

**RADIATION ADVISORY COUNCIL**  
**November 9, 2012**  
*Minutes*

**ATTENDEES:**

Timothy Angel, Ph.D., RS, CPM  
Susan Hiatt, Vice-Chair  
Phillip Jenkins, Ph.D., CHP  
David Kimberly, DDS, MD  
Pam Matura, M.H.S., C.R.C.  
Nina Mayr, MD  
John Olsen, MD  
Lawrence Osher, DPM  
Robert Peterson, Jr.  
Daniel Swanson  
Bill Thomas, CHP, CIH, Chair

**ABSENT MEMBERS:**

Heather Kight  
Kerry Krugh, Ph.D

**ODH STAFF ATTENDEES:**

James Castle  
Jean Hardy  
Mark Light  
Michael Snee  
Dwight Leeseberg  
Paul Carder  
Rochelle Smith

**GUEST:**

LeAnn Fisher  
Thavendra Rajah  
Jason K. Lee  
Jimelle Rumkey  
Rick Sites

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The Radiation Advisory Council (RAC) was called to order by Chair, Bill Thomas at 10:30 a.m., Friday, November 9, 2012, 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.

Mr. Thomas introduced and welcomed David Kimberly, DDS, MD as the new Dentist representative to the Radiation Advisory Committee. There was no meeting of the RAC on October 19.

**Agenda Review** – The RAC reviewed the Agenda. There were no changes to the agenda. Tim Angel made a motion to approve the agenda, Robert Peterson seconded the motion. The motion was passed.

**Minutes of July 20, 2012 Meeting** – The minutes of the July 20, 2012 meeting were reviewed. There were no changes to the minutes. John Olsen motioned to approve the minutes as written and Tim Angel seconded the motion. There was no opposition heard and the motion passed.

## **Committee Reports**

### **Radioactive Materials Committee – Susan Hiatt**

The committee has met twice since the last RAC meeting: August 14 and October 9. At the August meeting, the committee voted to delete OAC Rule 3701:1-39-02.1. The Committee voted to send rule revisions out for public comment, as required by the NRC Regulation Assessment Tracking System (RATS), 2011-2.

At the October meeting, the committee approved the fee rules with revised penalty language: 3701:1-38-02, -38-06, and -54-02. The proposed changes were recommended to the RAC for approval. The committee approved three rules in Chapter 54: 3701:1-54-03, -54-04, and -54-05. These rules were up for a five year review. No public comments were received on any of these rules. The Committee recommended that these rules be reviewed by the RAC.

### **Radiation-Generating Equipment Committee – Larry Osher**

The Radiation Generating Equipment Committee (REC) met once since the last RAC meeting, September 28, 2012. The REC discussed the public comments pertaining to the newly revised draft 3701:1-67, Radiation Therapy rules. All public comments were considered and the REC approved the draft 3701-67 rules and recommended their approval by the RAC. In addition, the REC reviewed and approved the penalty fee changes to rules 3701:1-38-06, 3701:1-66-03.

In September, the committee officially started reviewing rules pertaining to CT scanning. An expert subcommittee was created in order to discuss the following topics including, 1) Quality assurance and control testing for Cone Beam CT, 2) PET CT, Micro CT, OBI CT for therapy, and 3) Radiation dose as it pertains to pediatric CT imaging. The committee will look at an appropriate definition for cone beam and potential differences between different types of equipment such as, upright dental CT units, upright ear- nose and throat CT units, and weight-bearing podiatry CT units.

The REC members unanimously approved the idea of a new agenda item at meetings called "Open Forum" be added to future agendas to accommodate guests. Based upon projected workload/timelines for dedicated business, the REC will determine allotted time for "Open Forum" for each meeting.

At the next REC meeting, the committee plans to draft revisions to rules 3701:1- 66-04 (Quality Assurance), 3701:1-66-06 (Dental RGE), 3701:1-66-08 (Mammography RGE), and 3701:1-66-11 (Bone Densitometry).

The membership of the REC consists of 16 total positions. Committee membership is stable at 15; the Chiropractic position remains vacant. There was a new appointment to the REC, Cleveland's University Hospital Physicist Paul Geis, Ph.D now represents the new position Academic Medical Center. In addition, there was one reappointment, Kathryn Gardner, M.D. as Diagnostic Radiologist.

## **Department Reports**

### **Nuclear Materials Safety, Mark Light**

Two section vacancies have been filled:

Health Physicist – Decommissioning Paul Carder; and  
Health Physicist – Medical Section Rochelle Smith.

