



RADIATION ADVISORY COMMITTEE

Barbara Smith,
Chair



David Howe,
RPS Program Director

February 15th, 2023





TELECONFERENCE PROCEDURES



- Record phone-in number and pass code (in case you lose connectivity)
- Phone-in number and conference ID# provided in Teams invitation email
- If phoning into meeting, use PowerPoint slides to follow meeting
- To unmute self, press *6



- Video (of yourself) is optional
- Please mute your microphones unless speaking
- Use the “raise hand” feature if you have a question
- When speaking, begin by stating your name when you are finished
- RPS staff will use screen share to share PowerPoint information and handouts
- The meeting will be recorded for purposes of accuracy in the minutes



RADIATION ADVISORY COMMITTEE MEETING AGENDA

February 15, 2023 – Virtual Meeting

800 NE Oregon St., Portland, Oregon (On-line)

Phone-In Number 1-971-277-2343 ID: 749-557-401#

(* = Action Items)

10:00 a.m.

Registration/Public Session

- Call Meeting to Order – Barb Smith, Chair
- Introduction of guests
- Approval of Minutes – Barb Smith
- * New Member Nominee (Dr. Sousa Melo) and guests
- RPS Staffing – David Howe RPS

10:30 a.m.

2022 RPS Annual Summary – David Howe

Program Updates

- RPS Budget – David Howe, Program Director, RPS
- Electronic / Tanning Products Update – Brent Herring, Lead Worker, RPS
- Radioactive Materials Licensing – Daryl Leon, Health Physicist, RPS
- Emergency Response / Incidents – Tom Pfahler, Health Physicist, RPS
- RPS Training – Tom Pfahler, Health Physicist, RPS
- 2023 Priorities – David Howe

BREAK

11:15 a.m.

Exemptions/Rules/Statutes

- * Blue Pearl Vet - CereTom Elite CT, Mobile CT with CVT operators – Brent
- * OHSU Student Fluoro Supervision – Exemption to personal supervision by Radiation Tech - Brent
- * Black Stone Physical Medicine Collimation Exemption Request - Brent
- ODOE updating waste rules – Tom Pfahler



Legislative Bills

- 2023 Long Session (Feb – June) – David Howe
- HB 2996 (Dental Assistant OBD radiological proficiency certification) – David Howe
- HB 2583 (Changes Physician Assistant to Physician Associate) – David Howe
- HB 2584 (Eliminates performance assessment from PA-Physician Collaborative Agreements – David
- HB 2215 (Reactor Licensing / Fuel Waste) – David Howe

Rulemaking

- Pending X-ray and RML rule amendments – Daryl Leon
- Non-Radiologic Physician Training Requirements for Supervising RT's Performing Fluoroscopy – Michelle Martin

11:45 a.m. Lunch

12:15 p.m. Emergency Preparedness/Response

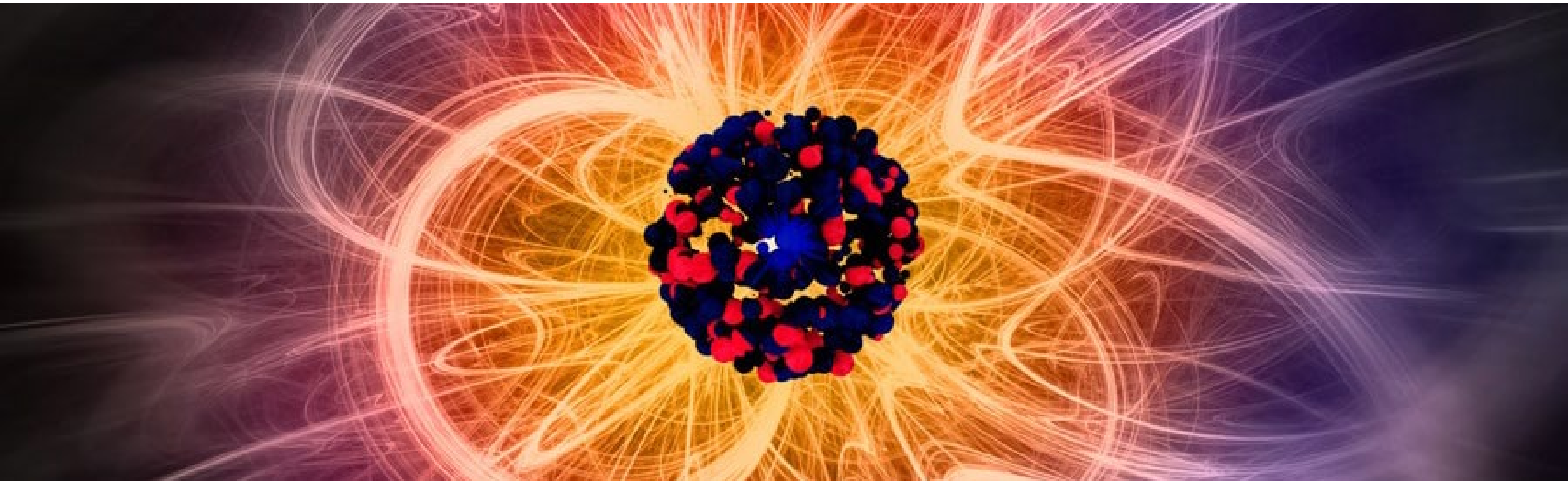
- CGS Hanford Exercise, Oct 2022 – Tom Pfahler
- CGS (off year) 2023 Exercise – Tom Pfahler
- ROSS – Radiation Operations Support Specialist (February 6 – 9th at OSU) – Tom Pfahler
- Recent incidents including OHSU Tuality, Salem Hospital, Lu-177 waste alarms – Michelle Martin/
Daryl Leon

