Summary of the Clean Air Act
Quick Links
The official text of the CAA is available in the United States Code, from the US Government Printing Office
42 U.S.C. §7401 et seq. (1970)
The Clean Air Act (CAA) is the comprehensive federal law that regulates air emissions from stationary and mobile sources. Among other things, this law authorizes EPA to establish National Ambient Air Quality Standards (NAAQS) to protect public health and public welfare and to regulate emissions of hazardous air pollutants.

NAAQS and SIPs
One of the goals of the Act was to set and achieve NAAQS in every state by 1975 in order to address the public health and welfare risks posed by certain widespread air pollutants. The setting of these pollutant standards was coupled with directing the states to develop state implementation plans (SIPs), applicable to appropriate industrial sources in the state, in order to achieve these standards. The Act was amended in 1977 and 1990 primarily to set new goals (dates) for achieving attainment of NAAQS since many areas of the country had failed to meet the deadlines.

Sources of Pollution
Section 112 of the Clean Air Act addresses emissions of hazardous air pollutants. Prior to 1990, CAA established a risk-based program under which only a few standards were developed. The 1990 Clean Air Act Amendments revised Section 112 to first require issuance of technology-based standards for major sources and certain area sources. "Major sources" are defined as a stationary source or group of stationary sources that emit or have the potential to emit 10 tons per year or more of a hazardous air pollutant or 25 tons per year or more of a combination of hazardous air pollutants. An "area source" is any stationary source that is not a major source.

For major sources, Section 112 requires that EPA establish emission standards that require the maximum degree of reduction in emissions of hazardous air pollutants. These emission standards are commonly referred to as "maximum achievable control technology" or "MACT" standards. Eight years after the technology-based MACT standards are issued for a source category, EPA is required to review those standards to determine whether any residual risk exists for that source category and, if necessary, revise the standards to address such risk.

Compliance and Enforcement
Air Enforcement
Clean Air Act Compliance Monitoring: investigations and inspections
History of the Act
EPA History: Clean Air Act of 1970/1977
EPA History: Clean Air Act Amendments of 1990
More Information
The Office of Air and Radiation (OAR) develops national programs, policies, and regulations for controlling air pollution and radiation exposure.

Clean Air Act and Air Pollution Overview covers progress under CAA in reducing air pollution, and the roles of state government and other parties in implementation.
Air Regulatory Topics
Broad index of Air Topics
Under CAA Section 112(r), the Office of Emergency Management (OEM) administers the Risk Management Plan Rule.
Air Enforcement
Información relacionada disponible en español (Related Information in Spanish)

EPA regulates emissions of air pollution from mobile and stationary sources under the Clean Air Act (CAA). For more on EPA's enforcement process, go to Basics on enforcement.

On this page:

Stationary Sources
New Source Review and Prevention of Significant Deterioration
Air Toxics
New Source Performance Standards
Mobile Sources
New Vehicles and Engines
Fuels
Ocean-Going Vessels and Large Ships
Hydrofluorocarbon Enforcement
American Innovation and Manufacturing Act 2020
Clean Air Act, Greenhouse Gas Reporting Program: HFC Importers
Compliance Monitoring and Assistance
On other pages:

Air Enforcement Policy, Guidance and Publications
Search for air cases and settlements
Find air enforcement data

Stationary Sources

Stationary sources include facilities such as factories and chemical plants, which must install pollution control equipment and meet specific emission limits under the CAA.

New Source Review (NSR) and Prevention of Significant Deterioration (PSD). These requirements require certain large industrial facilities to install state-of-the-art air pollution controls when they build new facilities or make modifications to existing facilities. Failure to install controls results in emission of pollutants that can degrade air quality and harm public health. Learn more about New Source Review.

Reducing air pollution from the largest source of emissions is one of EPA's national enforcement initiatives. EPA is taking action to eliminate or minimize emissions from coal-fired power, acid, glass and cement plants and petroleum refineries.

Coal-fired power plants. There are approximately 1,100 coal-fired electric utility units in the United States with an overall capacity of 340,000 megawatts. This sector emits approximately two-thirds of the nation's emissions inventory of sulfur dioxide (SO2) and approximately one-third of the nitrogen oxides (NOx). Investigations of this sector have identified a high rate of noncompliance with NSR/PSD when old plants are renovated or upgraded. Learn more about Sulfur Dioxide and Nitrogen Dioxide.

Plants that manufacture sulfuric and nitric acid, which are used in fertilizer, chemical and explosive production. Acid production plants emit many thousands of tons of nitrogen oxides, sulfur dioxide, and sulfuric acid mist each year. EPA investigations have found a high rate of non-compliance with NSR/PSD in connection with plant expansions and process changes.

Glass manufacturing plants. There are approximately 125 large glass plants operating in the United States. These plants emit approximately 200,000 tons per year of NOx, SO2 and particulate matter (PM). Investigation of this sector has shown that there have been a significant number of plant expansions but few applications for the installation of pollution controls required under NSR/PSD.

Cement manufacturing plants. Cement manufacturing plants are the third largest industrial source of air pollution, emitting more than 500,000 tons per year of SO2, NOx and carbon monoxide. EPA determined that many cement manufacturers made changes to existing facilities without applying for and obtaining pre-construction permits. The pollution can contribute to respiratory illness and heart disease, the formation of acid rain, reduced visibility, and can be transported over long distances before falling on land or water.

Petroleum refineries. Since 2000, EPA has engaged in an enforcement initiative specifically focused on addressing air emissions from petroleum refineries and has reached innovative, multi-issue, multi-facility settlement negotiations with major petroleum refining companies. These settlements have resulted in significant emission reductions of NOx, SO2, benzene, volatile organic compounds and PM.
Air Toxics. National Emission Standard for Hazardous Air Pollutants (NESHAP). Leaks, flares, and excess emissions from refineries, chemical plants and other industries can contain hazardous air pollutants (HAPs) that are known or suspected to cause cancer, birth defects, and seriously impact the environment. Leaking equipment is the largest source of HAP emissions from petroleum refineries and chemical manufacturing facilities. Cutting emissions of air toxics EPA's National Enforcement and Compliance Initiatives.