During the 3rd quarter of 2012, 82 radioactive materials licensing actions were completed. This included 1 new, 13 renewals, 64 amendments, and 4 terminations. There are no overdue licenses.

During the 3rd quarter of 2012, 49 radioactive materials licensee inspections were performed and there were no significant violations. There are no overdue inspections.

During the 3rd quarter of 2012, 12 incidents were recorded, 1 involved a notice of violation and 2 were Medical Events. These were discussed with the Radioactive Materials Committee.

Chapter 49 Well Logging, Chapter 56 Special Nuclear Material and Chapter 52 Irradiators (5 Year Review) rules became effective September 1, 2012.

Proposed amendments to rules 3701:1-38-01, 3701:1-40-14, 3701:1-40-15, 3701:1-44-15, and 3701:1-49-03 of the Administrative Code, were submitted for review and comment. The comment period ends December 21, 2012.

### **X-Ray, James Castle**

The Bureau of Radiation Protection inspected 1636 tubes at 716 facilities. There were 20 On-site hospital inspections, 34 CRE annual audit reviews, 82 MQSA inspections, and 38 freestanding healthcare facility inspections.

Three misadministration's were reported over the last three months. A description of each incident is provided below.

1. Patient A, a neck cancer patient, was treated with another patient's, Patient B's neck treatment plan.
  - This occurred because the therapist downloaded patient B into the electronic treatment system. Patient B did not show up for treatment.

- Patient A was then brought into treatment room and treated with patient B's treatment plan.
  - The discovery of the misadministration occurred while the therapist was in the room changing the set-up from the neck to the super clavicle treatment. The therapist noticed the name on the molded head mask did not match the information in the treatment system.
    - Dose planned for the fraction 200cGy – dose delivered 214cGy
    - 7% deviation for fraction, less than 1% of total intended.
    - Oncologist determine - no further treatment necessary
  - Therapist received counseling and further training on patient verification procedures
2. The patient was prescribed an electron boost to the tumor bed following breast cancer treatment. The boost was to consist of four fractions of 250cGy for a total dose of 1000cGy. Patient received treatment to the wrong site for one fraction out of four planned fractions
- The therapist and physician lined the treatment up to axilla scar instead of the lumpectomy scare and completed the first treatment.
  - How the misadministration was discovered: The patient arrived three days later for the second boost. The patient questioned the therapist about treating the axilla scare instead of the lumpectomy scare. The therapist immediately notified the physician who verified that the patient was treated incorrectly for the first treatment.
  - The attending radiation oncologist believes the dose delivered to the adjacent tissue did not exceed any normal tissue tolerances and therefore would be of no clinical significance.
3. A patient was treated to the lumbar spine from a previous patient's lumbar spine treatment plan.
- Total prescribed dose 3000cGy (10 fractions 300cGy)
  - Total of first 9 fractions 2700cGy
  - Last Treatment 124cGy total administered 2824cGy
  - Oncologist decided that patient did not need to make up remainder of dose
  - Therapist did not follow procedure for patient identification

#### One Overexposure Reported

- An interventional radiologist received 64.4 Rem exposure to the right hand.
- Emergency Adjudication Order sent by Director of Health for the radiologist to immediately cease and desist any procedures which may expose his extremities to ionizing radiation for the remainder of the year.
- The Medical Director removed the Radiologist from interventional rotation for the rest of the year.

#### Registration Applications:

1. 2 New Facility Category types

- RGE Manufacturer
- Recycling/Scrap/Waste
- 2. 8 New tube types
  - Medical
    - Cone beam CT
  - Therapy
    - Integrated kVp-Rad/CT/Fluoroscopy (OBI)
    - Mobile Electron Linear Accelerator
    - Electronic Brachytherapy
    - Cyberknife
    - TomoTherapy
  - Veterinary
    - Hand-held Veterinary
    - Micro CT Veterinary

**Guest Speaker: Arlen Pennell** - At the request of Michael Snee, Arlen Pennell of the Creative Services Department attended the RAC meeting to speak on web casting and the technology that is available for remote access to committee meetings.

**Bureau of Radiation Protection, Michael Snee, Chief**

There were 2 changes to the Revised Code, effective on September 10. The first change was the penalties charged for late payment of invoices. Formerly, the penalties were two times (2x) the invoice amount, assessed 90 days after the date of the invoice and 5x the invoice amount, assessed 180 days after the date of the invoice. The penalty was changed to ten percent (10%) of the invoice amount assessed 90 days after the date of the invoice. The second change to the Revised code eliminated the Public Health Council and created the Public Health Advisory Board.