12:45 p.m. New Business

- 2023 Mandatory RAC Member Training – David Howe

01:30 p.m. PUBLIC COMMENTS:

2:00 p.m. Announcements \ Next meeting scheduled for June 14, 2023 /Adjourn



INTRODUCTION OF GUESTS



APPROVAL OF MINUTES FROM OCTOBER 12, 2022



Radiation Advisory Committee Meeting

2023 RAC MEMBER CANDIDATE NOMINEE

Dr. Saulo Sousa Melo

Education: MS in Dentistry and PhD in Dental Radiology

Current Positions:

- OHSU School of Dentistry - Associate Professor/Director of Oral & Maxillofacial Radiology
- OHSU School of Medicine - Assistant Professor
- Director of Oral Radiology Clinic & Course Director of radiology curricula
- Coordinates OHSU School of Dentistry Imaging Interpretive Services - provides Cone-Beam CT reports to dentists

Prior Experience:

- University of Iowa College of Dentistry - Clinical Assistant Professor
- Taught Oral Radiology at local University/ Radiologist at private imaging center in Aracaju, Brazil

Professional Associations:

- American Academy of Oral & Maxillofacial Radiology - Councilor for Public Policy and Scientific Affairs
- International Association of Dentomaxillofacial Radiology – Regional Director for North America



RPS STAFFING

David Howe

Oregon Health Authority
Public Health Division
Radiation Protection Services

David Howe
Section Manager

ER/Technical Services/Field Operations

Hillary Haskins
Manager

Patricia Thompson
Administrative Assistant

Preparedness/Licensing

Todd Carpenter
Manager

Brent Herring
Lead Worker
Health Physicist
Environmental Health Specialist 3

Michelle Martin
Health Physicist
Environmental Health Specialist 3

Rama Wusirika
Health Physicist
Environmental Health Specialist 3

Toby Irving
Health Physicist
Environmental Health Specialist 3

Dong Lim
Health Physicist
Environmental Health Specialist 3

Richard Patterson
Health Physicist
Environmental Health Specialist 3

Sarah Brodesser
Health Physicist
Environmental Health Specialist 3

Judith Smith
X-Ray Registration
Administrative Specialist 1

Erin DeSemples
Health Physicist
Environmental Health Specialist 3

Lee Lind
RML Registration
Administrative Specialist 1

Daryl Leon
Health Physicist
Environmental Health Specialist 3

Alexandra Parker
Tanning Registration
Administrative Specialist 1

Thomas Pfahler
Health Physicist
Environmental Health Specialist 3

Thomas Mynes
Health Physicist
Environmental Health Specialist 3

Updated 02/03/2023

2022 ANNUAL SUMMARY REPORT



FISCAL SNAPSHOT JULY 2021 THROUGH APRIL 2022

Grant Phase Title	Beginning Balance	Revenues	Personal Services	Services & Supplies	Transfers	Allocated Direct Charges	Indirect Charges	Ending Balance
CHP TANNING DEVICES REGISTRATION	59,967	153,850	46,717	544	0	5,453	12,305	148,799
CHP-RPS ODOE ER/HOSPITAL TRAINING	19,249	(0)	2,332	364	10,000	354	635	25,564
CHP GRAIN ANALYSIS	(1,132)	7,515	9,787	1,108	0	1,227	2,742	(8,481)
CHP-RPS EMERGENCY RESPONSE TRAINING	(2,238)	(0)	28,291	5,976	36,753	4,070	7,843	(11,664)

2022 ANNUAL SUMMARY REPORT FOR RML PROGRAM

Radioactive Material Licensing

Budget Period	7/1/2021- 6/30/2023
Actuals Through	11/30/2022
Beginning Balance	-179,213
Revenue AY23	1,501,925
Accrued Revenue	0
Expenditure	1,511,960
Remaining Balance	-189,248
% Spent	101%
% Budget Period	71%
Revenue	1,322,712
INITIAL APPLICATION	39,562
LICENSE RENEWAL - A	1,453,097
MISC REVENUE	0
OF/FF CARRY OVER	-179,213
RECIPROCITY	2,065
SPONSORED TRAVEL REIMB REV	7,201
Grand Total	1,322,712

2022 ANNUAL SUMMARY REPORT FOR X-RAY PROGRAM

X-ray Registration

Budget Period	7/1/2021- 6/30/2023
Actuals Through	11/30/2022
Beginning Balance	74
Revenue AY23	3,086,875
Accrued Revenue	0
Expenditure	2,123,936
Remaining Balance	963,013
% Spent	69%
% Budget Period	71%

Revenue	3,086,949
INITIAL REGISTRATION	137,495
REGISTRATION RENEWAL - A	2,949,230
MISC REVENUE	150
OF/FF CARRY OVER	74
Grand Total	3,086,949



ELECTRONIC / TANNING PRODUCTS UPDATE

14

- Brent Herring,
- Lead Worker, RPS





ELECTRONIC PRODUCTS



Inspector Sign offs

- Sarah is signed off on dentals
- Dong is signed off on chiro and vet
- Rich is signed off on tanning and industrial
- Toby is currently working on therapy

Inspections since last RAC meeting (October 2022):

- 268 X-ray Inspections (medical, dental, vet, therapy, MQSA, and industrial)
- 24 Tanning Inspections