New Source Performance Standards (NSPS). Newly constructed sources or those that are modified or reconstructed must follow these standards to control excess emissions of NOx, SO2, and particulate matter.

Mobile sources
Motor vehicle engines and off-road vehicles and engines must meet CAA emissions standards. These standards apply to cars, trucks, buses, recreational vehicles and engines, generators, farm and construction machines, lawn and garden equipment, marine engines and locomotives. In addition, the composition of fuels used to operate mobile sources, including gasoline, diesel, ethanol, biodiesel and blends of these fuels, are also regulated under the CAA. Learn more about transportation and air quality.

New vehicles and engines must have an EPA-issued certificate of conformity before import or entry into the United States demonstrating that the engine or vehicle conforms to all applicable emissions requirements. The CAA also requires emissions labels for certified vehicles and engines. See examples of cases and settlements related to vehicles and engines.

Illegal imports. Since 2008, there has been a steady flow of illegally imported uncertified motorcycles, equipment containing small gasoline-powered engines (e.g., generators, mowers, chainsaws, etc.), and recreational vehicles. Uncertified vehicles and engines can emit harmful air pollutants at 30% or more above allowable standards. EPA is working with U.S. Customs to stop illegal vehicles and engines at the ports and requiring exportation. Learn more about importing vehicles and engines.

Defeat devices. It is a violation of the CAA to manufacture, sell, or install a part for a motor vehicle that bypasses, defeats, or renders inoperative any emission control device. For example, computer software that alters diesel fuel injection timing is a defeat device. Defeat devices, which are often sold to enhance engine performance, work by disabling a vehicle's emission controls, causing air pollution. As a result of EPA enforcement, some of the largest manufacturers of defeat devices have agreed to pay penalties and stop the sale of defeat devices.

Tampering. The CAA prohibits anyone from tampering with an emission control device on a motor vehicle by removing it or making it inoperable prior to or after the sale or delivery to the buyer. A vehicle's emission control system is designed to limit emissions of harmful pollutants from vehicles or engines. EPA works with manufacturers to ensure that they design their components with tamper-proofing, addresses trade groups to educate mechanics about the importance of maintaining the emission control systems, and prosecutes cases where significant or imminent harm is occurring.

Fuels. The CAA regulates fuel used in motor vehicles and non-road equipment. Clean fuels help reduce harmful emissions from a wide variety of motor vehicles, engines, and equipment.

Standards. EPA regulations require that all fuel and fuel additives produced, imported and sold in the United States meet certain standards. EPA conducts targeted and random inspections to evaluate compliance with these standards and brings enforcement actions against parties that violate these standards to reduce harmful emissions caused by fuel that does not meet the applicable standards. See

diesel and gasoline fuels enforcement actions.

Renewable Fuels. Transportation fuel sold in the U.S. must contain a minimum volume of renewable fuel to reduce greenhouse gas emissions and the use of petroleum fuels. Renewable fuel producers and importers generate renewable identification number (RINs) for each gallon of renewable fuel. Refiners and importers must acquire RINs to show compliance with the standard. EPA investigates and pursues enforcement actions against anyone generating, transferring and using invalid RINs. Learn more about renewable fuels. See Renewable Fuels Standards enforcement actions.

Fuel Waivers. EPA, with the concurrence of the U.S. Department of Energy (DOE), has the authority to temporarily waive fuel or fuel additive requirements in emergency situations when the fuel supply suffers major disruptions. This helps ensure that an adequate supply of fuel is available, particularly for emergency vehicle needs. In such circumstances EPA works closely with state and other federal agencies to determine an appropriate response.

Ocean-Going Vessels and Large Ships. The CAA regulates new and in-use U.S. flagged compression-ignition marine engines (also called marine diesel engines), vessels containing such engines, emissions from such engines, as well as the sulfur content of marine fuel. EPA's strategy to address emissions from all ships that affect U.S. air quality includes enforcement of CAA standards, as well as implementation and enforcement of the international standards for marine engines and their fuels contained in Annex VI to the International Convention on the Prevention of Pollution from Ships (a treaty called MARPOL) under the authority of the Act to Prevent Pollution from Ships (APPS).

Enforcement of MARPOL Annex VI. The EPA and the U.S. Coast Guard (USCG) agreed to jointly enforce U.S. and International air pollution requirements for vessels operating in U.S. waters. Learn more about MARPOL Annex VI.

Engine and Fuel Standards. EPA regulates air pollution from various marine diesel engines. EPA has adopted standards that apply to Category 3 (C3) engines installed on U.S. vessels, such as large ships and ocean vessels, and to marine diesel fuels produced and distributed in the United States. Learn more about other marine diesel engines.

Hydrofluorocarbon Enforcement

American Innovation and Manufacturing Act of 2020. The American Innovation and Manufacturing Act (AIM Act), enacted by Congress in 2020, authorizes EPA to phase down the production and consumption of hydrofluorocarbons (HFCs) by 85 percent in a stepwise manner by 2036 through an allowance allocation and trading program. The AIM Act also directs EPA to maximize reclamation of HFCs, minimize releases of HFCs from equipment, and facilitate the transition to next-generation technologies to replace HFCs. HFCs are potent greenhouse gases, with a climate impact that can be hundreds to thousands of times greater than carbon dioxide. EPA enforces the AIM Act and its regulations against violators who seek to produce or import HFCs without the required allowances, who submit false or misleading information, or who fail to report required information. Learn more about the AIM Act.