BRP personnel participated in a number of emergency exercises:

1. A Radiological Dispersal Device (RDD) tabletop exercise “Bearcat Thunder” was held at the University of Cincinnati on August 8.
2. A radiological terrorist incident exercise was held at Bolton Field in Franklin County on September 20.
3. Tim Walker went to Kansas to observe the “Amber Waves” RDD exercise held September 24-26.
4. Perry Nuclear Power Plant ingestion zone exercise was held October 1-3.

The Organization of Agreement States (OAS) held their annual meeting the week of August 27. Steve James was elected to the OAS Executive Board.

The Utility Radiological Safety Board (URSB) met on October 9 at the Columbiana County EOC in Lisbon, Ohio.

Ohio will be one of four states to participate in the Source Collection and Threat Reduction (SCATR) program pilot for disposal of sealed sources. We will be working with the CRCPD

and the DOE's National Nuclear Security Administration to identify and dispose of unwanted sealed sources in Ohio.

Shannon Dettmer was named the ODH Employee of the Month for September.

The BRP will be starting a multi-segment education campaign on our website. The first segment of "Raducation" will be on radiation basics.

The BRP was notified of a radiation detector alarm at the Cherokee Run Landfill in Logan County caused by a load of wastewater treatment plant sludge from the Greene County Waste Water Treatment Plant. The cause of the alarm was radioactive I-131 which is commonly used in the treatment of thyroid disorders. BRP staff Stephen James and Tim Walker met with workers at the facility to explain the radiation risk from the material and to answer any questions and concerns. The presentation was well received by the workers at the facility.

A presentation was given to discuss technologically enhanced naturally occurring radioactive material (TENORM) and hydraulic fracturing activities in Ohio.

#### **Technical Support, Stephen Helmer**

There was no report from Stephen Helmer

**Old Business:** None

#### **New Business:**

1. The following rules were considered by the RAC.

OAC 3701-39-02.1 - Standards for handling radioactive material – Rescind. No public comments were received. Tim Angel made a motion that the rule be rescinded. Susan Hiatt seconded the motion. There was no discussion. The RAC approved this change.

OAC 3701:1-38-02 – Fees for inspection, application, amendment, and renewal of radioactive material sources of radiation;

OAC 3701:1-38-06 – License or registration adjudication orders; late fees; impoundment; administrative monetary penalty; and

OAC 3701:1-54-02 – Generator reporting and fee requirements.

No public comments were received. Tim Angel made a motion that the rules be approved as presented to the RAC. Robert Peterson seconded the motion. There was no discussion. The RAC approved these changes.

OAC 3701:1-54-03 – Assured isolation facility;

OAC 3701:1-54-04 – Quality assurance; and

OAC 3701:1-54-05 – Radioactive waste processing.

No public comments were received. Pam Matura made a motion that the rule be approved as presented to the RAC. Tim Angel seconded the motion. There was no discussion. The RAC approved these rules.

OAC 3701:1-66-03 – Certification of radiation experts. No public comments were received. Tim Angel made a motion that the rules be approved as presented to the RAC. Robert Peterson seconded the motion. There was no discussion. The RAC approved these changes.

OAC 3701:1-67 Therapy Radiation-Generating Equipment – A significant number of public comments were received and three different meetings of the REC were required to develop the rules. The REC recommended the following changes, including:

- 3701:1-67-01 -
- 3701:1-67-03 Rescinded
- 3701:1-67-05 Rescinded
- 3701:1-67-05 New
- 3701:1-67-06 Rescinded
- 3701:1-67-06 New
- 3701:1-67-07 Rescinded
- 3701:1-67-07 New
- 3701:1-67-08 Rescinded
- 3701:1-67-08 New
- 3701:1-67-09 Rescinded
- 3701:1-67-09 New

Tim Angel made a motion that the rules be approved as presented to the RAC. Nina Mayr seconded the motion. The RAC discussed the changes that were proposed. The RAC approved these changes.

The RAC discussed the proposed changes to OAC 3701:1-67-02 and revised the proposed language. Larry Osher made a motion to approve the revised language. Susan Hiatt seconded the motion. The RAC approved the revised text.

2. The RAC discussed the options of remote or video access to the RAC meetings and the committee meetings. There was significant discussion by the RAC members. The ability to provide remote access may increase participation by stakeholders but may limit discussion in this new public forum. The REC and RMC will discuss the options and may use the technology on a limited basis. The RAC members expressed concerns about the use of remote access. The RAC did not vote on this issue.

