

**RADIATION PROTECTION PROGRAM
THREE-YEAR REGULATORY FEE AND PROGRAM COST ANALYSIS REPORT
TO THE ENVIRONMENTAL QUALITY BOARD**

INTRODUCTION:

The Department of Environmental Protection's (DEP) Radiation Protection Program (RPP) has its roots in the Department of Health and has been active in protecting the public, workers, patients, and the environment since the late 1930s. In 1984, the Pennsylvania General Assembly enacted the Radiation Protection Act (Act 147) in response to the 1979 accident at Three Mile Island. The legislative findings in Section 102 of the Act state:

“The General Assembly hereby determines, declares and finds that, since radiation exposure has the potential for causing undesirable health effects, the citizens of the Commonwealth should be protected from unnecessary and harmful exposure resulting from use of radioactive materials, radiation sources, accidents involving nuclear power and radioactive material transportation.”

Section 102(1) states that a purpose of the Act is to *“Establish and maintain a comprehensive program of radiation protection in the Department of Environmental Resources.”*

Act 147 also directed DEP to enter into agreement with the federal government for the regulation of radioactive material. In March 2008, the Governor signed an Agreement with the U.S. Nuclear Regulatory Commission for the transfer of about 900 radioactive materials licenses to DEP.

For this broad set of duties, DEP has the power to *“collect fees necessary to fund any and all other acts not inconsistent with any provision of this act which it may deem necessary or proper for the effective enforcement of this act.”* The RPP functional areas include: nuclear safety, emergency response, environmental surveillance, radioactive materials, accelerator and X-ray equipment, and radon. Authority to collect fees related to DEP's Radon Program is in the Radon Certification Act (Act 43 of 1987). The fees collected provide fiscal support for RPP functions for permitting and inspection in DEP's Central Office Bureau of Radiation Protection (BRP) and the Regional Offices. **There are no general funds allocated to DEP's RPP.**

REGULATORY FEE ANALYSIS:

As required by 25 Pa. Code Section 218.11(1) and Chapter 240, Appendix A, DEP has prepared a Three-Year Regulatory Fee and Program Cost Analysis Report (Report) for years 2018 – 2021. The program areas covered by this cost analysis include: Accelerator, X-ray and Vendors/Service Providers; Radioactive Materials and Decommissioning; and Radon. The last fee increase for all program areas was in 2009, and more recently for Radioactive Materials and Radon only in October 2017.

In addition to these program areas, DEP is responsible for nuclear power plant (NPP) oversight. NPP oversight functions are performed by the RPP's Nuclear Safety Division and Environmental Surveillance Section, both of which are statutorily funded under Act 147 (as amended by Act 31 of 2007 and Act 190 of 2014) and subject to a separate fee analysis required by the Act. The most recent analysis was issued in November 2017 and can be found in the

DEP publication *2017 Radiation Protection Report to the General Assembly Pursuant to Act 31 of 2007* (2900-BK-DEP4445).

Following is a summary of the RPP fee collections and program costs by functional area for the past three fiscal years and the next three projected years. Through a staff of 102 technical and administrative personnel located in the central and regional offices, the RPP permitting, inspection, environmental surveillance and emergency response functions are carried out to protect the citizens of the Commonwealth. Such work involves highly technical training requirements and specialized radiation measurement equipment.

ACCELERATOR, X-RAY AND VENDORS/SERVICE PROVIDERS

BACKGROUND:

DEP'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.

X-ray Registration and Inspection Program:

The Radiation Control Division is responsible for the registration and inspection of over 11,000 facilities possessing more than 33,000 X-ray units. To ensure that patients, personnel and the environment are protected; that operators are properly trained; and radiation equipment and facilities meet current protection standards, DEP 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.

Users of radiation-producing machines are required to register with DEP, 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. DEP 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 Oct. 27, 1992. The MQSA ensures that the public receives 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 full cost reimbursement contract with the USFDA, conducts inspections of each of the Commonwealth's more than 350 facilities that perform mammographic X-ray procedures. These inspections are conducted on a schedule prescribed by the USFDA. This schedule calls for a facility to be inspected 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. These high-energy machines can be very dangerous and cause grave harm to patients and operators if not used correctly. A person who

intends to purchase, construct or acquire an accelerator shall notify DEP 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. 158 facilities have 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 BRP. The registration is renewable for 12-month periods following submission of the applicable fee.

REVENUE TREND AND PROJECTION:

The combined revenue from these program areas has been relatively stable and has maintained the programs since 2009. It should be noted, however, that implementation costs are expected to continue to increase. This analysis assumes a three percent (3%) increase in all costs (e.g., staff salaries and benefits) annually for future years.

RECOMMENDATION AND COMMENT:

The RPP conducted a detailed fiscal analysis of these program areas. Based on current fee collections and existing available funds in these program areas, sufficient revenue is available to cover expenses beyond FY 2021-22. *Therefore, no fee increase is recommended for these programs at this time.*

The following table provides revenue and program cost projections:

Accelerator, X-ray, and Vendors

	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
Current Available Funds	--	--	--	\$3,822	\$3,585	\$3,186	\$2,627
Fee Collection*	\$4,439	\$4,367	\$4,202	\$4,400	\$4,400	\$4,400	\$4,400
Fines and Penalties*	\$165	\$183	\$82	\$125	\$125	\$125	\$125
MQSA Contract*	\$400	\$456	\$298	\$400	\$400	\$400	\$400
Total Revenue*	\$5,004	\$5,006	\$4,582	\$4,925	\$4,925	\$4,925	\$4,925
Program Costs*	\$4,485	\$4,503	\$4,572	\$5,162	\$5,324	\$5,484	\$5,648

*In thousands of dollars; assumes current fee rates; includes MQSA reimbursements, fines and penalties.