Inspections performed in 2022:

- 556 X-ray Inspections (medical, dental, vet, therapy, MQSA, and industrial)
 - 2,074 machines and 2,117 tubes
- 99 Tanning Inspections

Inspections performed in 2021 (for comparison):

- 326 X-ray Inspections (medical, dental, vet, therapy, MQSA, and industrial)
 - 1,345 machines and 1,422 tubes
- 22 Tanning Inspections



ELECTRONIC PRODUCTS



2022 Violation Summary

X-ray

- 18 - Dental operator complete machine specific training
- 18 - Records of dosimetry reports
- 12 - X-ray equipment functioning at manufacturer's intended specs

Tanning

- 15 - Emergency shut-off not tested annually
- 14 - Timer not checked annually
- 12 - Lamp equivalency certification not tested
- 10 - Client's date of birth and ID information not recorded



RADIOACTIVE MATERIALS LICENSING 2022 SUMMARY

Daryl Leon, Health Physicist, RPS

Count	Type
56	Change RSO/AU
52	Renewal
37	Add/remove source
32	Reciprocity
12	Termination
13	New
24	Other
226	Total



2022 – RML Inspections and Violations

92 inspections performed (none overdue)

SL 1	SL2	SL3	SL4	SL5	Rec
0	1	23	31	27	12

Count	Rule #	Description
20	120-0020	Annual audit not conducted
17	120-0460	Leak tests not performed
16	118-0050	Transportation violations. i.e., blocking bracing, Transportation documents etc.
12	118-0050	HAZMAT initial/3-year refresher training
10	120-0200	Equipment calibration
5	116-0160	Dose Calibrator checks not performed correctly
4	111-0010	Rad safety training
3	116-0090	Rad Safety Committee missing AU/not held at least once every 6 months
8		Various

2022 EMERGENCY RESPONSE/ INCIDENTS

Count	Description
14	Scrap Monitor Alarm
11	Medical Event
9	Waste Monitor Alarm
5	Miscellaneous
3	Accelerator patient overdose
3	Tanning
2	Transportation
6	Various
53	Total

2022 EMERGENCY RESPONSE/ INCIDENTS

FEATURED INCIDENTS

- CT tech not following scanning and repeat protocols. Rescans due to user error and lack of basic understanding in CT. CT tech tried to hide actions
- Lu-177 found in various waste facilities
- Treated wrong area (7 fractions) using Sensus superficial electronic brachytherapy
- Notified by the City of Albany that they are in possession of a "cut up" tank (original dimensions 15'x10') that has found to contain "low level" radioactivity when evaluated for disposal by a local company
- HDR source replacement delivered to wrong address
- Diagnostic dose fell off back of FedEx truck while in transit to hospital. Pedestrian phoned hospital and dose retrieved by a van from the hospital. No damage to contents (I-123 Ioflupane)
- Licensee reported HDR doses delivered ~3cm (1.2 in) short of treatment site due to incorrect transfer tube length



RPS TRAINING



Tom Pfahler

TRAINING AND CONFERENCES

Training

- NRC – G-108; H-111
- ICS on-line (100, 200, 700, 800)
- Mammography CEU

Conferences: attended in-person and on-line

- Organization of Agreement States
- Conference of Radiation Control Program Directors
- Health Physics Society



ROSS – Radiological Operations Support Specialist

- In-Person Training
 - http://ctosnnsa.org/pages/courses/courses_mobile_training_description
- Flyer
 - https://www.fema.gov/sites/default/files/2020-07/fema_cbrn-ross.pdf
- General Info
 - <https://www.crcpd.org/page/ROSS-Portal>
- Booklet
 - https://www.fema.gov/sites/default/files/2020-05/fema_nims_509_ross_0.pdf



2023 PRIORITIES

DAVID HOWE



2023 PRIORITIES

DAVID HOWE

- RECRUIT FOR PERMANENT RPS OPERATIONS/ER MANAGER
- CONTINUE FOCUS ON STAFF INSPECTION CROSS-TRAINING
- ACQUIRE NEW RIID'S AND X-RAY EQUIPMENT TESTING DEVICES
- FINALIZE STATE OREGON RADIOLOGICAL EMERGENCY RESPONSE PLAN

Take a Break





EXEMPTIONS / RULES/ STATUTES

BluePearl Specialty + Emergency Pet Hospital Exemption Request

Brent Herring

- Exemption request to allow mobile CT, in a stationary manor, to be used in a veterinary facility
- RPS currently has no rules concerning this request
- BluePearl submitted original request in February 2022
- BluePearl submitted the following:
 - The outline of the MIC CT Trainer Program
 - Physics testing on the unite dated November 20, 2022
 - CT Number Image Uniformity needs to be addressed – high CT numbers greater than the ACR allowed 7.00 HU
 - Picture of “Caution: Radiation” sign on entry door
 - CT reference chart
 - Numerous photographs of machine and control in room
 - CVT MIC CT Cross Trainer certificates
 - Pictures of PPE (gloves, aprons, and thyroid)
 - Scheduled times for vendor applications training (January)
- Waiting on shielding study