**Next Meeting of the RAC:** January 18, 2013

**Adjourn:** The Radiation Advisory Council meeting adjourned at 1:05PM .

**RADIATION ADVISORY COUNCIL**  
**July 20, 2012**  
*Minutes*

**ATTENDEES:**

Timothy Angel, Ph.D., RS, CPM  
Susan Hiatt, Vice-Chair  
Phillip Jenkins, Ph.D., CHP  
Kerry Krugh, Ph.D  
Pam Matura, M.H.S., C.R.C.  
Nina Mayr, MD  
Lawrence Osher, DPM  
Robert Peterson, Jr.  
Daniel Swanson  
Bill Thomas, CHP, CIH, Chair

**ABSENT MEMBERS:**

Heather Kight  
John Olsen, MD

**ODH STAFF ATTENDEES:**

James Castle  
Stephen Helmer  
Mark Light  
Michael Snee  
Karl Von Ahn

**GUEST:**

Emilee Palmer  
Lee Blackburn  
Pat Marida  
Rick Sites  
Alicia Rivers

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The Radiation Advisory Council (RAC) was called to order by Chair, Bill Thomas at 10:30 a.m., Friday, July 20, 2012, 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. Tim Angel made a motion to approve the agenda, Phil Jenkins seconded the motion. The motion was passed.

**Minutes of January 20, 2012 Meeting** – The minutes of the January 20, 2012 meeting were reviewed. It was noted that at the meeting on April 20, 2012, there were not enough members for a quorum. Consequently, there was no official business conducted at the meeting and no minutes of the April meeting. The topics that were discussed at the April meeting are attached to the minutes prepared for the July meeting.

There were a few minor changes. Susan Hiatt made a motion to approve the minutes with changes and Larry Osher 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 twice since the January RAC meeting: March 13, April 10, June 12 and July 10, 2012. At these meetings the committee approved for submission to the RAC three chapters of the Administrative Code: Chapter 3701: 1-49 (well logging), Chapter 3701: 1-52 (irradiators), and Chapter 3701: 1-56 (special nuclear material). These chapters are up for a five-year review.

At the March meeting the committee conducted a five-year rule review of Chapter 3701:1-46 (general licenses and manufacturing and distribution licenses). This chapter is out for public comment. At the March meeting the committee also reviewed a draft form for training, education and preceptor attestation of RSOs for medical licensees under Chapter 3701: 1-58.

At the June meeting the committee approved Chapter 3701:1-46, General Licenses and Licenses for Manufacturing and Distribution, which is due for a five-year review. No comments were received on this chapter. The committee also reviewed the proposal to rescind rule 3701:1-39-02\_1, as it is unnecessary since the adoption of the TENORM rules. This went out for a 30-day comment period. In June, the Committee also reviewed the rules in the NRC Regulation Assessment Tracking System (RATS).

At the July meeting, the committee reviewed rules in Chapter 3701:1-54, on radioactive waste, for a five-year review, and several rules in Chapters 38 and 66, which need to be revised to be consistent with the new penalty schedule for late fee payments. These rules will go out for public comment. The next meeting is on August 14.

### **Radiation-Generating Equipment Committee – Larry Osher**

The Radiation Generating Equipment Committee (REC) met 3 times since the January RAC meeting, May 4, June 8 and July 13, 2012. Committee activities have consistently focused on a major revision of the Chapter 67 Radiation Therapy rules. Changes have been substantive and reorganizational. All meetings have solicited input from expert physicists and therapists from around the state, with extensive reviews of public comments. At the July meeting, with the completion of the 67-08 (Shielding & Survey + Appendix) and 67-01 (Definitions) rules, the REC finally completed its review of all rules within the Chapter. These have been sent out/posted for public comments. The entire chapter will be ready for presentation at the October RAC. Upcoming, the only rule due for 5 year review is 3701:1-38-04 (Radiation generating

equipment inspection schedule and inspection fee). The 2x & 5x penalty fees have been rescinded.

The Committee intends to open the CT rules at its next meeting scheduled in September. The bureau is recommending that the Committee review the Industrial Rules in the near future, including shielding requirements.

Membership is stable. The committee would like to create a new position — University/New Technology and would like to recommend Paul Geis, Ph.D., Division of Medical Physics and Dosimetry, Department of Radiation Oncology of University Hospitals Case Medical Center for the position.

## **Department Reports**

### **Bureau of Radiation Protection, Michael Snee, Chief**

- Mid-Biennium Review included changes to the Revised Code. The Revised Code was amended to penalties charged for late payment of invoices. Currently the penalties are 2x the invoice amount assessed 90 days after the date of the invoice and 5x the invoice amount assessed 180 days after the date of the invoice. The penalty will be changed to 10% of the invoice amount assessed 90 days after the date of the invoice.