Clean Air Act, Greenhouse Gas Reporting Program: HFC Importers. Data on greenhouse gas (GHG) emissions helps the public and policymakers understand the sources and magnitude of emissions contributing to climate change. There are approximately 9,000 large greenhouse gas emission sources, fuel and industrial gas suppliers, and CO2 injection sites in the United States, which together account for 85 to 90 percent of U.S. GHG emissions. These sources and hydrofluorocarbon importers must report their GHG data and other relevant information under the Greenhouse Gas Reporting Program (GHGRP) each year. EPA pursues enforcement actions against sources that fail to properly report their GHG emissions. Learn more about the GHGRP.

Compliance Monitoring and Assistance

EPA works with its federal, state and tribal regulatory partners through a comprehensive Clean Air Act compliance monitoring program. Compliance monitoring ensures that the regulated community obeys environmental laws/regulations through on-site inspections and record reviews that can lead to enforcement when necessary. The CAA compliance assistance program provides businesses, federal

facilities, local governments and tribes with tools to help meet environmental regulatory requirements.
National Enforcement and Compliance Initiative: Creating Cleaner Air for Communities by Reducing Excess Emissions of Harmful Pollutants

Problem

image of exploding flaring

Air pollution from an improperly operated flare

People living in non-attainment areas or in communities that are near sources of hazardous air pollutants (HAPs) may face significant risks to their health and environment. Nonattainment is any area in the United States that does not meet the primary or secondary national ambient air quality standards (NAAQS).

HAPs are pollutants that are known or suspected to cause cancer or other serious health effects. In some instances, small amounts of these chemicals inhaled or ingested can cause serious illness. EPA has identified over 180 chemicals as HAPs, including mercury, benzene, dioxin, ethylene oxide, and lead compounds.

In addition to HAPs, significant sources of volatile organic compounds (VOCs) contribute to non-attainment with the NAAQS or may adversely affect the attainment status of an area. VOCs are a key component in the formation of ground-level ozone, which creates smog, and secondary organic aerosols, which may impact ecosystems and can cause adverse health effects in people.

Goal

The Creating Clean Air for Communities (CCAC) National Enforcement and Compliance Initiative (NECI), initiated in fiscal year 2020, was designed to address the adverse health and environmental effects from sources of toxic air pollution and help improve air quality in communities across the country. Implementing this NECI has resulted in the installation of new pollution controls as well as the proper operation of existing controls at numerous facilities resulting in significant reductions of toxic pollutants, as well as methane and other greenhouse gases, which contribute to climate change.

Results

During FY 2023, the Agency continued to make significant progress on this NECI. The following summary illustrates the Agency’s efforts in FY 2023 to improve air quality and reduce excess emissions of VOCs and HAPs:

Pollutant Reduction

EPA addressed serious violations through enforcement actions, achieving measurable pollutant reductions and improving air quality to provide cleaner air for communities. FY 2023 enforcement actions alone have resulted in a reduction of approximately 30 million pounds of VOCs and HAPs as well as other harmful air pollutants. FY 2023 enforcement actions also resulted in the reduction of over 307 million pounds of carbon dioxide equivalent (CO2e), including methane.

Cases

Oversight of Emergency Orders

Significant EPA oversight of previously issued CAA § 303 emergency orders is ongoing to address imminent and substantial endangerment to public health and the environment in St. Croix and in South Carolina. EPA took additional enforcement as appropriate in FY 2023 to help ensure cleaner air for these communities.

Examples of concluded enforcement actions in FY 2023 include the following:

United States Orders Matador Production Company to Reduce Unlawful Air Pollution from Its Oil and Gas Wells in New Mexico, Eliminating 16,000 Tons of Harmful Air Pollutants

United States Orders Mewbourne Oil Company to Pay $5.5 Million and Reduce Unlawful Air Pollution from Oil and Gas Wells in New Mexico and Texas, Eliminating More than 11,000 Tons of Harmful Air Pollutants Annually

EPA and Justice Department Announce Settlement to Reduce Hazardous Air Emissions at BP Products' Whiting Refinery in Indiana

Tesoro to Pay $27.5 Million For Violating Previous Court Order Requiring Them to Reduce Air Pollution at Their Martinez, Calif. Refinery

The Williams Companies and Related Entities Resolve Clean Air Act Violations at Alabama Natural Gas Processing Plant and 14 Other Facilities

FY 2023 Number of CCAC Facilities with EPA Inspections / Off-site Compliance Monitoring
FY2022 - CCAC Facilities
Advanced, innovative equipment and techniques
Employed infrared cameras using optical gas imaging and the National Enforcement Investigations Center's geospatial measurement of air pollution (GMAP) vehicle during inspections. This technology allows for real time identification of VOC and HAP emissions, identifying potential noncompliance resulting from fugitive emissions and equipment leaks.
Enhanced use of compliance monitoring tools
Inclusion of a requirement for facilities to continually monitor concentrations of emissions along their property boundary (i.e. fenceline) in enforcement settlements, when appropriate, provides additional insight into emission sources and their potential impacts.

For petroleum refineries which are required to implement a fenceline monitoring program for benzene emissions, the Agency provides a Dashboard to make the publicly available data easier to access and analyze by EPA, state and other regulatory agencies, as well as members of the public.

Compliance Assistance Portal
Through partnerships with state and tribal authorities, EPA regional offices conducted multiple joint inspections and joint enforcement actions, including Matador and Mewbourne.

Issued Compliance Advisories and Enforcement Alerts
In March 2023, EPA issued a federal facility compliance advisory to highlight the CCAC NECI alerting federal facilities of their responsibility to ensure compliance with all CAA regulatory requirements and to not release excess VOC or HAP emissions that cause significant harm to the public, including overburdened communities with potential environmental justice concerns. The EPA is highlighting this NECI for federal facilities so they may promptly address any noncompliance.

Compliance Assistance Portal
Enhanced the Environmental Compliance Information for Energy Extraction portal providing compliance assistance for owners and operators of crude oil and natural gas extraction operations.
Coal-Fired Power Plant Enforcement
The coal-fired power plant industry is an EPA national enforcement priority. Since 1999, EPA has pursued a coordinated, integrated compliance and enforcement strategy to address Clean Air Act (CAA) New Source Review compliance issues at the nation's coal-fired power plants. Many of these cases have resulted in settlements or are being argued in court.

