

EPA MERCURY AND AIR TOXICS STANDARDS (MATS)

TECHNICAL
BULLETIN

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Reducing Emissions from Power Plants

On December 16, 2011, the Environmental Protection Agency (EPA) signed a rule to reduce emissions of toxic air pollutants from power plants. Specifically, these mercury and air toxics standards (MATS) for power plants are intended to reduce emissions from new and existing coal and oil-fired electric utility steam generating units (EGUs).

By following MATS, power plant operators will emit relatively lower levels of heavy metals, including mercury (Hg), arsenic (As), chromium (Cr), and nickel (Ni); and acid gases, including hydrochloric acid (HCl) and hydrofluoric acid (HF). These toxic air pollutants, also known as hazardous air pollutants or air toxics, are known or suspected of causing cancer and other serious health effects.

EPA also signed revisions to the new source performance standards (NSPS) for fossil-fuel-fired EGUs. This NSPS revises the standards that new coal- and oil-fired power plants must meet for particulate matter (PM), sulfur dioxide (SO₂), and nitrogen oxides (NO_x).

MATS Requirements

For all existing and new coal-fired EGUs, the rule establishes numerical emission limits for mercury, PM (a surrogate for toxic non-mercury metals), and HCl (a surrogate for all toxic acid gases). For existing and new oil-fired EGUs, the standards establish numerical emission limits for PM (a surrogate for all toxic metals), HCl, and HF. EGUs may also show compliance with the HCl and HF limits by limiting the moisture content of their oil.

The rule establishes alternative numeric emission standards, including SO₂ (as an alternate to HCl), individual non-mercury metal air toxics (as an alternate to PM), and total non-mercury metal air toxics (as an alternate to PM) for certain subcategories of power plants.

The revisions to the NSPS for fossil-fuel-fired EGUS include revised numerical emission limits for PM, SO₂, and NO_x.

Estimated Cost and Benefits

EPA estimates the health benefits associated with meeting the standards for air toxics could be up to \$90 billion in 2016 (2007\$) and that the total national annual cost of implementing and complying with this rule will be \$9.6 billion.

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For more information on the EPA MATS rule visit: <http://www.epa.gov/mats>

Maxxam Capabilities

Maxxam offers comprehensive analytical capabilities including the measurement of Dioxins/Furans, PCB Congeners (209), PAHs, OC pesticides and other persistent chemicals. Maxxam supplies sampling media for all analyses performed.

Maxxam provides full support for MATS rule. Our NELAC certification includes:

- Method 5 for Total Particulate Matter
- Method 29 for Mercury/ Metals
- Method 26 for Hydrogen Halides and Halogens (Acid Gases)

Accreditation

The following organizations have endorsed Maxxam's quality system:

- NELAC
- Standards Council of Canada
- United States Army Corps of engineers
- National Voluntary Laboratory Approval Program (NVLAP)
- Environmental Lead Laboratory Approval Program
- State of New York – Environmental Laboratory Approval Program
- State of Pennsylvania
- State of New Jersey
- Commonwealth of Virginia
- State of California
- State of Florida
- State of Hawaii
- State of Louisiana
- State of Texas
- State of Washington

Quality Management System

Maxxam has a strong quality management system (QMS) which encompasses both quality assurance and quality control. More than 30 people are employed on Maxxam's quality assurance (QA) team as Regional Managers, Specialists and Coordinators. QA staff are responsible for carrying out the monitoring, documentation and training required by the company's QMS. To ensure the independence, integrity and effectiveness of their functions, these employees report to the National Director of Quality, who reports directly to Maxxam's CEO.

Our laboratories are accredited to ISO/ IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories" which is the global standard for laboratory quality management programs. Maxxam laboratories also participate in many national and international proficiency testing and double-blind-check sample programs to assess turnaround time (TAT), data accuracy and traceability.

Maxxam is the Canadian market leader in analytical services and solutions to the energy, environmental, food and DNA industries and a member of the Bureau Veritas Group of companies – a world leader in testing, inspection and certification services. We support critical decisions made by our customers through the application of rigorous science and the knowledge and expertise of our over 2500 employees.

For more information, please email:
airtoxics@maxxam.ca