The Revised Code was also amended to eliminate the Public Health Council. Both of the Revised Code changes will be effective on September 10.

- There have been some changes in the upper management of ODH. Martin Tremmel will assume the duties of a new position as the Deputy Director of Local Public Health Services. Steve Wermuth, Chief Operating Officer, will work with Financial Affairs, Management Information Systems, Employee Services, Government Affairs and Public Affairs focusing on both internal and external customer relations. Will McHugh will assume the role of Chief Administrative Officer for the agency. Mr. McHugh was the Chief of the Division of Prevention and in his new position he will be in charge of the three program divisions (Family, Prevention, and Quality Assurance) and the Office of Performance Improvement. Steve Wagner who was the Chief of Preparedness has assumed the role of Acting Chief of the Division of Prevention.
- The Conference of Radiation Control Program Director (CRCPD) held their annual meeting in Orlando, Florida, during the week of May 7. Prior to the meeting BRP staff attended AAPM sponsored training on radiation therapy and FDA sponsored training on mammography.
- The Council of State Governments Midwestern Radioactive Materials Transportation Committee met in conjunction with the National Transportation Safety Forum on May 15-17.

- The BRP sponsored a training course presented by DOE's Radiation Emergency Assistance Center on May 30-31. (Helmer)
- A nuclear power plant emergency exercise was held on June 19 involving the Beaver Valley Nuclear Power Station. (Helmer)
- BRP personnel participated in an FBI sponsored Radiological Awareness and Response Workshop that was held in Cleveland on June 20 and 21. The workshop brought together law enforcement and public health personnel to discuss the response to a radiological incident. The FBI is sponsoring similar workshops around the country. (Helmer)
- BRP personnel participated in a Federal Radiological Monitoring Assessment Center outreach seminar on June 28-29.
- Utility Radiological Safety Board (URSB) met on July 9 at the Davis-Besse Nuclear Power Plant in Oak Harbor, Ohio. A tour of the plant was held after the meeting. The next URSB meeting will be held in October in the vicinity of the Beaver Valley Nuclear Power Station. (Helmer)
- BRadiation messages included:
  - ✓ Safety Culture brochure – May 7
  - ✓ X-ray registration computer improvements – June 7
  - ✓ Sealed source disposal options – June 29
  - ✓ NRC information notice concerning HDR physical presence requirements – July 2
  - ✓ X-ray product defect notice – July 3
  - ✓ DOT basic reference charts – July 13
- ODH is working on upgrading the department's websites. New software is in place to help with that effort. The BRP is looking at our websites in order to make them more user friendly and to provide more and better information to our stakeholders.

### **Nuclear Materials Safety, Mark Light**

Two section vacancies are pending interviews:

Health Physicist – Decommissioning

Health Physicist – Medical Section, posted July 18

One vacancy was filled, Industrial Section Health Physicist, Sean Kubera began work July 16.

During the 2nd quarter of 2012, 61 radioactive materials licensing actions were completed. This included 12 renewals, 46 amendments, and 3 terminations. There are no overdue licenses.

During the 2nd quarter of 2012, 33 radioactive materials licensee inspections were performed and there were no significant violations. There are no overdue inspections.

During the 2nd quarter of 2012, 1 incident was responded to which was a scrap yard.

**Rules:** The Chapter 43, TENORM rules became effective April 1, and Chapter 69, Radon will become effective January 1, 2013.

Chapter 49, Well Logging, Chapter 56, Special Nuclear Material and Chapter 52, Irradiators (5 Year Review) were presented to JCARR on July 11 and will have final hearing by PHC on August 16, 2012.

Chapter 54, Low level rad waste (54-2-5) and rules 3701:1-38-02, 06, 3701:1-54-02, and 3701:1-66-03 will be published on the ODH web page, next week. Deadline for public comments on Rule 3701:39-02.1 (Rescind rule covered in Chapter 43) is July 25.

### **X-Ray, James Castle**

The Bureau of Radiation Protection inspected 1251 tubes at 586 facilities. The inspections included:

- 28 on-site hospital inspections;
- 101 CRE annual audit reviews;
- 89 MQSA inspections; and
- 24 freestanding healthcare facility inspections.

Jim reported that two misadministrations were reported involving therapy radiation-generating equipment, including:

- Patient receiving treatment to both knees was treated to the right anterior knee using the left anterior knee treatment protocol. Dose delivered was similar – no adverse effects to patient.
- A breast cancer patient receiving a post-operative treatment of a small electron field to the surgical drain site received 9 treatments to the wrong area mainly due to using the wrong CT scans for position planning. 31.7% under dose to the intended area. The facility is currently providing corrective action in response to the Ohio Department Health's inspection.

