RADIATION PROTECTION PROGRAM
THREE-YEAR REGULATORY FEE AND PROGRAM COST ANALYSIS REPORT
(February 2025)

The Department of Environmental Protection (DEP or Department) Radiation Protection Program (RPP) was established to carry out the comprehensive program of radiation protection in the Commonwealth of Pennsylvania (Commonwealth) as required by the Radiation Protection Act, 35 P.S. §§ 7110.101—7110.703 (RPA). Section 401 of the RPA (35 P.S. § 7110.401) and Section 8 of the Radon Certification Act, 63 P.S. § 2008, require that fees be established to cover DEP's RPP costs. The RPP includes the functions of both the Central Office and Field Divisions of the Bureau of Radiation Protection.

As required by 25 Pa. Code § 218.11(l) and Chapter 240, Appendix A, DEP prepared an updated Three-Year Regulatory Fee and Program Cost Analysis Report (Report) for the period of 2022-2025 to present to the Environmental Quality Board. The three RPP areas this cost analysis addresses are: Accelerator, Radiation-Producing Machines, and Vendors/Service Providers; Radioactive Materials and Decommissioning; and Radon. The last fee increases for the Accelerator, Radiation-Producing Machines and Vendors/Service Providers program area and the Radioactive Materials and Decommissioning program area were proposed in 2022 and effective in 2023. The last fee increase for the Radon program was proposed in 2016 and effective in 2017.

The purpose of this report is to review the adequacy of fees based on projected RPP costs through fiscal year (FY) 2030-2031. Following is a summary of the RPP fee collections and program costs by functional area.

ACCELERATOR, X-RAY AND VENDORS/SERVICE PROVIDERS

BACKGROUND

Through a staff of 67 located in the central office and field divisions, the RPP's Radiation Control Division administers the radiation-producing machine registration and inspection program, the Mammography Quality Standards Act program, the particle accelerator licensing and inspection program, and the vendor/service provider registration program.

Radiation-Producing Machine Registration and Inspection Program

The Radiation Control Division is responsible for the registration and inspection of over 10,000 facilities possessing about 33,000 X-ray units. These facilities include hospitals, clinics, and medical and dental offices.

In order to ensure that patients, personnel, and the environment are protected and that operators are properly trained, quality control is performed, and radiation equipment and facilities meet current protection standards, the Department has a goal to routinely inspect all facilities at least once every four years or as necessary to ascertain compliance or non-compliance with applicable regulations. Major facilities may be inspected every two to three years. Approximately 2,600 site inspections are conducted each year.

Users of radiation-producing machines are required to register with the Division, indicate the number and type of units possessed, and designate an individual responsible for radiation safety. Users pay

registration fees based on the type of facility and the number of X-ray units they have. The fee amounts are listed in 25 Pa. Code § 218.11(a) (relating to registration, renewal of registration, and license fees) and are provided in Appendix A of this report. The Division oversees the production and issuance of associated registration certificates, renewal letters, and invoices and the collection of initial and annual fees.

Mammography Quality Standards Act Activities

The federal Mammography Quality Standards Act (MQSA) was signed into law on October 27, 1992. The MQSA ensures that women and men receive high-quality mammography services for early breast cancer detection through the establishment of a federal certification and inspection program. The Act authorizes the U.S. Food and Drug Administration (USFDA) to obtain state and local assistance in enforcing the MQSA requirements, including annual inspections of all certified mammography facilities. DEP, under a $668,000 reimbursement contract with the USFDA, conducts inspections of each of the Commonwealth's more than 330 facilities which perform mammographic X-ray procedures. This contract is modified most years due to the changing number of facilities. These inspections are conducted on a schedule prescribed by the USFDA. This schedule calls for a facility to be inspected once every 12 months.

Accelerator Licensing and Inspection

The Commonwealth requires licensing of all particle accelerators within the Commonwealth for industrial use, research, or medical purposes. A person who intends to purchase, construct, or acquire an accelerator must notify the Department of this intent by filing the appropriate application for a specific license within 30 days after the initial order is issued to obtain any or all parts of the accelerator. Annual fees for licensed particle accelerators are listed in 25 Pa. Code § 218.11(d) and are provided in Appendix A of this report. About 140 facilities have approximately 250 licensed accelerators within the Commonwealth.