OHSU Student Fluoroscopy Supervision Exemption Request

Brent Herring

- Current RPS Rule 333-106-0205(4)(G) – students currently enrolled in an approved school of radiologic technology as defined in ORS 688.405, may operate fluoroscopic equipment under the personal supervision of a Radiologist or an R.T. while in the clinical phase of training.
- Exemption request – evaluate potential solutions from education gap to real world.
 - Surgeons with fluoroscopy privileges be deemed qualified for personal supervision of radiography students, or
 - Students, upon proving competency, be able to advance to being indirectly supervised by a radiation tech in c-arm cases
 - Students
 - Not allowed in operating room alone without indirect supervision
 - Not allowed, personal supervision, in cath lab, IR, and EP labs (general fluoro use only)
 - Surgeon and student both consent to student running portion of case (if a tech needs to step out for other duties)
- Reason for request
 - ARRT appropates radiation students can perform radiation exams and procedures with indirect supervision upon proving competency per ARRT standards and tech approval
 - Lack of confidence once students become a technician

Black Stone Physical Medicine Collimation Exemption Request

Brent Herring

- Rule 333-106-0201(3)(B) – Stepless adjustment shall, at the greatest SID, provide continuous filed sizes from the maximum obtainable to a field size of 5 cm by 5 cm or less
- Exemption request – latest physics report stated correction action was required for their OEC 9600 because it was not compliant with the rule stated above. Black Stone Physical Medicine is requesting an exemption based on:
 - They work frequently with their x-ray technician, and this is a known issue, however the machine continues to operate satisfactorily in the lateral position.
 - They leave the machine alone as it works well and does not affect their use of the machine.
- Black Stone Physical Medicine has stated:
 - They will leave the machine in the lateral position to change the collimation.
 - It is an unusual situation where the machine is operational but requires certain positioning to accomplish some functions.



ODOE WASTE

RULES UPDATE



OREGON
DEPARTMENT OF
ENERGY

- This rulemaking project will identify proposed revisions to OAR chapter 345, division 050, and other rules to implement the new provisions of SB 246 (2021) and to ensure that Oregon's regulation of radioactive wastes is sufficient to protect public health and safety and the environment.
 - <https://www.oregon.gov/energy/Get-Involved/Pages/Energy-Facility-Siting-Council-Rulemaking.aspx#RWM>

OREGON DEPARTMENT OF ENERGY UPDATING WASTE RULES

Requesting ODOE Rule Advisory Committee comment by March 1st, 2023

- Draft language in OAR 345-050-0035 and beyond is intended to clarify the pathway process, bring the dose limit to a level consistent with federal recommendations for unrestricted use (100 mrem), and to add a plant uptake dose pathway. There is a desire by some RAC members to also include allowance for shielding or mitigation that would result from consideration of landfill disposal. ODOE RAC welcomes any proposed language suggestions to that effect as well as a clear explanation as to how such a program would comply with statute at 469.300(23) and 469.525. [NOTE: Historically, as is stated in OAR 345-050-0035(2), EFSC has not allowed consideration of mitigation or land use restrictions when conducting pathway exemption requests for determination of radioactive waste, as is stated at OAR 345-050-0035(2)].
- An alternative option for the Pathway Exemption process is less prescriptive as to the technical assessment and process to be used while analyzing potential pathway exempt wastes. The existing procedures would be retained as agency guidance, but alternate methods would be considered. However, based on internal ODOE staff analysis, it will likely be a challenge to demonstrate that wastes over Table 1 and 1a values are eligible for a pathway exemption at the 100 mrem dose limit based on current pathway exemption analysis requirements. ODOE welcomes alternative analysis proposals for debate and consideration.

OREGON DEPARTMENT OF ENERGY UPDATING WASTE RULES

Requesting ODOE Rule Advisory Committee comment by March 1st, 2023

- Draft changes made to OAR 345-050-0006 to -0030 are largely intended to streamline the potential radioactive waste screening process, address residual medical isotopic wastes that are now frequently setting off portal alarms, and bring the rules into alignment with limitations on current out-of-state disposal and temporary storage practices.
- OAR 345-050-0049 is in outline form. ODOE RAC welcomes input on how to best include the plant uptake dose and have posed some questions in the outline. Please provide whatever feedback on those questions you deem appropriate.



LEGISLATIVE BILLS 2023 LONG SESSION FEBRUARY - JUNE

House Bill 2996

Sponsored by Representatives PHAM H, JAVADI, BYNUM; Senator STEINER (Presession filed.)

SUMMARY

The following summary is not prepared by the sponsors of the measure and is not a part of the body thereof subject to consideration by the Legislative Assembly. It is an editor's brief statement of the essential features of the measure as introduced.

Prohibits Oregon Board of Dentistry from requiring applicant for certification as dental assistant to pass written examination for radiological proficiency.
Takes effect on 91st day following adjournment sine die.

A BILL FOR AN ACT

1 Relating to dental assistants; and prescribing an effective date.

2 **Be It Enacted by the People of the State of Oregon:**

3 **SECTION 1.** Section 2 of this 2023 Act is added to and made a part of ORS chapter 679.

4 **SECTION 2.** In adopting rules related to the requirements for certification as a dental
5 assistant, the Oregon Board of Dentistry may not require an applicant for certification to
6 pass a written examination for radiological proficiency.

7 **SECTION 3.** Section 2 of this 2023 Act applies to applications for certification as a dental
8 assistant submitted on and after the effective date of this 2023 Act.

9 **SECTION 4.** (1) Section 2 of this 2023 Act becomes operative on January 1, 2024.

10 (2) The Oregon Board of Dentistry may take any action before the operative date speci-
11 fied in subsection (1) of this section that is necessary to enable the board to exercise, on and
12 after the operative date specified in subsection (1) of this section, all of the duties, functions
13 and powers conferred on the board by section 2 of this 2023 Act.