Jim reported and provided a hand-out of the new format of the X-ray website. Jim explained that the site is currently under development and more information will be added in the near future.

Jim reported that the BRP and REC discussed the availability of experts based in Ohio regarding the field of radiation-generating equipment. The BRP and REC would prefer to be proactive in developing rules for emerging modalities instead of waiting several years after a new modality emerges for the CRCPD and the national Suggested State Regulations. This approach addresses potential gaps for radiation safety issues. By being proactive, Ohio citizens would be better protected from radiation safety incidents.

## Technical Support, Stephen Helmer

### 1. Nuclear Power Plants

- ODH successfully completed the Beaver Valley (after hours) exercise on June 19<sup>th</sup>. There were no findings of any kind for the state. The evaluators noted a number of strengths for the State including the Executive Director being proactive, asking probing questions, and thinking outside the box in terms of the response actions. FEMA also noted that the state Joint Information Center (JIC) did an outstanding job of compiling and disseminating information from multiple sources including social media. State personnel at the Beaver Valley Emergency Operations Facility were very assertive in acquiring information and asking probing questions to gather needed information. Overall FEMA felt it was a good exercise.
- The Utility Radiological Safety Board (URSB) statutory meeting was on July 9, 2012. The meeting was held at the Davis-Besse Nuclear Power Station (DBNPS) Administration Building. The URSB is holding their quarterly statutory meetings this year at or near each of the commercial nuclear power plants in Ohio. The July meeting included a site tour at the DBNPS.
- Preparations for the Perry Nuclear Power Plant (PNPP) two-day ingestion exercise are underway. It will include Emergency & Ingestion Phase for both State Dose Assessment at the Ohio Emergency Management Agency (OEMA) and State Agency Field Teams. The Dry Run exercise is scheduled from August 20<sup>th</sup> through August 23<sup>rd</sup>. The Graded exercise is scheduled from October 1<sup>st</sup> through October 3<sup>rd</sup>.
- Federal Radiological Monitoring and Assessment Center (FRMAC) training provided by the Department of Energy (DOE) was provided to state agencies on June 28<sup>th</sup> and 29<sup>th</sup>. They provided updates on Federal response capabilities and field experiences from their assignments to the Fukushima nuclear disaster in Japan.

2. Training by the staff at the Radiation Emergency Assistance Center/Training Site (REAC/TS) was provided to state agencies on May 30<sup>th</sup> and 31<sup>st</sup> "Emergency Management of Radiation Accident Victims". The REAC/TS is a program managed by the U.S. Department of Energy, Oak Ridge Institute for Science and Education (ORISE).

3. FBI Table Top Exercise, Radiological / Nuclear Awareness Workshop, was held on June 20 & 21. The exercise:

- a. Improved interagency cooperation during a WMD incident;
- b. Defined the role of an epidemiologist in a public health investigation;
- c. Defined the role of a FBI agent in a WMD investigation;
- d. Identified local points of contact and regional response assets; and
- e. Reviewed recent cases regarding radiological material.

### 4. Federal clean-up sites

- DOE Portsmouth – is going to 24/7 hour operation for site decommissioning
- Painesville – Field work completed in 2011 and working on site-closeout report – concern on whether they are actually meeting Ohio requirements.

- Luckey – Stalled, scheduled to begin in 2014 pending completion of other sites
- Harshaw – Feasibility Study initiated in 2011 and will be completed in 2012

**Old Business:** The 2011 Annual Report for the RAC was reviewed in January and no further comments were provided. The Annual Report was approved for distribution to the Director.

**Next Meeting of the RAC:** October 19, 2012, starting at 10:30 AM.

**Adjourn:** The Radiation Advisory Council meeting adjourned at 2:10 PM.

**RADIATION ADVISORY COUNCIL**

**January 20, 2012**

*Minutes*

**ATTENDEES:**

Timothy Angel, Ph.D., RS, CPM  
Phillip Jenkins, Ph.D., CHP  
Kerry Krugh, Ph.D  
Nina Mayr, MD  
John Olsen, MD  
Lawrence Osher, DPM  
Robert Peterson, Jr.  
Daniel Swanson  
Bill Thomas, CHP, CIH, Chair

**ABSENT MEMBERS:**

Susan Hiatt, Vice-Chair  
Heather Kight  
Pam Matura, M.H.S., C.R.C.