Vendor/Service Provider Registration

The Commonwealth administers a registration program for vendors/service providers who sell, lease, install and/or service radiation-producing machines. Commonwealth regulations require that each vendor/service provider doing business within the Commonwealth must be registered prior to providing such services. To register, each vendor/service provider must complete a registration application and return that application with the associated fee to the Bureau of Radiation Protection. The registration is renewable for 12-month periods following submission of the applicable fee as listed in 25 Pa. Code § 218.11(k) and provided in Appendix A of this report. Registration of machine vendors ensures the Department will be notified of the location and owner of new X-ray equipment installations. The Department receives approximately 25 applications per year.

TREND ANALYSIS

The combined revenue from these RPP areas has been relatively stable. However, implementation costs are expected to continue to increase. This analysis assumes a 3% increase in all operational costs annually for future years for an average inflation/cost of living increase, and a 4.75% increase in personnel costs per the current contract agreement.

COMMENT

The RPP has conducted a detailed fiscal analysis of these program areas. Based on current fee collections and existing available funds in these program areas, this analysis indicates with existing reserve funds and current fees, the fund balance will be negative in FY 2027-28 for radiation-producing machine and vendor registrations and accelerator license categories.

The table below provides revenue and program cost projections:

Accelerator, X-ray and Vendors/Service Providers*^

	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31
Beginning Balance	$2,817	$2,452	$1,550	$1,005	$739	$149	-$753	-$1,982	-$3,552
Fee Collection	$4,414	$5,082	$5,792	$5,856	$5,856	$5,856	$5,856	$5,856	$5,856
Fines and Penalties	$52	$54	$48	$0	$0	$0	$0	$0	$0
MQSA Contract	$700	$625	$615	$668	$668	$668	$668	$668	$668
Total Revenue	$5,166	$5,761	$6,455	$6,524	$6,524	$6,524	$6,524	$6,524	$6,524
Program Costs	$5,531	$6,663	$7,000	$6,790	$6,790	$7,426	$7,753	$8,094	$8,450
Ending Balance	$2,452	$1,550	$1,005	$739	$149	-$753	-$1,982	-$3,552	-$5,478

*All figures in thousands of dollars.
^FYs 2025-26 through 2030-31 are estimated.

RADIOACTIVE MATERIALS & DECOMMISSIONING

BACKGROUND

DEP's Radiation Control Division is also responsible for the regulation, licensing, and inspection of radioactive material user operations and, along with the Decommissioning Section of the Decommissioning and Surveillance Division, is responsible for termination of radioactive material licenses (e.g., for by-product, source, and special nuclear material).

Radioactive Material Licensing and Inspection

Users of all by-product, source, and special nuclear material are required to obtain a license from DEP prior to obtaining those radioactive materials. This material is used in hospitals, colleges, and industries for medical, research, and industrial purposes. The Department issues specific, general, and reciprocity licenses for the use of radioactive material in the Commonwealth. The objective of the licensing program is to ensure radioactive material is used safely, disposed of properly, and facilities are free from contamination when licensed operations are terminated. Annual license fees for radioactive material are

listed in 25 Pa. Code Chapter 218, Appendix A (relating to fees for radioactive material licenses) and provided in Appendix A of this report.

Decommissioning

The Decommissioning Section performs technical reviews of decontamination and decommissioning (D&D) activities for radioactive materials licensees and non-licensed radiologically contaminated sites in accordance with appropriate Commonwealth regulations. Typical reviews include site characterization plans, health and safety plans, decommissioning plans, survey reports, and the evaluation of decommissioning funding plans and financial assurance mechanisms. The Decommissioning Section also performs on-site reviews and inspections of D&D activities for occupational, public, and environmental radiation protection concerns. These activities include performing confirmatory surveys and sampling to ensure the cleanup levels established for the site have been met. This Section would also perform independent oversight and sampling at decommissioning nuclear power plant sites (e.g., Three Mile Island Unit 2). This work is performed at full cost recovery.

