

Final Rule: Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Category

April 2024

Power plants that burn coal to produce electricity use large volumes of water. When this water is returned to lakes, streams, and other waterbodies it can include: toxic and bioaccumulative pollutants such as selenium, mercury, arsenic, and nickel; halogen compounds such as bromide, chloride, and iodide; nutrients such as nitrogen and phosphorus; and total dissolved solids. Exposure to these pollutants can harm people and ecosystems through contamination of drinking water sources, recreational waters, and aquatic life. In people, health risks may include bladder cancer and other types of cancer, kidney and liver damage, cardiovascular disease, and developmental impacts to children. In fish and wildlife, the pollutants may cause deformities and harm reproduction. Many of these pollutants can remain in the environment for years.

On April 25, 2024, the EPA announced a final rule to reduce the discharge of toxic metals and other pollutants into our nation's waterbodies from coal-fired power plants. The agency's regulation follows the latest science and applies the EPA's authority under the Clean Water Act to establish technology-based limits on wastewater pollution. This final rule will protect freshwater resources that provide sources of drinking water for communities, support economic development and agricultural production, enhance outdoor recreation, and sustain vibrant ecosystems.

Introduction to Effluent Limitations Guidelines and Standards

Under the Clean Water Act, the EPA publishes Effluent Limitations Guidelines and Standards (ELGs), which are national industry-specific wastewater regulations based on the performance of demonstrated wastewater treatment technologies (also called "technology-based limits"). These technology-based regulations are intended to represent the greatest pollutant reductions that are economically achievable for an entire industry.

The Steam Electric Power Generating ELGs apply to power plants that generate electricity through the creation of steam. This rulemaking is focused on a subset of steam electric plants that burn coal to create steam. The EPA's most recent updates to the ELGs for this industry were promulgated in 2015 and in 2020. In 2021, the EPA identified further pollutant reductions that can be achieved through affordable and available treatment technologies that form the basis for regulation. The EPA proposed a regulation in March 2023 to revise the wastewater discharge standards for this category, and after consideration of public comments, is finalizing revisions. In a separate action, EPA updated but maintained a provision of the 2020 regulation, allowing power plants to be eligible for alternative, less stringent, wastewater pollution limits if they permanently stop burning coal by 2028.

Final Limits Established in this Rule

This regulation establishes a zero discharge of pollutants limitation for three wastewaters generated at coal-fired power plants: flue gas desulfurization (FGD) wastewater, bottom ash transport water (BATW), and combustion residual leachate (CRL). The regulation also establishes numeric discharge limitations for mercury and arsenic for CRL that is discharged through groundwater and for a fourth wastestream, called legacy wastewater, that is discharged from certain surface impoundments. The regulation also eliminates less stringent requirements for two subcategories of facilities (high flow facilities and low utilization energy generating units) that were contained in the 2020 regulation.