14 **SECTION 5.** This 2023 Act takes effect on the 91st day after the date on which the 2023
15 regular session of the Eighty-second Legislative Assembly adjourns sine die.

16
17
NOTE: Matter in **boldfaced** type in an amended section is new; matter [*italic and bracketed*] is existing law to be omitted.
New sections are in **boldfaced** type.

HB 2996: Dental Assistant Oregon Board of Dentistry radiological proficiency certification





82nd OREGON LEGISLATIVE ASSEMBLY--2023 Regular Session

House Bill 2583

Sponsored by Representative DIEHL (at the request of Nick Haskins, former Representative Raquel Moore-Green)
(Pre-session filed.)

SUMMARY

The following summary is not prepared by the sponsors of the measure and is not a part of the body thereof subject to consideration by the Legislative Assembly. It is an editor's brief statement of the essential features of the measure as introduced.

Changes term "physician assistant" to "physician associate."

HB 2583: Changes Physician Assistant to Physician Associate



House Bill 2583 is 145 pages in total

House Bill 2584

Sponsored by Representative DIEHL (at the request of Nick Haskins, former Representative Raquel Moore-Green)
(Pre-session filed.)

SUMMARY

The following summary is not prepared by the sponsors of the measure and is not a part of the body thereof subject to consideration by the Legislative Assembly. It is an editor's brief statement of the essential features of the measure as introduced.

Removes requirement that physician assistant collaboration agreement with employer include physician assistant performance assessment.
Takes effect on 91st day following adjournment sine die.

A BILL FOR AN ACT

1
2 Relating to physician assistants; creating new provisions; amending ORS 677.510; and prescribing
3 an effective date.

4 **Be It Enacted by the People of the State of Oregon:**

5 **SECTION 1.** ORS 677.510, as amended by section 11a, chapter 349, Oregon Laws 2021, is
6 amended to read:

7 677.510. (1) A physician assistant is responsible for the care provided by the physician assistant
8 if the physician assistant is acting as an employee.

9 (2) A physician assistant shall engage in collaboration with the appropriate health care provider
10 as indicated by the condition of the patient, the standard of care and the physician assistant's edu-
11 cation, experience and competence. The degree of collaboration must be determined at the physi-
12 cian, podiatric physician or employer with whom the physician assistant has entered into a collab-
13 oration agreement, or the group or hospital service and the credentialing and privileging systems
14 of the physician assistant's primary location of practice.

15 (3)(a) A physician assistant may not provide care unless the physician assistant has entered into
16 a collaboration agreement signed by a physician, podiatric physician or employer. The collaboration
17 agreement must include:

- 18 (A) The physician assistant's name, license number and primary location of practice;
- 19 (B) A general description of the physician assistant's process for collaboration with physicians
20 or podiatric physicians; **and**

21 (C) If the physician assistant has fewer than 2,000 hours of post-graduate clinical experience, a
22 plan for the minimum number of hours per month during which the physician assistant will collab-
23 orate, both in person and through technology, with a specified physician or podiatric physician[;
24 and]

25 *[(D) The performance assessment and review process, as described in subsection (5) of this
26 section].*

27 (b) The physician assistant, or physician, podiatric physician or employer with whom the physi-
28 cian assistant has entered into the collaboration agreement, is responsible for tracking the hours
29 described in paragraph (a) of this subsection.
30

NOTE: Matter in **boldfaced** type in an amended section is new; matter *[italic and bracketed]* is existing law to be omitted.
New sections are in **boldfaced** type.

HB 2584: Eliminates performance assessment from Physician Assistant Collaboration Agreement



1 (4) The collaboration agreement must be kept on file at the physician assistant's primary lo-
2 cation of practice and made available to the Oregon Medical Board upon request.

3 (5) Performance assessments and reviews of a physician assistant may be completed by the
4 physician assistant's employer in accordance with a performance assessment and review process
5 established by the employer.

6 (6) A physician assistant shall submit to the board every 36 months documentation of completion
7 of:

8 (a) A one-hour pain management education program approved by the board and developed based
9 on recommendations of the Pain Management Commission; or

10 (b) An equivalent pain management education program, as determined by the board.

11 **SECTION 2.** The amendments to ORS 677.510 by section 1 of this 2023 Act apply to col-
12 laboration agreements entered into or renewed on or after the operative date specified in
13 section 3 of this 2023 Act.

14 **SECTION 3.** (1) The amendments to ORS 677.510 by section 1 of this 2023 Act become
15 operative on January 1, 2024.

16 (2) The Oregon Medical Board may take any action before the operative date specified in
17 subsection (1) of this section that is necessary to enable the board to exercise, on and after
18 the operative date specified in subsection (1) of this section, all of the duties, functions and
19 powers conferred on the board by the amendments to ORS 677.510 by section 1 of this 2023
20 Act.

21 **SECTION 4.** This 2023 Act takes effect on the 91st day after the date on which the 2023
22 regular session of the Eighty-second Legislative Assembly adjourns sine die.

23

HB 2584: Eliminates performance assessment from Physician Assistant Collaboration Agreement





House Bill 2215

Sponsored by Representatives SMITH DB, DIEHL (Pre-session filed.)

SUMMARY

The following summary is not prepared by the sponsors of the measure and is not a part of the body thereof subject to consideration by the Legislative Assembly. It is an editor's brief statement of the essential features of the measure as introduced.

Removes requirement that adequate repository for terminal disposition of high-level radioactive waste be licensed as precondition for issuance of site certificate for nuclear-fueled thermal power plant.