TREND ANALYSIS

Fee collections for radioactive material licensing have been trending down since the national economic recession of 2008. Universities and industries that use radioactive material have been consolidating or finding other operational methods that do not require a license, and many licensees have opted to be licensed under a small business fee category at a lower cost, which is specified in 25 Pa. Code Chapter 218, Appendix A.

This analysis assumes a 3% increase in all operational costs annually for future years as an average inflation/cost of living increase, and a 4.75% increase in personnel costs per Pennsylvania's union-covered employee contract agreement.

Work in the Decommissioning Program is driven by industry trends, federal funding, and ongoing discovery of contaminated sites. Most work performed by the Decommissioning Program is subject to full cost recovery from the facility owner. Currently, the DEP hourly rate charge for these activities is $275. Costs of decommissioning activities at sites where no responsible party exists are paid from the Radiation Protection Fund.

COMMENT

The RPP has conducted a detailed fiscal analysis of these program areas. This analysis indicates with existing reserve funds and current fees, the fund balance will be negative in FY 2027-28 in the Radioactive Materials and Decommissioning area.

The table below provides revenue and program cost projections:

Radioactive Materials Licensing*^

	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31
Beginning Balance	$3,541	$3,088	$2,558	$2,218	$1,465	$491	-$713	-$2,159	-$3,855
Fee Collection	$3,505	$3,787	$4,178	$4,175	$4,350	$4,350	$4,350	$4,350	$4,350
Fines and Penalties	$73	$189	$13	$0	$0	$0	$0	$0	$0
Cost Recovery	$0	$11	$2	$0	$0	$0	$0	$0	$0
Total Revenue	$3,578	$3,976	$4,193	$4,175	$4,350	$4,350	$4,350	$4,350	$4,350
Program Costs	$4,031	$4,517	$4,533	$4,928	$5,324	$5,554	$5,795	$6,047	$6,310
Ending Balance	$3,088	$2,558	$2,218	$1,465	$491	-$713	-$2,159	-$3,855	-$5,815

*All figures in thousands of dollars.
^FYs 2025-26 through 2030-31 are estimated.

RADON

BACKGROUND

Pennsylvania has some of the highest indoor air radon levels in the country, and perhaps the world. According to the National Academy of Sciences and U.S. Environmental Protection Agency (EPA), radon is the second leading cause of lung cancer. The Department's Radon Program, including eight staff members, is one of the most robust in the nation and provides a variety of regulatory and public service activities. These activities include:

- Implementing the EPA State Indoor Radon Grant (SIRG) (e.g., education and outreach through public service announcements (PSA); grants to universities; outreach to builders, realtors, and the medical community; and free test kits to mothers of newborns).
- Certifying radon laboratories, mitigators, and testers.
- Performing routine inspections of mitigation installations, mitigation offices, testing, and laboratory facilities.
- Performing blind testing on radon-detection devices.
- Providing diagnostic services to homeowners and mitigators on difficult-to-remediate houses.
- Performing "targeted" surveys in areas of high radon activity through the American Lung Association.
- Assisting homeowners and mitigators with difficult to remediate buildings.
- Providing free confirmatory testing to homeowners who have installed active mitigation systems and to homes with radon levels greater than 100 pCi/L.

- Developing and maintaining databases for calculations, tracking data, and surveys; maintaining and configuring DEP databases with the Bureau of Information Technology for certification tracking.
- Providing a wide variety of public information services to increase awareness of the radon issue and encouraging testing and mitigation.
- Providing unbiased and expert advice on all aspects of radon to the general public.
- Performing radon-related research projects and contributing technical information to the radon industry.
- Serving on radon-related national committees.

TREND ANALYSIS

The Department performs significant outreach and PSAs that encourage homeowners to test and mitigate. This creates interdependency between outreach and revenue, allowing the program to maintain stability in certification fee revenue from radon laboratories, mitigators and testers. Historically, certification fee revenue has not fully covered Radon Program costs. Current certification fee amounts are listed in 25 Pa. Code Chapter 240, Appendix A (relating to radon certification fee schedule) and are provided in Appendix A of this report. Grant funding from the EPA SIRG provides a small percentage of revenue to offset administrative costs, but the Radon Program has always been barely self-sustaining.