**ODH STAFF ATTENDEES:**

James Castle  
Stephen Helmer  
Mark Light  
Michael Snee  
Margie Wanchick

**GUEST:**

Bryon Murray, Ohio Medical Physics Consulting, LLC

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The Radiation Advisory Council (RAC) was called to order by Chair, Bill Thomas at 10:40 a.m., Friday, January 20, 2012, 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 made a move to approve “New Business” at the beginning of the meeting. Robert Peterson seconded the motion. The motion was passed.

**New Business:**

**Review of 2011 Annual Report** – The 2011 annual report was reviewed. There were several changes made to the report. Bill Thomas will make the changes. The RAC will review the final report and approve it at the regular scheduled meeting in April.

**Election of RAC officers** - Bill Thomas was nominated to be the Chair of the RAC. Larry Osher motioned to approve Bill Thomas as Chair of the RAC, Phil Jenkins seconded the motion and Bill Thomas was approved to be the Chair of the RAC for 2012.

Susan Hiatt was nominated to be the Vice-Chair of the RAC. John Olsen motioned to approve Susan Hiatt as Vice-Chair of the RAC, Phil Jenkins seconded the motion and Susan Hiatt was approved to be the Vice-Chair of the RAC for 2012.

**Minutes of November 8, 2011 Meeting** – The minutes of the November 8, 2011 meeting were reviewed. It was noted that at the meeting on October 21, there were not enough members for a quorum. Consequently, there was no official business conducted at the meeting and no minutes of the October meeting. The topics that were discussed at the October meeting are attached to the minutes prepared for the November 8 meeting.

There were a few minor changes. Nina Mayr motioned to approve the minutes with changes and Dan Swanson seconded the motion. There was no opposition heard and the motion passed.

## **Committee Reports**

### **Radioactive Materials Committee – Bill Thomas for Susan Hiatt**

The Radioactive Materials Committee met on December 13, 2011 and January 10, 2012. The Committee reviewed several rules as part of the five-year reviews, including the following rules:

3701:1-49, Well Logging;  
3701:1-52, Irradiators; and  
3701:1-56, Special Nuclear Material.

The committee reviewed each of these rules. Some minor revisions were made. Each of the rules was approved for public comment. The next committee meeting will be on March 13, 2012.

### **Radiation-Generating Equipment Committee – Larry Osher**

The Radiation Generating Equipment Meeting officially met two (2) times since the last scheduled October 21, 2011 RAC date, that is October 28 and November 18, 2011. During these meetings, as planned, a “stepwise” approach was adopted towards modifying the 66-72 Radiation Therapy rules, specifically therapy Rules 67-05, 06, -08, and -09.

At the October meeting, work centered on structural re-organization, in particular the QA and Shielding Requirements. The November meeting specifically focused on content and/or substantive recommended changes. These rules were posted for Public Comment, with the expectation that they will be reviewed in time for consideration for approval the next (April 2012) RAC meeting.

There was a request to add a physicist for membership on the REC. Bryon Murray is President and Chief Medical Physicist for Ohio Medical Physics Consulting, LLC and also a Clinical Assistant Professor Current at the Ohio State University School of Allied Medical Professions.

The next scheduled meeting is February 3 and March 2, 2012.

## **Department Reports**

### **Bureau of Radiation Protection, Michael Snee, Chief**

- Radioactive tissue boxes at Bed, Bath & Beyond stores. The boxes were contaminated with Co-60 during the manufacturing process in India. Eight boxes were shipped to three stores in Ohio. The boxes have been pulled from the shelves and will be properly disposed.
- An overview of the new Common Sense Initiative was given.

- An employee of Oak Ridge Associated University visited ODH to examine documents that the BRP has concerning the Battelle, King Avenue and West Jefferson sites as part of the National Institutes of Occupational Safety and Health (NIOSH) Dose Reconstruction Project.

### **Nuclear Materials Safety, Mark Light**

Two section vacancies are pending interviews:

Health Physicist – Decommissioning

Health Physicist – Medical Section

During the 4th quarter of 2011, 98 radioactive materials licensing actions were completed. This included 2 new license, 34 renewals, 87 amendments, and 9 terminations. There are no overdue licenses.

During the 4th quarter of 2011, 32 radioactive materials licensee inspections were performed and there were no significant violations. There are no overdue inspections.

During the 4th quarter of 2011, 8 incidents were responded to which included 7 scrap yards, 1 discovery of Radioactive Material at a private residence.

**Rules:** The Chapter 38, 40 and 58 rules were voted on by the Public Health Counsel at the December 1, 2011 meeting and became effective January 1, 2012.