Coal-Fired Power Plant Lawsuits
On November 3, 1999, the Department of Justice and the Environmental Protection Agency announced the filing of civil complaints against seven electric utility companies operating coal-fired power plants in the Midwest and Southeast, charging that their plants illegally released massive amounts of air pollutants over a period of several years and contributed some of the most severe environmental problems facing the United States today. The companies involved are American Electric Power Company, Cinergy, FirstEnergy, Illinois Power, Southern Indiana Gas & Electric Company, Southern Company and Tampa Electric Company. In separate but related actions, EPA issued Notices of Violations to these same companies, plus an administrative order against the Tennessee Valley Authority. Perhaps the most comprehensive, coordinated enforcement effort under the Clean Air Act to date, the complaints, Notices

of Violation and administrative order cover 32 plants located in 10 states.

Coal-Fired Power Plant Settlement
Duke Energy Corporation (9/10/15)
Interstate Power and Light Company (7/15/15)
Four Corners Power Plant (6/24/15)
Consumers Energy (09/16/14)
Minnesota Power (07/16/14)
Wisconsin Power and Light (04/22/13)
Dominion Energy, Inc. (04/01/13)
Wisconsin Public Service Corporation Settlement (01/04/13)
Louisiana Generating Settlement (11/21/12)
Dairyland Power Cooperative Settlement (06/29/12)
Tennessee Valley Authority Clean Air Act Settlement (04/14/11)
Northern Indiana Public Service Company Air Act Settlement (01/13/11)
Hoosier Energy Rural Electric Cooperative, Inc. (07/23/10)
American Municipal Power (05/18/10)
Westar Energy, Inc. Settlement (01/25/10)
Ohio Edison Company, W.H. Sammis Power Station, Clean Air Act Settlement (08/11/09)
Kentucky Utilities Company (02/03/09)
Salt River Project Agricultural Improvement and Power District (8/12/08)
American Electric Power Service Corporation Settlement (10/09/07)
East Kentucky Power Cooperative (07/2/07)
Nevada Power Company (06/13/07)
Alabama Power Company Settlement (04/25/06)
Minnkota Power Cooperative and Square Butte Electric Cooperative Settlement (04/24/06)
Illinois Power Company and Dynegy Midwest Generation Settlement (03/07/05)
South Carolina Public Service Authority (Santee Cooper) Settlement (03/16/04)
Southern Indiana Gas and Electric Company (SIGECO) Settlement (06/06/03)
Wisconsin Electric Power Company (WEPCO) Settlement (04/29/03)
Virgina Electric and Power Company (VEPCO) Settlement (04/17/03)
ALCOA, Inc. Settlement (03/27/03)
PSEG Fossil L.LC. Civil Judicial Settlement (01/24/02)
Tampa Electric Company (TECO) Settlement (02/19/00)
Acid Plant New Source Review Enforcement Initiative
The sulfuric and nitric acid manufacturing industry is an Environmental Protection Agency (EPA) National Compliance Initiative: Creating Cleaner Air for Communities by Reducing Excess Emissions of Harmful Pollutants. This sector emits many thousands of tons of nitrogen oxides, sulfur dioxide, and sulfuric acid mist each year. EPA investigations into this sector have found a high incidence of NSR/PSD violations. New pollution control technology required by EPA’s settlements are both cost-effective and result in much lower emission rates from these sources than what was previously thought to be achievable.

On this page:

Products Produced by this Industry
Health and Environmental Effects of Acid Plant Emissions
Acid Plant Settlements
Case Result
Products Produced by this Industry:
Sulfuric acid is the largest volume chemical produced in the United States. It is used in the manufacture of phosphate fertilizer, gasoline, inorganic chemicals, soaps and detergents, and dyes. It is produced through the combustion of elemental sulfur, the decomposition of sulfuric acid containing wastes, and as a byproduct from the production of nonferrous metals such as lead, zinc, copper, molybdenum, and gold. Nitric acid is also produced in large quantities domestically. It is used in the production of nitrogen fertilizer, explosives and munitions, and organic chemicals. All nitric acid is produced through the catalytic

oxidation of ammonia.

Health and Environmental Effects of Acid Plant Emissions

Acid Plants are a significant source of sulfur dioxide, as well as nitrogen oxide, particulate matter, volatile organic emissions and other pollutants, which are associated with the following health and environmental impacts:

Sulfur dioxide (SO2) in high concentrations can affect breathing and may aggravate existing respiratory and cardiovascular disease. Sensitive populations include asthmatics, individuals with bronchitis or emphysema, children, and the elderly. SO2 is also a primary contributor to acid deposition, or acid rain.

Particulate matter (PM) is a mixture of solid particles and liquid droplets found in the air, such as dust, dirt, soot, or smoke. Some PM is large enough or dark enough to be seen with the naked eye, while others are so small they can only be detected using a microscope. The size of particles is directly linked to their potential for causing health problems. Small particles less than 10 micrometers in diameter pose the greatest health concerns problems due to inhalation, for example, and fine particles (less than 2.5 micrometers) are the major cause of reduced visibility (haze) in parts of the United States.

Nitrogen oxides (NOx) can cause or contribute to a variety of health problems and adverse environmental impacts, such as ground-level ozone, acid rain, global warming, water quality deterioration, and visual impairment. Affected populations include children, people with lung diseases such as asthma, and exposure to these conditions can cause damage to lung tissue for people who work or exercise outside.