SIRG funds have been about $429,000 annually in recent years, which is utilized mainly for staff training, PSAs, equipment and supplies, home shows, and some support of salaries and benefits. It also provides funds to the American Lung Association for radon outreach. With tight federal budgets, the SIRG funding cannot be relied upon as a stable funding source and it can cease at any time; therefore, only the current contract is included in the table below.

This analysis assumes a 3% increase in all operational costs annually for future years as an average inflation/cost of living increase, and a 4.75% increase in personnel costs per Pennsylvania's union-covered employee contract agreement.

COMMENT

The RPP has conducted a detailed fiscal analysis of this program area. This analysis indicates with existing reserve funds and current fees, the fund balance will be negative in FY 2025-26 in the Radon area.

The table below provides revenue and program cost projections:

Radon Program*^

	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31
Beginning Balance	$1,168	$926	$560	$0	-$681	-$1,423	-$2,225	-$3,089	-$4,018
Fee Collection	$757	$637	$679	$600	$600	$600	$600	$600	$600
Fines and Penalties	$18	$6	$2	$0	$0	$0	$0	$0	$0
SIRG†	$345	$512	$423	$329	$0	$0	$0	$0	$0
Total Revenue	$1,120	$1,155	$1,104	$929	$600	$600	$600	$600	$600
Program Costs	$1,362	$1,521	$1,664	$1,610	$1,342	$1,402	$1,464	$1,529	$1,597
Ending Balance	$926	$560	$0	-$681	-$1,423	-$2,225	-$3,089	-$4,018	-$5,015

*All figures in thousands of dollars.
^FYs 2025-26 through 2030-31 are estimated.
†State Indoor Radon Grant (SIRG)

COST INCREASES AND SAVINGS INITIATIVES

Most of the RPP's costs are related to personnel. The new master agreement between the Commonwealth and Council 13 AFSCME implemented in FY 2023-2024 will increase staff salaries by 22.1% by FY 2027-2028. The projected operational costs include increased rates for IT consulting and services, increased equipment costs that have been put on hold due to the COVID-19 pandemic, and increased laboratory costs.

The RPP has begun a series of cost saving initiatives. A workload analysis showed recent vacancies can remain open while the workload is shared among other staff. The Governor's modernization efforts will assist in evaluating staffing levels through the implementation of a new platform for billing and inspecting the more than 10,000 X-ray registrations. Field inspectors have been assigned state vehicles along with the associated gas and maintenance cost. The RPP management team is exploring using GPS to maximize inspections by coordinating multiple inspections into a single trip. With improvements to these business processes, the RPP expects to see a reduction in vehicle needs to perform our mission.

The RPP has also identified several administrative cost saving measures. Many outsourced printing jobs have been brought back in-house, including invoices, certificates, license, radon literature, and overdue notices. Printing these documents in-house will save approximately $32,000 per year. The RPP is working with vendors to secure 5-year fixed contracts for equipment calibration. Service price per unit typically increases by approximately 4.5% every year. These fixed price contracts will keep the per unit cost the same for five years. As of October 1, 2025, development of the RPP's eInspection mobile platform will be completed, so the IT cost associated with this platform will transfer from development to maintenance and a cost savings of approximately $280,000 per year.

SUMMARY OF RECOMMENDATIONS

Accelerator, Radiation-Producing Machines, and Vendors/Service Providers

Based on current fee collections and existing available funds in these program areas, this analysis indicates that in FY 2027-28 there will not be sufficient revenue for the radiation-producing machine and vendor registrations and accelerator license categories. The RPP recommends proposing a future rulemaking to increase fees to adequately fund this program area.

Radioactive Materials and Decommissioning

This analysis indicates that in FY 2027-28 there will not be sufficient revenue for license categories in the Radioactive Materials area and the Decommissioning hourly rate. The RPP recommends proposing a future rulemaking to increase fees to adequately fund this program area.

Radon

This analysis indicates that in FY 2025-26 there will not be sufficient revenue to maintain the current Radon Program. The RPP recommends proposing a future rulemaking to adjust fees for Radon to adequately fund this program area.

