

# “Environmental Radiation Protection Standards for Nuclear Power Operations”



## Advance Notice of Proposed Rulemaking

### About the Standards

EPA issued *Environmental Radiation Protection Standards for Nuclear Power Operations* in 1977 [42 FR 2860, Vol. 42, No. 9, January 13, 1977.]. The standards limit the radiation releases and doses to the public from the normal operations of nuclear power plants and other uranium fuel cycle facilities—the facilities involved in the manufacture and use of uranium fuel for generating electrical power.

### Should the Standards Be Revised?

*Environmental Radiation Protection Standards for Nuclear Power Operations* are protective of human health and the environment, but scientific understanding of radiation risk and dose to human health has advanced since 1977, and new nuclear technologies and operational practices have emerged. A number of specific developments have led EPA to consider whether to revise these standards—

- **Improved Dose and Risk Methods:** EPA wants to ensure that its standards are based on up-to-date science. Advances in radiation dose and risk methodologies since 1977 have led to a better understanding of the health risks from ionizing radiation in general, as well as from specific radioactive elements. Improved calculational tools have also become available.
- **Renewed Interest in Nuclear Power:** Growing concern about greenhouse gas emissions from fossil fuels could lead to renewed interest in nuclear power. The nuclear industry anticipates demand for construction of new nuclear power plants in the next 10 to 30 years.

### *The Rulemaking Process—from Laws to Environmental Standards*

An environmental law is enacted when Congress passes a bill and the President signs it. Specific bills make EPA responsible for writing **regulations** which specify what must be done to obey the law. Many environmental regulations set **standards** that limit the amount of a hazardous material that can be discharged into the environment.

After an environmental law is enacted, EPA conducts a scientific analysis of the issues and, if necessary, proposes new or revised regulations in a **Notice of Proposed Rulemaking**. The proposal is listed in the **Federal Register** so that members of the public can consider it and send their comments to the Agency. EPA will consider comments received as it finalizes the regulations. The comments and EPA's response to them become part of the public record.

Final regulations are published in the Federal Register as a **Final Rule**, and added to the **Code of Federal Regulations**.

### *Why is EPA issuing this Advance Notice of Proposed Rulemaking?*

EPA is taking the optional rulemaking step of issuing an **Advance Notice of Proposed Rulemaking** (ANPR) to start a public discussion about whether to revise the **Environmental Radiation Protection Standards for Nuclear Power Operations**. We want input from affected stakeholders and the public on a number of specific issues. After reviewing the responses received, EPA may propose revised radiation protection standards or leave the existing ones in place. Any revisions to the standards would be published in the Federal Register in a **Notice of Proposed Rulemaking**.

- **New Nuclear Technologies:** Some emerging nuclear technologies that are not explicitly mentioned in the standards could become available for commercial generation of electricity within 10 to 30 years. EPA is considering whether to include these technologies in a revised regulation to ensure that its radiation protection standards appropriately cover potentially viable commercial nuclear power facilities.

- **On-site storage of spent nuclear fuel:** Highly radioactive spent nuclear fuel is currently stored at nuclear power plants in pools or specially designed storage casks until a long-term disposal solution is available. The current regulations apply to all aspects of the uranium fuel cycle, which includes storage of spent nuclear fuel. EPA is considering clarifying the coverage of such storage facilities in revisions to this regulation.

- **Groundwater contamination:** EPA is re-examining whether additional water protection provisions are needed to safeguard the public and the environment. Radioactive elements from nuclear power plants and

fuel facilities have leaked or spilled into groundwater in recent years. EPA is considering whether to supplement existing ground and surface water protections to address the specific types of contamination that could come from the uranium fuel cycle facilities.

## EPA and Nuclear Power Operations

EPA's mission is to protect human health and the environment. The Agency sets generally applicable environmental standards that limit the amount of radioactivity that can be released into the environment. EPA does not oversee the daily operations of nuclear power plants or nuclear fuel facilities. The Nuclear Regulatory Commission (NRC) has regulatory responsibility for licensing and oversight of nuclear power plants and other commercial facilities that use radioactive materials. NRC implements EPA standards at applicable facilities.

## How You Can Participate—

The public will have 120 days to submit comments on this Advanced Notice of Proposed Rulemaking starting the day of its publication in the Federal Register. You will be welcome to submit written comments on this ANPR by email or regular mail.

Detailed Instructions for submission of comments are in the ANPR, which you can download at: [www.epa.gov/radiation/laws/190/](http://www.epa.gov/radiation/laws/190/)