Sulfuric acid mist is a corrosive chemical and can severely burn the skin and eyes. It may cause third degree burns and blindness on contact. Exposure to sulfuric acid mist can irritate the eyes, nose, throat and lungs, and at higher levels can cause a buildup of fluid in the lungs (pulmonary edema). Asthmatics are particularly sensitive to the pulmonary irritation. Repeated exposures may cause permanent damage to the lungs and teeth. More information on the effects exposure to sulfuric acid and acid mist, please visit the Agency for Toxic Substances and Disease Registry's Health Statement on Exposure to Sulfuric Acid.

Nitrous Oxide (N2O) is a potent greenhouse gas with an atmospheric lifetime of approximately 120 years. Nitrous oxide is about 310 times more effective in trapping heat in the atmosphere than CO2 over a 100-year period. The primary sources of human-influenced emissions of nitrous oxide are agricultural soil management, animal manure management, sewage treatment, mobile and stationary fuel combustion, adipic acid production, and nitric acid production. Nitrous oxide is also emitted naturally from a wide variety of biological sources.

Acid Plant Settlements

J.R. Simplot Company (12/3/15)

Mosaic Fertilizer Clean Air Act Settlement (10/05/09)
DuPont/Lucite Clean Air Act Settlement (04/20/09)
Chemtrade/Marsulex Clean Air Act Settlement (01/12/09)
Rhodia Inc. Clean Air Act Settlement (04/26/07)
Agrium/Royster-Clark Clean Air Settlement (02/26/07)
E. I. du Pont de Nemours & Company Clean Air Act Settlement (12/14/05)

Case Results

Number of Acid Plants covered by Consent Decrees: 22
Where: Nationwide (9 states)
California, Indiana, Kentucky, Louisiana, Ohio, Oklahoma, Texas, Virginia, and Wyoming
Emissions Reductions:
Sulfur Dioxide (SO2) by more than 36,740 tons per year
Other pollutants (NOx, acid mist, VOC, CO and PM) by more than 610 tons per year
Injunctive Relief:
$224 million in control technologies
Civil Penalties:
$9.575 million
Supplemental Environmental Projects:
$48,000

Cement Manufacturing Enforcement Initiative

The cement manufacturing industry was an EPA New Source Review/Prevention of Significant Deterioration (NSR/PSD) national enforcement initiative in fiscal years 2008-2010 and was continued as a Reducing Air Pollution from the Largest Sources national enforcement initiative for fiscal years 2011-2013. The cement sector is the third largest industrial source of pollution, emitting more than 500,000 tons per year of sulfur dioxide, nitrogen oxide, and carbon monoxide. Beginning in 2008, EPA has pursued a coordinated, integrated compliance and enforcement strategy to address Clean Air Act New Source Review compliance issues at the nation's cement manufacturing facilities.

On this page:

Health and Environmental Effects of Cement Plant Emissions
Cement Plant Settlements
Cement Plant Lawsuit

Health and Environmental Effects of Cement Plant Emissions

Cement plants are a significant source of sulfur dioxide, nitrogen oxide and carbon monoxide, which are associated with the following health and environmental impacts:

Nitrogen oxide (NOx) can cause or contribute to a variety of health problems and adverse environmental impacts, such as ground-level ozone, acid rain, global warming, water quality deterioration, and visual impairment. Affected populations include children, people with lung diseases such as asthma, and exposure to these conditions can cause damage to lung tissue for people who work or exercise outside. Sulfur dioxide (SO2) in high concentrations can affect breathing and may aggravate existing respiratory and cardiovascular disease. Sensitive populations include asthmatics, individuals with bronchitis or emphysema, children, and the elderly. SO2 is also a primary contributor to acid deposition, or acid rain. Carbon monoxide (CO) can cause harmful health effects by reducing oxygen delivery to the body's organs and tissues, as well as adverse effects on the cardiovascular and central nervous systems. CO also contributes to the formation of smog (ground-level ozone), which can cause respiratory problems.

Cement Plant Settlements

Lone Star Industries, Inc. (Buzzi) (8/01/16)
Cemex, Inc., (07/27/16)
Ash Grove (6/19/13)
Holcim Hagerstown Maryland (7/11/13)
Cemex Inc. (Lyons) (4/19/13)
Essroc Cement Company (12/29/11)
California Portland Cement Company (12/15/11)
CEMEX Fairborn Plant (2/10/11)
Lafarge North America, Inc. (1/21/10)
Cemex (California) (1/15/09)
St. Mary's Cement (Illinois) (9/08/08)

Cement Plant Lawsuits

Cemex Complaint

Petroleum Refinery National Case Results

Settlement Results

NEI Data Refining Sector

Data reported by the petroleum refining sectors

Data reported by the petroleum refining sector to EPA's National Emissions Inventory* shows a significant and steady decline in SO2 and NOx emissions in this sector since the first of the NPRI settlements was reached in 2000 – approximately 75% less than pre-Refinery Initiative levels (data shown is in tons per year).

* For more information on EPA's National Emissions Inventory

EPA's national Petroleum Refinery Initiative addresses air emissions from the Nation's petroleum refineries. Our results have been:

Since March 2000, the Agency has entered into 37 settlements with U.S. companies that refine over 95 percent of the Nation's petroleum refining capacity.
These settlements cover 112 refineries in 32 states and territories, and on full implementation will result in annual emissions reductions of more than 95,000 tons of nitrogen oxides and more than 260,000 tons of sulfur dioxide.
Settling companies have agreed to:

Invest more than $7 billion in control technologies and pay civil penalties of more than $116 million
Perform supplemental environmental projects over $116 million
EPA's settlements require:

Significant reductions of nitrogen oxide
Significant reductions of sulfur dioxide
Additional emission reductions of benzene, volatile organic compounds and particulate matter
EPA's investigations focused on the four most significant Clean Air Act compliance challenges for this industry and the emissions units that are the source of most of its pollution:

New Source Review/Prevention of Significant Deterioration
Fluidized catalytic cracking units
Heaters and boilers
New Source Performance Standards
Flares
Sulfur recovery units
Fuel gas combustion devices (including heaters and boilers)
Leak Detection and Repair requirements
Benzene National Emissions Standards for Hazardous Air Pollutants
EPA has reached innovative, multi-issue, multi-facility settlement negotiations with the following major petroleum refining companies:

Alon USA LP
Big West Oil, LLC
BP Exploration and Oil, Inc.
BP Whiting
Chevron USA Inc.
CHS Inc. (Cenex)
CITGO
Coastal Eagle Point Oil Company (CEPOC)
Coffeyville Resources Refining & Marketing Settlement
Conoco, Inc. (preconsolidation refineries only)
ConocoPhillips
CountryMark Refining and Logistics, LLC
Ergon Refining Inc.
ExxonMobil Corporation
Frontier
Giant
Hess Corporation
Holly Refining
Hovensa LLC
Hunt Refining
Koch Industries
Lion Oil
Marathon Ashland Petroleum LLC
Marathon Petroleum Company, LP and Catlettsburg Refining, LLC
Murphy Oil
Motiva Enterprises LLC - Equilon Enterprises - Deer Park Refining (Shell)

Navajo Refining Company and Montana Refining Company
Shell Chemical LP/Shell Chemical Yabucoa, Inc.
Sinclair Oil Co.
Sunoco, Inc.
Tesoro and Par
Total Petrochemicals U.S.A
Valero Eagle Refining Company
Valero (Premcor)
Western Refining
Wyoming Refining
Enforcement Alerts on Refinery Issues
Voluntary Program (slotted guidepoles) - May 2000
Fugitive Emissions (LDAR) - October 1999
Flaring - October 2000
RCRA new waste listings - April 1999
NSR/PSD - January 1999
National Enforcement and Compliance Initiatives
NECI Resources
EPA Announces Federal Enforcement Priorities to Protect Communities from Pollution
EPA Seeks Public Comment on Proposed National Enforcement and Compliance Initiatives for Fiscal Years 2024-2027
Updated Policy for EPA's Enforcement and Compliance Initiatives
EPA focuses its enforcement and compliance assurance resources on the most serious environmental violations by developing and implementing national program priorities, called National Enforcement and Compliance Initiatives (NECIs). The NECIs are in addition to the EPA's core enforcement work, including protecting clean and safe water, reducing air pollution, and protecting safe and healthy land.

Formal enforcement remains the key tool to address serious noncompliance and create general deterrence EPA also uses informal enforcement, compliance monitoring, self-audits, and compliance assistance to advance the NECIs.

On this page:

Fiscal Year 2024-2027 NECIs
Fiscal Year 2020 - 2023 NECIs
Fiscal Year 2024-2027 NECIs
On August 17, 2023, EPA's Office of Enforcement and Compliance Assurance (OECA) announced its selection of six priority areas as the National Enforcement and Compliance Initiatives (NECIs) for Fiscal Years 2024-2027.

Each of these six NECIs address an environmental and public health challenge, the kind of challenge that is difficult to tackle without additional resources and a concerted national effort. Each initiative incorporates environmental justice considerations to ensure the benefits of our Nation's environmental laws can be shared by everyone living in the United States. Taken together, these initiatives comprehensively address significant environmental problems across media: air, water, and toxics.

Using the full scope of EPA's enforcement and compliance tools to confront the most significant public health and environmental challenges will help protect vulnerable and overburdened communities and promote a sustainable future. The six FY 2024-2027 NECIs are:

Mitigating Climate Change (new)
Addressing Exposure to PFAS (new)
Protecting Communities from Coal Ash Contamination (new)
Reducing Air Toxics in Overburdened Communities (modified)
Increasing Compliance with Drinking Water Standards (continued)

Chemical Accident Risk Reduction (continued)
Fiscal Year 2020-2023 NECIs
The six FY 2020-2023 NECIs advanced the Agency's Strategic Plan objective to improve compliance with our nation's environmental laws in partnership with states and federally recognized Indian tribes with authorized environmental programs.

EPA began incorporating environmental justice and evaluating opportunities to address climate change in its implementation of the NECIs in 2021.

The six FY 2020-2023 NECIs are listed below.

NEW! Each of the NECI pages listed below contains FY 2023 enforcement and compliance accomplishments.

Air
Creating Cleaner Air for Communities by Reducing Excess Emissions of Harmful Pollutants
Stopping Aftermarket Defeat Devices for Vehicles and Engines
Hazardous Chemicals
Reducing Hazardous Air Emissions from Hazardous Waste Facilities
Reducing Risks of Accidental Releases at Industrial and Chemical Facilities
Water
Reducing Significant Non-Compliance with National Pollutant Discharge Elimination System
Reducing Non-Compliance with Drinking Water Standards at Community Water Systems
Clean Air Act Vehicle and Engine Enforcement Case Resolutions
Over half the pollutants in America's air come from "mobile sources" of air pollution. These mobile sources include cars, trucks, buses, motorcycles, recreational vehicles, scooters, off road construction equipment, marine engines, generators, and small engines and equipment. Mobile source pollutants include smog-forming volatile organic compounds and nitrogen oxides, various toxic air pollutants such as cancer-causing benzene, carbon monoxide, particulate matter or soot, and greenhouse gases. In addition to adverse effects on the environment, these pollutants are responsible for asthma, heart disease and other illnesses.

The Clean Air Act requires new engines and equipment sold or distributed in the United States to be certified to meet EPA-established emissions requirements to protect public health and the environment from air pollution. The Act and its implementing regulations also contain various requirements concerning testing, reporting, recordkeeping, warranty, labeling, tampering, defeat devices, and vehicle and engine maintenance and alterations. EPA enforces the vehicle and engine provisions of Title II of the Clean Air Act and regulations at 40 C. F. R. Parts 85, 86, 88 through 94, 600, and 1033 through 1068.

EPA may seek civil penalties or injunctive relief (including remediation of the violations and projects to offset excess emissions) for violations of the Act and regulations, and may bring cases in federal district court or through an administrative process. Enforcement actions include cases against a variety of parties, including manufacturers, importers, distributors, and consultants.