APPENDIX A
Current Radiation Protection Program Fee Amounts

Radiation-Producing Machine Registration and Inspection Program:

Fee Type	Fee Amount	Regulatory Citation
Chiropractors, Dentists, Podiatrists, Veterinarians	Annual Administrative Fee: $130 Annual Fee per Device: $65	25 Pa. Code § 218.11(a)
Hospitals	Annual Administrative Fee: $940 Annual Fee per Device: $65	25 Pa. Code § 218.11(a)
Other Facilities	Annual Administrative Fee: $455 Annual Fee per Device: $65	25 Pa. Code § 218.11(a)

Accelerator Licensing and Inspection:

Fee Type	Fee Amount	Regulatory Citation
Accelerators, below 50 MeV, other than for ion implantation	$2,730 for the first accelerator at a facility $910 for each additional unit at the same facility	25 Pa. Code § 218.11(d)(1)
Accelerators used for ion implantation	$910 for the first accelerator at a facility $90 for each additional unit at the same facility	25 Pa. Code § 218.11(d)(2)
Accelerators 50 MeV and above	Minimum annual fee of $2,730 for the first accelerator at the facility $910 for each additional unit at the same facility Additional invoices will be issued by the Department at regular intervals at least quarterly when net costs are incurred above the minimum annual fee.	25 Pa. Code § 218.11(d)(3)

Vendor/Service Provider Registration:

Fee Type	Fee Amount	Regulatory Citation
Annual registration fee	$180	25 Pa. Code § 218.11(k)

Radioactive Material Licensing and Inspection:

Fee Type	Fee Amount	Regulatory Citation
Special Nuclear Material Sealed Source Gauges (X-Ray Fluorescence)	Annual Fee: $3,465	25 Pa. Code Chapter 218, Appendix A
Special Nuclear Material—Other	Annual Fee: $9,570	25 Pa. Code Chapter 218, Appendix A
Source Material—Metal Extraction	Annual Fee: $49,610	25 Pa. Code Chapter 218, Appendix A
Removal of Radioactive Contaminants from Drinking Water	Annual Fee: $18,480	25 Pa. Code Chapter 218, Appendix A
Source Material as Shielding	Annual Fee: $1,240	25 Pa. Code Chapter 218, Appendix A
Source Material—Other (not 11e2)	Annual Fee: $22,110	25 Pa. Code Chapter 218, Appendix A
Manufacturing & Distribution Commercial Broad Scope—10 CFR 30, 33	Annual Fee: $48,015	25 Pa. Code Chapter 218, Appendix A
Manufacturing, Refurbishing & Distribution Commercial Specific License—10 CFR 30	Annual Fee: $13,695	25 Pa. Code Chapter 218, Appendix A
Manufacturing & Distribution Pharmaceuticals—10 CFR 32.72—32.74	Annual Fee: $19,635	25 Pa. Code Chapter 218, Appendix A
Pharmaceuticals—Distribution Only—10 CFR 32.7x	Annual Fee: $11,220	25 Pa. Code Chapter 218, Appendix A
Irradiator—Shielded Source	Annual Fee: $6,930	25 Pa. Code Chapter 218, Appendix A
Irradiator—Unshielded ‹10kCi	Annual Fee: $12,870	25 Pa. Code Chapter 218, Appendix A
Irradiator—Unshielded ›=10kCi	Annual Fee: $51,480	25 Pa. Code Chapter 218, Appendix A
Distribution As Exempt—No Review of Device	Annual Fee: $17,655	25 Pa. Code Chapter 218, Appendix A
Distribution—SSD Devices to Part 31 GLs	Annual Fee: $4,125	25 Pa. Code Chapter 218, Appendix A
Distribution—No Review-Exempt Sealed Source	Annual Fee: $3,135	25 Pa. Code Chapter 218, Appendix A
Research & Development Broad Scope	Annual Fee: $24,915	25 Pa. Code Chapter 218, Appendix A
Research & Development	Annual Fee: $9,240	25 Pa. Code Chapter 218, Appendix A
Services other than Leak Testing, Waste Disposal or Calibration	Annual Fee: $14,025	25 Pa. Code Chapter 218, Appendix A
Radiography	Annual Fee: $23,265	25 Pa. Code Chapter 218, Appendix A