Chapter 43 TENORM and Chapter 69 RADON were introduced to the Public Health Council at the December 1, 2011 meeting and will have a public hearing February 2, 2012.

Chapter 49 Well Logging and Chapter 52 Irradiators (5 Year Review) were approved by the RMC to be published on the web for public comment until Feb 20 and 23 respectively.

Chapter 56 Special Nuclear Material will be submitted to be published on the web next week.

### **X-Ray, James Castle**

Jim discussed 3 out of 6 misadministrations cases reported last quarter. Common reasons for misadministrations:

- Failure to properly verify patient set-up and treatment protocols;
- Failure to properly identify the patient;
- Failure to properly identify the correct patient set-up markings; and
- Radiation therapists performing “override” functions without verifying information with a physicist or physician.

Jim provided the RAC members a copy of the good practice notification that will be sent to all facilities with radiation therapy equipment. The intent of the notification is to educate facilities regarding good practices to reduce the most common radiation therapy misadministrations.

Jim informed the RAC that the number of Freestanding Healthcare Imaging Facilities have dropped from 577 facilities in 2007 to 400 facilities in 2011.

### **Technical Support, Stephen Helmer**

#### 1. Nuclear Power Plants

- Utility Radiological Safety Board (URSB) Statutory meeting held January 17, 2012. The USB is currently looking at CAC (Citizens Action Committee) removal from statute. USB Annual Report fy2011 is complete (pass around copy for members)
- Davis-Besse Nuclear Power Station (DBNPS) completed its outage to replace their

Reactor Head (large hole on side on containment building). Placed original reactor head in the interim Storage Building (will include their two Steam Generators in 2014).

First Energy provided video presentation of the evolution and an update on their containment building cracks. Root Cause report due to the Nuclear Regulatory Commission on February 28<sup>th</sup>.

- New offsite Emergency Operations Facilities (EOF's) have been built. The URSB will include next three statutory meetings at these facilities near each nuclear power plant. If any of you are interested these are public meetings and tours may be available.
2. 4 Federal clean-up sites remaining
    - DOE Portsmouth – ongoing preparations working with OEPA and DOE on ARARs (Applicable or Relevant and Appropriate Requirements)
    - DOE Mound – legacy management (Institutional Controls in place) –
    - Painesville – Fieldwork completed in 2011 and working on site-closeout report
    - Luckey – stalled, scheduled to begin in 2014 pending completion of other sites
    - Harshaw – Feasibility Study initiated in 2011 and will be completed in 2012
  3. Oil & Gas Fracking in Ohio including offsite deep well injections regulated by ODNR
    - Media interest and interviews are being addressed
    - ODH (Ohio Department of Health) working with ODNR and OEPA (Ohio Department of Natural Resources and Ohio Environmental Protection Agency)
    - TENORM – Rules to PHC and have been approved to go to JCARR (Joint Committee on Agency Rule Review) Public hearing at PHC expected February 2<sup>nd</sup>.
    - Drill “Cuttings” containing Naturally Occurring Radioactive Material (NORM) going to municipal Landfills in Ohio. Working with industry questions and Ohio EPA on this.
    - BRP participated in the weekly Local Health Department (LHD) teleconference (1/4/12) to discuss Natural Gas Drilling in the Marcellus and Utica Shale Regions
    - BRP to develop survey/sample process and meet with Chesapeake Energy
      - SAMPLING MEDIA considerations
        - Cuttings – on site
        - Drilling Mud/Cutting Fluid – on site
        - Fracking Water – on site (no Pictures)
        - Produced Water – on site (no pictures)
        - Scale (Pipes, Tubulars, Valves, Pumps, etc.) – by Service Providers
  4. RRVC – Radiation Response Volunteer Corps (associated with Medical Reserve Corps)
    - a. 23 Volunteers have signed up
    - b. Scheduled to attend coordinators meeting at Ohio EMA (Emergency Management Agency) on Friday January 20, 2012.
    - c. Moving forward: 1. Accept applications 2. Meet with MRC coordinators 3. Forward applications to appropriate coordinator 4. Provide training upon request from MRC
  5. CRCPD RRVC Grant. BRP participating in the CRCPD (Conference of Radiation Control of Program Directors) HSER-10 Task Force (Homeland Security / Emergency Response – 10) for volunteer development associated with the RRVC.
  6. Filled Senior Health Physicist position with Jill Boley, start date January 31, 2012.

**Old Business:** None

**Next Meeting of the RAC:** April 20, 2012, starting at 10:30 AM.

**Adjourn:** The Radiation Advisory Council meeting adjourned at 1:20 PM.