Radiation Protection:
Preparedness, Awareness and Education Activities that Protect Americans From Exposure to Harmful Levels of Radiation Facing Major Cuts

What challenges does the Radiation Protection program address?
Radiation is all around us and we are exposed to it every day from both human-made and natural sources. Exposure to too much radiation can cause serious injury, disease and death. Radiation can damage human tissue, causing cancer and birth defects. A number of federal agencies have different types of expertise and responsibility for protecting the public from radiation. The Nuclear Regulatory Commission, for example, licenses nuclear power plants. The Centers for Disease Control and Prevention are experts on the health effects of radiation exposure. The staff in EPA's Office of Radiation are experts in environmental exposures to radiation and how to protect the public from those threats.

What benefits are at risk if the Radiation Protection program is significantly reduced?
- The United States would be less prepared to respond and protect Americans in the case of a nuclear accident or attack.
- Outdated regulations would remain in place, leading to greater risk of exposure to radiation from industrial operations.
- Guidance for local officials, medical professionals and others on how to minimize radiation exposure would not be provided or updated.
- The country's foremost experts on the environmental sources and impacts of radiation and ways to protect the public would no longer be available to help address continuing and emerging threats posed by radiation.

How does the Radiation Protection program achieve results?
The EPA Radiation program protects human health by setting protective limits, providing technical advice and guidance, and preparing for and responding to radiological emergencies through the following activities:
- Developing standards through a transparent process to protect the public from radiation from sources such as uranium mines, nuclear power plants, spent nuclear fuel and other radioactive wastes. Some of the existing standards were adopted decades ago and are not current with our scientific and technical understanding of the risks of radiation and how to reduce them.
- Researching emerging issues about the environmental sources of radiation, such as fracking.
- Monitoring airborne radiation through RadNet, a nationwide system of 130 monitors in 50 states, DC and Puerto Rico that continually measure radiation in the air and can detect minute changes. The RadNet system helped us monitor whether radiation from the nuclear plant accident in Fukushima, Japan was reaching the United States.
- Preparing for emergency response in case of a nuclear accident or other radiation emergency. EPA staff conduct exercises and drills with other federal, state, and local agencies to make sure we are prepared in case of a nuclear accident or dirty bomb. We hope we will never need this expertise, but boy are we glad we have it.
- Developing guidance for local government, the public and various audiences about how to protect the public from exposure to radiation. For example, EPA provides guidance to users of x-rays in

medical operations and to local emergency response personnel in case of a local release of radiation.

Successes of the Radiation Program

- In 2014, EPA updated the **"Radiation Protection Guidance for Diagnostic and Interventional X-Ray Procedures"**, which provides federal facilities that use diagnostic and interventional x-ray equipment with recommendations for keeping patient doses as low as reasonably achievable without compromising the quality of patient care. The Interagency Working Group on Medical Radiation updated this guidance to address the significant increase in the use of digital imaging technology, such as CT scans, and high dose procedures, such as interventional fluoroscopy.

- In 2016 and 2017, EPA updated its 1992 Protective Action Guides (PAG) Manual, which is a resource for state and local emergency response staff for response to a radiological dispersal device or "dirty bomb," or an accident at a nuclear power plant. The PAG Manual provides a list of considerations for planning and initiating a cleanup process as the emergency is brought under control and includes lessons learned from actual radiological emergencies, including the Fukushima nuclear power plant accident.

Baseline Budget FY 2016

$12.263 million, 59.1 FTE (Staff)

Contact for More Information:

Environmental Protection Network, EPN.Main.Mailbox@gmail.com
Janet McCabe, janetgmccabe@gmail.com