Other Byproduct Material	Annual Fee: $4,455	25 Pa. Code Chapter 218, Appendix A
Generally licensed devices under § 217.143 (relating to certain measuring, gauging or controlling devices)	Annual Fee: $530	25 Pa. Code Chapter 218, Appendix A
Greater than the General License Limits in 10 CFR 31.12(a)(3), (4) or (5) but not more than ten times those Limits	Annual Fee: $3,465	25 Pa. Code Chapter 218, Appendix A
Greater than ten times the General License Limits in 10 CFR 31.12(a)(3), (4) or (5)	Annual Fee: $4,455	25 Pa. Code Chapter 218, Appendix A
Manufacturing & Distribution Pharmaceuticals—Accelerator Produced Only	Annual Fee: $19,470	25 Pa. Code Chapter 218, Appendix A
Waste Storage, Processing or Disposal	Annual Fee: Full Cost	25 Pa. Code Chapter 218, Appendix A
Waste Packaging or Repackaging	Annual Fee: $19,800	25 Pa. Code Chapter 218, Appendix A
Waste Receipt of Prepackaged for Disposal	Annual Fee: $15,180	25 Pa. Code Chapter 218, Appendix A
Well Logging & Non Field Flood Tracers	Annual Fee: $7,260	25 Pa. Code Chapter 218, Appendix A
Well Logging Field Flood Tracer Studies	Annual Fee: Full Cost	25 Pa. Code Chapter 218, Appendix A
Nuclear Laundry	Annual Fee: $43,200	25 Pa. Code Chapter 218, Appendix A
Human Use—Teletherapy	Annual Fee: $22,605	25 Pa. Code Chapter 218, Appendix A
Human Use—Broad Scope (except Teletherapy)	Annual Fee: $39,875	25 Pa. Code Chapter 218, Appendix A
Human Use (except Teletherapy)	Annual Fee: $8,085	25 Pa. Code Chapter 218, Appendix A
Specifically licensed sources used in static eliminators, nonexempt smoke detectors, fixed gauges, dew pointers, calibration sources, civil defense uses or in temporary (2 years or less) storage	Annual Fee: $3,465	25 Pa. Code Chapter 218, Appendix A
Decontamination, Decommissioning, Reclamation or Site Restoration	Annual Fee: Full Cost	25 Pa. Code Chapter 218, Appendix A
Reciprocity (180 days/year)	Annual Fee: $2,475	25 Pa. Code Chapter 218, Appendix A
Small Business—Category 1	Annual Fee: $3,795	25 Pa. Code Chapter 218, Appendix A
Small Business—Category 2	Annual Fee: $825	25 Pa. Code Chapter 218, Appendix A

Radon Certification:

Fee Type	Fee Amount	Regulatory Citation
Testing Individual	$525 every 2 years	25 Pa. Code Chapter 240, Appendix A
Testing Employee	$150 every 2 years	25 Pa. Code Chapter 240, Appendix A
Testing Firm	$1,050 every 2 years	25 Pa. Code Chapter 240, Appendix A
Mitigation Individual	$450 every 2 years	25 Pa. Code Chapter 240, Appendix A
Mitigation Firm	$1,050 every 2 years	25 Pa. Code Chapter 240, Appendix A
Laboratory Individual	$600 every 2 years	25 Pa. Code Chapter 240, Appendix A
Laboratory Firm	$1,125 every 2 years	25 Pa. Code Chapter 240, Appendix A
Primary Testing Device Listing	$150 every 2 years	25 Pa. Code Chapter 240, Appendix A
Course Provider	$565 every 2 years	25 Pa. Code Chapter 240, Appendix A
Late Application Renewal	$150	25 Pa. Code Chapter 240, Appendix A
Late 45-Day Reporting	$150	25 Pa. Code Chapter 240, Appendix A
Radon Mitigation System Fee	$50 for each radon mitigation system installed or activated	25 Pa. Code Chapter 240, Appendix A