Violators are subject to civil penalties up to $45,268 per noncompliant vehicle or engine, $4,527 per tampering event or sale of defeat device, and $45,268 per day for reporting and recordkeeping violations. 42 U.S.C. § 7524; 40 C.F.R. § 19.4. The EPA often uses the Mobile Source Civil Penalty Policy to arrive at an appropriate civil penalty for vehicle and engine enforcement settlements.

Clean Air Act Vehicle and Engine Enforcement Case Resolutions by Fiscal Year
2023 Clean Air Act Vehicle and Engine Enforcement Case Resolutions
2022 Clean Air Act Vehicle and Engine Enforcement Case Resolutions
2021 Clean Air Act Vehicle and Engine Enforcement Case Resolutions
2020 Clean Air Act Vehicle and Engine Enforcement Case Resolutions
2019 Clean Air Act Vehicle and Engine Enforcement Case Resolutions

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2008 Clean Air Act Vehicle and Engine Enforcement Case Resolutions
2007 Clean Air Act Vehicle and Engine Enforcement Case Resolutions
2006 Clean Air Act Vehicle and Engine Enforcement Case Resolutions
2005 Clean Air Act Vehicle and Engine Enforcement Case Resolutions

Clean Air Act Fuels Settlement Information

EPA enforces the motor vehicle fuels provisions of Title II of the Clean Air Act ("the Act"), section 211, and regulations at 40 C.F.R. Parts 79 and 80. These provisions include certain requirements and prohibitions regarding the quality of motor vehicle fuels, and are designed to greatly reduce harmful emissions from all motor vehicles, including passenger cars, light trucks and heavy duty trucks. The provisions relating to fuels include the Renewable Fuel Standards (RFS 1 and RFS 2), gasoline sulfur, benzene, mobile source air toxics, ultra low sulfur diesel, reformulated gasoline and anti-dumping requirements.

CAA Fuels Administrative Settlement Agreements

CAA Fuels Civil Judicial Settlements and certain Administrative Settlements

The gasoline and diesel fuel requirements and prohibitions apply to all parties in the distribution system, including refiners, renewable fuel producers, importers, distributors, carriers, oxygenate blenders, retailers and wholesale purchaser-consumers (fleet operators having their own fueling facilities). EPA enforces these provisions with environmental audits and inspections (including testing of fuels), and through various recordkeeping and reporting requirements. EPA may seek civil penalties or injunctive relief (including remediation of the violations and projects to offset illegal emissions) for violations of the Act or regulations, and may bring cases in federal district court or through an administrative process. Enforcement actions include cases against all the types of regulated parties as listed above.

The Renewable Fuel Standard (RFS) program requires transportation fuel sold in the U.S. must contain a minimum volume of renewable fuel to reduce greenhouse gas emissions and the use of petroleum fuels. Renewable fuel producers and importers generate renewable identification number (RINs) for each gallon of renewable fuel. Refiners and importers must acquire RINs to show compliance with the standard. EPA investigates and pursues enforcement actions against anyone generating, transferring and using invalid RINs. Case information related to the Renewable Fuels Standard program and can be found on a separate page. See Civil Enforcement of the Renewable Fuel Standard Program.

Violators are subject to a potential civil penalty of up to $47,357 per day of violation, and the economic benefit or savings resulting from the violation. Civil penalties are updated for inflation and can be found at 40 CFR § 19.4.

CAA Fuels Settlement Agreements

Civil judicial settlements can be found on the Cases and Settlements page.

2023 CAA Fuels Administrative Settlements
2021 CAA Fuels Administrative Settlement
2019 CAA Fuels Administrative Settlement
2018 CAA Fuels Administrative Settlement
2017 CAA Fuels Administrative Settlement
2015 CAA Fuels Administrative Settlement

2014 CAA Fuels Administrative Settlement
2012 CAA Fuels Administrative Settlement
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2002 CAA Fuels Administrative Settlement
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2000 CAA Fuels Administrative Settlement
1999 CAA Fuels Administrative Settlement
1998 CAA Fuels Administrative Settlement
1997 CAA Fuels Administrative Settlement
1996 CAA Fuels Administrative Settlement
Civil Enforcement of the Renewable Fuel Standard Program
Resources
Frequently asked questions on the renewable fuel standards

The Renewable Fuel Standard (RFS) program requires producers or importers of renewable fuel to generate fuel credits, known as Renewable Identification Numbers (RINs), in proportion to the amount and type of renewable fuel they produced or imported. The RFS program also requires that non-renewable fuel refiners and importers, known as obligated parties, and renewable fuel exporters obtain valid RINs and retire those RINs each year by submitting them to the EPA.

Congress adopted the RFS program to reduce the nation’s dependence on foreign oil, help grow the nation’s renewable energy industry and achieve significant greenhouse gas emissions reductions.

EPA is charged with implementing the RFS program and enforcing its requirements. In order to protect the program’s integrity and maintain a level playing field for regulated companies, EPA is pursuing enforcement actions against renewable fuel producers and importers that generated invalid RINs.

