review of 2012 Annual Report: The RAC committee reviewed the draft annual report and noted a few minor changes. Bill Thomas, Chair, advised he would make the changes and submit the report for approval at the next RAC meeting.

Election of RAC officers: Tim Angel motioned to re-elect Bill Thomas as the Chair and Susan Hiatt as the Vice-Chair. Mr. Thomas and Ms. Hiatt both accepted the nomination. David Kimberly seconded the motion. There was no opposition heard and the motion passed.

Review – Rule 3701:1-40-3 Activities requiring license: The rule was reviewed by the RAC and Susan Hiatt made a motion to approve the rule as presented to the RAC. Tim Angel seconded the motion. There was no opposition heard and the RAC approved the rule.

Next meeting of the RAC: April 19, 2013

Adjourn: The meeting adjourned at 12:00pm