Removes requirement that proposed site certificate for nuclear-fueled thermal power plant be submitted to electors of this state for approval or rejection.

Refers Act to people for their approval or rejection at next regular general election.

A BILL FOR AN ACT

1
2 Relating to nuclear-fueled thermal power plants; repealing ORS 469.590, 469.593, 469.594, 469.595,
3 469.597, 469.599 and 469.601; and providing that this Act shall be referred to the people for their
4 approval or rejection.

5 **Be It Enacted by the People of the State of Oregon:**

6 **SECTION 1. ORS 469.590, 469.593, 469.594, 469.595, 469.597, 469.599 and 469.601 are repealed.**

7 **SECTION 2. This 2023 Act shall be submitted to the people for their approval or rejection**
8 **at the next regular general election held throughout this state.**

9

NOTE: Matter in **boldfaced** type in an amended section is new; matter [*italic and bracketed*] is existing law to be omitted.
New sections are in **boldfaced** type.

LC 1658

HB 2215: Reactor Licensing / Fuel Waste





RULEMAKING

UPCOMING RULE AMENDMENTS — DARYL LEON

Division 125

For Cat 1 and Cat 2 materials; In appendix A to part 37, the mathematical formula is revised to correct a sum of fractions formula. An ellipsis and a plus sign are added at the appropriate locations, and the summation sign (sigma) and brackets are deleted as unnecessary as follows:

$$\frac{R_1}{AR_1} + \frac{R_2}{AR_2} + \dots + \frac{R_n}{AR_n} \geq 1.0$$

Minor corrections regarding reports of transaction involving nationally traced sources.
Update the mailing address to submit fingerprint cards.

Division 116

Minor clarifications regarding training for Radiation Safety Officer and Associate Radiation Safety Officer;
Minor clarifications regarding training for authorized nuclear pharmacist; and
Minor clarifications regarding medical physicist, authorized user and nuclear pharmacist.

PROPOSED RULE CHANGE

Michelle Martin
Health Physicist

Require all non-radiologist practitioners who supervise a Radiologic Technologist (RT) during fluoroscopy procedures to have state approved fluoroscopy training

PROPOSED RULE CHANGE

Michelle Martin
Health Physicist

Non-Radiologist Practitioner Definition

- [333-106-0005](#)
Definitions

(66) "Non-radiologist practitioner" means an individual who practices medicine as a medical doctor (M.D.), doctor of osteopathic medicine (D.O), doctor of chiropractic medicine (D.C.), doctor of podiatric medicine (D.P.M.) or doctor of veterinary medicine (D.V.M.); and

Supervision Definitions

(b) "Direct supervision" means that the supervisor is physically present in the **building** and immediately available to furnish assistance as needed.

(c) "Personal supervision" means that the supervisor is physically present in the **room** during the performance of the procedure at all times.



Currently approved fluoroscopy training courses

Training Program	Course Title	Training Format	Website
ASRT	State of Oregon Fluoroscopy Training (6 course program)	Online course	www.asrt.org/ORfluoro
Fluoroscopic Safety, LLC	Advanced Training Program on the Safe Use of Fluoroscopy	Online course	http://fluorosafety.com/oregon-fluoro
R.M. Partnership	Fluoroscopic Radiation Safety Training- General Version	Online course	www.rmpartnership.com
R.M. Partnership	Minimizing Risks from Fluoroscopic X-Rays	Softbound text	www.rmpartnership.com
Versant medical Physics & Radiation Safety	Virtual Fluoroscopy Course- 10 hour Course	Online Course	https://versantphysics.com/

Or Facilities may submit a course to RPS for approval

PROPOSED RULE CHANGE

Michelle Martin
Health Physicist

Current Rule

[333-106-0205](#)

Fluoroscopic X-ray Systems Requirements: Activation of the Fluoroscopic Tube

(4) Supervision requirements for operators of fluoroscopic equipment. The operation of fluoroscopic equipment by properly trained operators must comply with the following supervisory requirements:

(c) Radiologic technologists who have a permanent or temporary license from the OBMI to practice radiography may operate fluoroscopic equipment under the **personal or direct supervision of a radiologist or a non-radiologist practitioner** who has had proper training in the use and operation of fluoroscopic X-ray equipment.

PROPOSED RULE CHANGE

Michelle Martin
Health Physicist

Proposed Rule Change: Delete “Direct”

[333-106-0205](#)

Fluoroscopic X-ray Systems Requirements: Activation of the Fluoroscopic Tube

(4) Supervision requirements for operators of fluoroscopic equipment. The operation of fluoroscopic equipment by properly trained operators must comply with the following supervisory requirements:

(c) Radiologic technologists who have a permanent or temporary license from the OBMI to practice radiography may operate fluoroscopic equipment under the personal or **direct** supervision of a radiologist or a non-radiologist practitioner who has had proper training in the use and operation of fluoroscopic X-ray equipment.

PROPOSED RULE CHANGE

Michelle Martin
Health Physicist

Reason for Rule Change

- Increase radiation awareness for doctors
- Doctors controlling how long fluoro pedal being pushed for (exposure) which effects patient dose and safety
- “Direct Supervision” not practical at most facilities. Current rule allows it but difficult to implement/demonstrate

PROPOSED RULE CHANGE

Michelle Martin
Health Physicist

Proposed Rule Change - What would this mean?