RADIOACTIVE MATERIALS & DECOMMISSIONING

BACKGROUND:

The Radiation Control Division is also responsible for the licensing and inspection of radioactive material and, along with the Decommissioning Section of the Decommissioning and Surveillance Division, is responsible for regulation of radioactive material (e.g., by-product, source, and special nuclear material). The Decommissioning Section reviews, inspects and approves license terminations.

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. The objective of the licensing program is to ensure radioactive material is used safely, disposed of properly, the public is protected, and facilities are free from contamination when licensed operations are terminated.

Decommissioning:

The Decommissioning Section performs technical reviews of decontamination and decommissioning 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 decontamination and decommissioning 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 facility and site have been met.

Note: Licensing and inspection activities are covered by annual license fees; however, decommissioning activities are subject to full cost recovery.

REVENUE TREND AND PROJECTION:

A fee increase was adopted in late 2017 to address the rising costs of program administration in this functional area. A detailed analysis of fee collection through the first full year of the revised fees and existing available funds in this program has been performed.

Decommissioning work is driven by industry trends, federal funding, and ongoing discovery of contaminated sites. Most work performed by the Decommissioning Section is subject to full cost recovery from the facility owner / licensee. Currently, DEP's hourly rate charge for these activities is \$225. Costs of RPP decommissioning activities at facilities and sites where no responsible party exists are covered by the Radiation Protection Fund.

RECOMMENDATION AND COMMENT:

Based on current fee collections and existing available funds in these program areas, sufficient revenue is available to cover expenses beyond FY 2021-22. *Therefore, no fee increase is recommended for these programs at this time.*

The following table provides revenue and program cost projections:

Radioactive Materials Licensing

	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
Current Funds Available	--	--	--	\$4,091	\$4,902	\$5,605	\$6,172
Fee Collection*	\$2,869	\$3,063	\$3,553	\$5,100	\$5,100	\$5,100	\$5,100
Bond Forfeiture/Cost Recovery*	\$231	\$86	\$546	\$25	\$25	\$25	\$25
Fines and Penalties*	\$120	\$132	\$80	\$125	\$125	\$125	\$125
Total Revenue*	\$3,220	\$3,281	\$4,179	\$5,250	\$5,250	\$5,250	\$5,250
Program Costs*	\$3,514	\$3,806	\$3,402	\$4,439	\$4,547	\$4,683	\$4,824

* In thousands of dollars.

RADON

BACKGROUND:

Due to Pennsylvania's unique geology and soils, the Commonwealth has some of the highest indoor air radon levels in the country. Further, according to EPA, radon is the second leading cause of lung cancer. DEP's Radon Program is one of the most active, robust and technically capable in the nation and provides a variety of regulatory and public service activities to protect the health of Commonwealth citizens. These activities include:

- Certifying radon testers, laboratories, and mitigators;
- Implementing the EPA State Indoor Radon Grant (SIRG) (e.g., education and outreach through public service announcements (PSAs) and free test kits to mothers of newborns);
- Performing routine inspections of mitigated homes and other installations, mitigator's at their offices, testing operations, and laboratory facilities;
- Performing blind testing on radon measurement devices;
- Providing diagnostic services to homeowners or mitigators on difficult-to-remediate houses;
- Providing "Hot Spot" surveys in areas of high radon activity;
- Providing free confirmatory testing to homeowners who have installed active mitigation systems for homes with radon levels greater than 100 pCi/L;
- Develop and maintaining databases for calculations, tracking radon test data, and surveys;
- Maintaining and configuring DEP databases with the Bureau of Information Technology for issuing and tracking certifications;
- Providing a wide variety of public information services to increase awareness of the Commonwealth's high radon issues, 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; and,
- Serving on radon-related national scientific, standards, and public outreach committees.

REVENUE TREND AND PROJECTION:

DEP performs significant public outreach and PSAs that motivate 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. Grant funding from the EPA SIRG program also provides some offset of administrative costs. A fee increase was adopted in late 2017 to address the rising costs of program administration. An analysis of fee collection through the first full year of the revised fees and existing available funds in this program has been performed.

RECOMMENDATION AND COMMENT:

Based on current fee collections and existing available funds in these program areas, sufficient revenue is available to cover expenses beyond FY 2021-22. *Therefore, no fee increase is recommended for these programs at this time.*

The following table provides revenue and program cost projections:

Radon Program

	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
Current Funds Available	--	--	--	\$976	\$874	\$731	\$546
Fee Collection*	\$181	\$190	\$568	\$773	\$773	\$773	\$773
Fines and Penalties*	\$60	\$63	\$49	\$50	\$50	\$50	\$50
SIRG **	\$321	\$354	\$371	\$429	\$429	\$429	\$429
Total Revenue*	\$562	\$607	\$988	\$1,252	\$1,252	\$1,252	\$1,252
Program Costs*	\$1,418	\$1,271	\$1,207	\$1,354	\$1,395	\$1,437	\$1,480

* In thousands of dollars.

** State Indoor Radon Grant (SIRG)