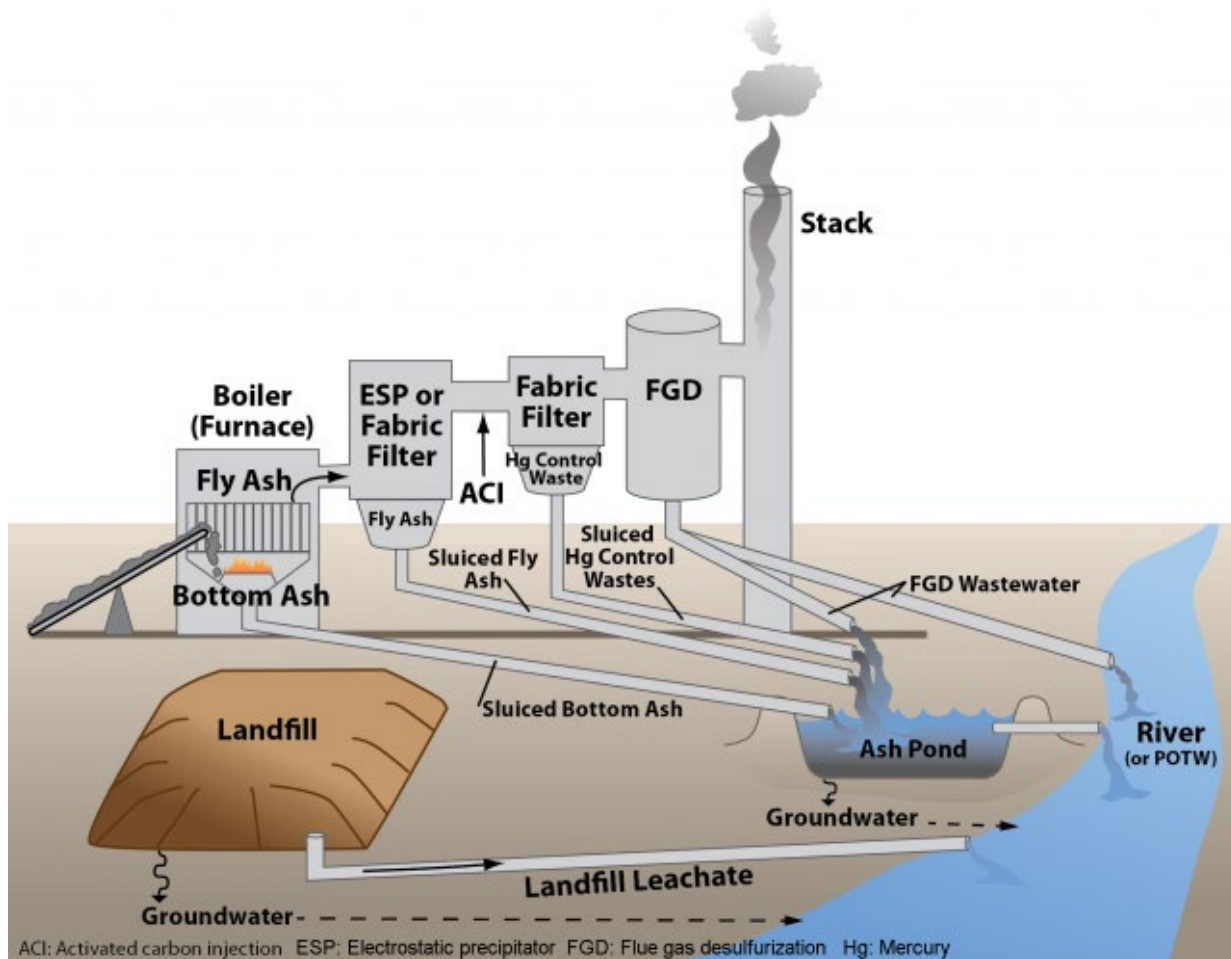


Diagram 1. Key wastewaters produced by coal-fired steam electric power plants.

The final rule includes implementation flexibilities where appropriate. For example, recognizing that some coal-fired power plants are in the process of closing or switching to less polluting fuels such as natural gas, the regulation includes flexibilities to allow these plants to continue to meet the 2015 and 2020 regulation requirements instead of the requirements contained in this final regulation. This is done by creating a new subcategory for energy generating units (EGUs) that permanently cease coal combustion by 2034. EGUs in this new subcategory are required to meet the 2020 rule requirements for FGD wastewater and BATW rather than the new, more stringent zero-discharge requirements that apply to other facilities. This subcategory also contains requirements for CRL discharges that vary

based on whether the EGU is still combusting coal or not.

The EPA estimates that this final rule will reduce pollutants discharged through wastewater from coal-fired power plants by more than 660 million pounds per year. The agency estimates that water quality and non-water quality improvements in this rule will provide \$3.2 billion in public health benefits each year. These health and environmental protections will especially benefit low-income communities and communities of color that are disproportionately impacted by pollution from coal-fired power plants. An assessment of rule implementation shows that electricity bills for the average residential household would increase by less than \$3.50 per year.

The regulation also includes new provisions to improve transparency and public awareness with respect to water pollution from these facilities. Under the final rule, facilities will be required to post information, such as details of discharges and wastewater treatment systems in use, to a publicly available website.

Where can I find more information?

To access the Federal Register notices and supporting documents for this rulemaking, visit EPA's Steam Electric Effluent Guidelines website at: <https://www.epa.gov/eg/steam-electric-power-generating-effluent-guidelines>. For questions, contact Richard Benware at (202) 566-1369 or benware.richard@epa.gov.