More non-radiologic practitioners will be required to take fluoroscopy training

PROPOSED RULE CHANGE

Michelle Martin
Health Physicist

Rule Implementation Plan

- Issuance of Bulletin to facilities- ~March 2023
- Start Rule making procedures- current estimate is ~ 9 months
- Public Hearing- opportunity to provide input and feedback

PROPOSED RULE CHANGE

Michelle Martin
Health Physicist

Rule Implementation Plan

- Give facilities 6 months to have non-rad practitioners take fluoro training
- Facilities would be allowed to use “direct supervision” in interim with a written procedure on how supervision is performed
- Inspections starting ~ October 2023- inspectors check for fluoro training for all non-rad practitioners supervising RTs

PROPOSED RULE CHANGE

Michelle Martin
Health Physicist

Who is exempt?

- Operation of fluoroscopy prior to April 10, 2005
- State of California fluoroscopy license
- State of Colorado fluoroscopy license
- Portland Community college fluoroscopy training certificate

PROPOSED RULE CHANGE

Michelle Martin
Health Physicist

What happens in the meantime?

- Allow facilities to use “direct” piece of rule with a written policy explaining how the practitioner will provide adequate supervision
- Allowance will be reviewed during facility inspection

PROPOSED RULE CHANGE

Michelle Martin
Health Physicist



Questions?

Michelle Martin

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Oregon
Health
Authority



LUNCHTIME



EMERGENCY PREPAREDNESS/RESPONSE

Tom Pfahler

Oregon
Health
Authority



CGS HANFORD EXERCISE

TOM PFAHLER

- October 2022



CGS Hanford Exercise October 2022

Tom Pfahler

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- Simulated release of radioactive plume from Columbia Generating Station in Richland, WA
- RPS Evaluated by FEMA every 2 years on the following:
 - Emergency Operations Management
 - Notification and activation of Emergency Response Team
 - Exposure Control
 - Monitoring radiation dose in the field
 - Establishing turn-back rates, dose reporting limits
 - Alert & Notification
 - Communications processes during response
 - Equipment and comms redundancies
 - Detect, Measure, Sample, Analyze, and Assess
 - Collection of air, soil, vegetation, and water samples
 - Teams Alpha and Bravo
 - RPS members and Civil Support Team



FEMA Comments CGS Hanford Exercise October 2022

Tom Pfahler

- “The 2022 Columbia Generating Station (CGS) Evaluated Plume Exposure Pathway exercise was successfully conducted on October 25, 2022. The participants demonstrated knowledge of their emergency response plans and procedures and adequately implemented them during the exercise. There were no findings or plan issues identified.”
- Evaluators impressed with team member level of knowledge and coordination
 - RPS trains monthly on various aspects of emergency response
- FEMA Recommendations
 - Include in briefing a section on how to use CBRN Responder
 - Website/application used by RPS for recording and sending sample collection data
 - Ensure each team member using CBRN Responder has enabled tracking capabilities
 - Consider life vests for collection of water samples
 - Upgrade of equipment
 - Shears for vegetation collection

CGS (OFF YEAR) 2023 EXERCISE

TOM PFAHLER





EMERGENCY PREPAREDNESS & RESPONSE



Radiological
Operations
Support
Specialist



February 6 – 9th at Oregon State University

RECENT INCIDENTS

MICHELLE MARTIN & DARYL LEON
PRESENTING

Incident: Tuality/OHSU Hillsboro

Incident: Salem Hospital

Event 1: Irradiation of unintended tissue

Event 2: Source deliver to wrong location

Incident: Lu-177 Waste Alarms

INCIDENT: 20-0043

TUALITY / OHSU HILLSBORO

- Worker received 30REM DDE in 2020
- Facility notified of overexposure alert from dosimetry company October 27, 2020
- Worker notified November 5, 2020 (after worker request)
- RPS notified of overexposure December 21, 2020

INCIDENT: 20-0043

**TUALITY / OHSU
HILLSBORO**

- Investigation Conducted
- Additional dosimetry records requested
- Notice of Violation issued to facility in July 2022

INCIDENT: 20-0043

**TUALITY / OHSU
HILLSBORO**

Facility Response to Notice of Violation

- Additional safety procedures created
- Additional radiation safety training for staff
- Additional dosimetry calculations performed (new calculated dose of 15 REM)

INCIDENT: 20-0043

**TUALITY / OHSU
HILLSBORO**

January 2023- Met with Manager of Diagnostic Imaging

- Received additional clarification as to dosimetry reporting timeline
- Received additional safety procedures clearly specifying OAR radiation exceedance reporting requirements

INCIDENT: 20-0043

**TUALITY / OHSU
HILLSBORO**

Next Steps:

Revise Notice of Violation based on new information

- ie when badge was turned into dosimetry company
- When facility knew about dose over exceedance

SALEM HOSPITAL EVENTS

Event 1:
Irradiation of
unintended tissue

Event 2:
Source deliver to
wrong location

SALEM HOSPITAL EVENT WITH HIGH DOSE RATE AFTERLOADER PROGRAM



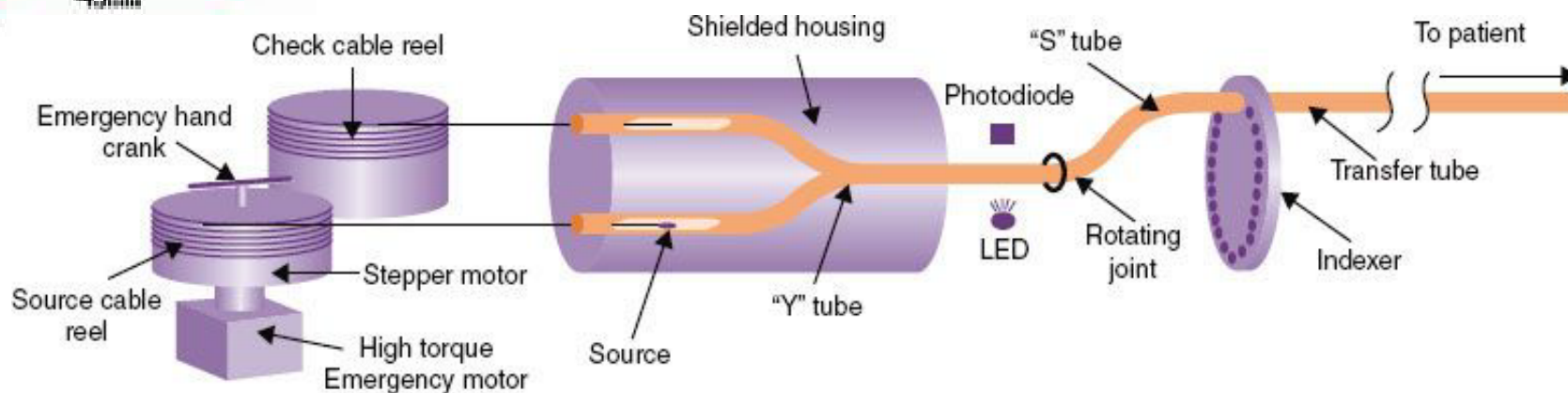
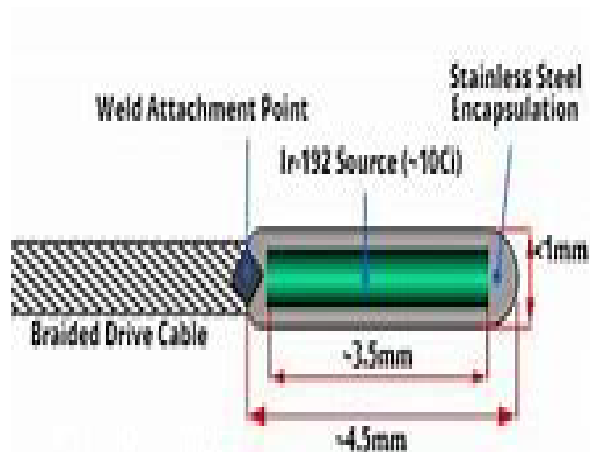
HDR Overview

- Device used to deliver therapeutic dose
- Sealed Source = iridium-192 @ 11 curies
- Dose given within a few centimeters
- Dose given by surface, within a cavity, organ, or tubular structure (brachytherapy)
- Source replaced every three months



HDR OVERVIEW (CONT.)

- Setup for treatment
 - HDR device containing shielded source
 - Source attached to drive cable metal wire
 - Transfer tube (plastic)
 - Applicator (placed inside patient)



Event 1: Irradiation of Unintended Tissue

SALEM HOSPITAL

- Transfer tube length to be measured at least every 3 months
- Licensee last measured length in July 2020
- Transfer tube discovered to be ~3cm (1.2 in) longer than expected
- Resulted in patient doses delivered short of treatment site
- More dose delivered to unintended tissue outside treatment area
- 27 patients since previous transfer tube measurement
- Two different applicators used resulting in dose differences
 - 21 patients received underdoses of 44.5% to treatment site
 - 6 patients received underdoses of 5.8% to treatment site

Event 1: Irradiation of Unintended Tissue

SALEM HOSPITAL

- US Nuclear Regulator Commission (US NRC) notified of the event
- Licensee issued Notice of Violation (NOV) for two items:
 - Failure to perform transfer tube measurements at least every 3 months
 - Overdosing cylinder patients by >50% and >50 rem to unintended tissue
- The licensee has corrected both items

Event 2: Source Delivery to Wrong Location

SALEM HOSPITAL

- Replacement source delivered to wrong location in hospital
- Source in shielded package stored in secured area
- Secured area used intermittently by non-radiation workers
- Licensee did not check tracking information for package location
- Package with source sat in secured area for 6 days before discovery
- Highest estimated dose to non-radiation workers is 10 mRem

Event 2: Source Delivery to Wrong Location

SALEM HOSPITAL

- USNRC notified of the event
- Licensee issued Notice of Violation for two items:
 - Loss of control of the package once delivered to the site and,
 - Failure to have documented procedures to receive shipments resulting in non-radiation workers receiving unnecessary doses in violation of ALARA
- The licensee has corrected items

Incident

Radioactive Medical Waste at Transfer Station Lutetium-177

- Load of municipal solid waste set off radiation detectors at Dry Creek Landfill in Eagle Point
- Load returned to transfer station in Grants Pass (Southern Oregon Sanitation - SOS)
- SOS contracted with Kromek Group to identify material (found to be medical lutetium-177 used in radiopharmaceutical therapy under the name Lutathera)
- SOS contacted ODOE (Oregon Dept of Energy) and RPS for next steps

Incident

Radioactive Medical Waste at Transfer Station Lutetium-177

- RPS personnel responded to site and confirmed presence of lutetium
- SOS to return waste to landfill within a few days
- RPS and SOS discussed the incident and procedures for future responses
- RPS provided SOS with written model procedures to use and modify



NEW BUSINESS



MANDATORY RAC MEMBER TRAINING

David Howe



PUBLIC COMMENTS



THANK YOU FOR ATTENDING

Next Meeting is June 14, 2023