The EPA has implemented the following enforcement response policies relating to obligated parties or renewable fuel exporters who used invalid RINs from 2010, 2011, 2012, 2013 and 2014 RINs:

Interim Enforcement Response Policy
Second Interim Enforcement Response Policy
Amended Second Interim Enforcement Response Policy
Administrative Action
Visit here for information regarding the Genscape, Inc. Settlement Agreement
Enforcement Actions:
2022
Quad County Corn Processors Cooperative
2021
Elliot Global Partners
2020
PES Holdings, LLC, et. al.
2018
NGL Crude Logistics, LLC
PES Holdings, LLC, et. al.
2017
Triton Energy, LLC
2016

Western Dubuque Biodiesel, LLC
Chemoil Corporation
Montgomery Recycling Corporation
2015
Gen-X Energy Group, Inc. or Southern Resources and Commodities, LLC
New Energy Fuels Inc. and Chieftain Biofuels LLC
Washakie Renewable Energy, LLC
2014
Global E Marketing, LLC
Green Diesel, LLC
2013
Imperial Petroleum, Inc. and e-Biofuels, LLC
Absolute Fuels, LLC
Clean Green Fuels, LLC
Quad County Corn Processors Cooperative
(Washington, DC – November 3, 2022) - The U.S. Environmental Protection Agency and the U.S. Department of Justice today announced a settlement with Iowa-based Quad County Corn Processors Cooperative, that requires the company to retire over 438,000 renewable fuel credits to resolve alleged violations of the Renewable Fuel Standard (RFS) program. Quad County Corn Processors Cooperative will also pay a civil penalty of $320,000 under the settlement.

Elliot Global Partners
The EPA issued Elliot Global Partners a Notice of Violation (NOV) on March 22, 2021. The NOV alleges that Elliot Global Partners generated approximately 5.8 million invalid D4 renewable identification numbers (RINs) between March 30, 2020 and January 28. 2021.

PES Holdings, LLC, et. al
On July 21, 2019, following a June 21, 2019 explosion and fire at the Philadelphia Energy Solutions Refining and Marketing LLC (“PESRM”) owned and operated refinery located in Philadelphia, Pennsylvania (“Philadelphia Refinery”), PES Holdings, LLC, North Yard GP, LLC, North Yard Logistics, L.P., PES Administrative Services, LLC, PES Energy Inc., PES Intermediate, LLC, PES Ultimate Holdings, LLC, and PESRM (collectively the “Debtors”) filed for bankruptcy in the United States Bankruptcy Court for the District of Delaware.

On September 30, 2019, PESRM failed to meet its renewable identification number (“RIN”) retirement obligations, accrued for the period from January 1, 2019 through June 30, 2019, and required by the 2018 Consent Decree and Environmental Settlement Agreement, In Re: PES Holdings, LLC, et. al., Case No. 18-10122 (KG) (“2018 Consent Decree”), that PESRM and many of the other Debtors in this matter entered into with the United States in a prior 2018 bankruptcy case. On March 31, 2020, these RIN retirement obligation violations became a violation under the Clean Air Act’s (“CAA”) Renewable Fuel Standard (“RFS”) program.

Additionally, after the June 21 explosion, including in part while the bankruptcy case was pending, PESRM continued to produce gasoline and diesel fuel from crude oils that remained at the Philadelphia Refinery, triggering additional RIN retirement obligations under the 2018 Consent Decree and the CAA’s RFS program. For any RINs generated after July 1, 2019, the compliance deadline under both the 2018 Consent Decree and the CAA’s RFS program was March 31, 2020.

On May 1, 2020, the United States and Debtors filed a Consent Decree and Environmental Settlement Agreement (“Settlement Agreement”) with the bankruptcy court to resolve Debtors’ obligations under the 2018 Consent Decree, the CAA, and the RFS regulations. Under the Settlement Agreement, Debtors have agreed to purchase and retire up to 161,830,963 Quality Assurance Plan Q-RINs subject to a price cap of $22 million, as described below.

See: the PES Holdings, LLC, et. al. case

NGL Crude Logistics, LLC
On September 27, 2018, the EPA announced a settlement with NGL Crude Logistics, LLC that resolves allegations in the United States' October 4, 2016 Complaint alleging that the company entered into a series of transactions in 2011, that resulted in the generation of more than 36 million invalid RINs. NGL will pay a civil penalty of $25 million and retire 36 million valid renewable fuel credits. The EPA settled its related allegations against Western Dubuque Biodiesel, LLC on October 4, 2016.

See: the NGL Crude Logistics, LLC

PES Holdings, LLC, et. al.
On January 21, 2018, PES Holdings, LLC, North Yard Financing, LLC, North Yard GP, LLC, North Yard Logistics, L.P., PES Administrative Services, LLC, PES Logistics GP, LLC, PES Logistics Partners, L.P., Philadelphia Energy Solutions Refining and Marketing LLC (PESRM), PESRM Holdings, LLC (collectively the Debtors) filed for bankruptcy in the United States Bankruptcy Court for the District of Delaware.

The Debtors Bankruptcy Plan of Reorganization failed to provide for any compliance with a portion of Debtors' 2016 RVOs, all of its 2017 RVOs, and the portion of its 2018 RVOs that it incurs between January 1, 2018, and the Effective Date of the settlement (anticipated to be April 1, 2018).

On March 12, 2018, the Debtors and the United States filed a settlement with the bankruptcy court to resolve the Debtors' obligations under the Clean Air Act Renewable Fuel Standard (RFS) program. Under the Settlement Agreement, Debtors have agreed (1) to retire a total of 138 million currently held RINs to resolve PESRM's liability for RVOs prior to the Effective Date of Debtors' proposed Plan of Reorganization ("Plan"); (2) to retire 64.6 million RINs it currently owns towards the Reorganized Debtors post-bankruptcy 2018 RVO; and (3) to consent to retirement of RINs on a semiannual basis for their post-Effective Date RVOs through 2022. This obligation will be extended and the company will be subject to stipulated penalties if it fails to meet this obligation.

See: the PES Holdings, LLC, et. al. case.

Triton Energy, LLC
The EPA issued Triton Energy, LLC (Triton) a Notice of Violation (NOV) on February 15, 2017. The NOV alleges that Triton generated about 39 million invalid D4 renewable identification numbers (RINs) between March 1, 2012, and March 31, 2015.

The EPA entered into the following administrative settlement agreements to resolve alleged civil violations arising from the use of invalid Triton Energy, LLC biomass-based diesel RINs.

See: the Triton Energy, LLC case for information relating to Obligated Parties who used RINs identified in the NOV.

Western Dubuque Biodiesel, LLC
On October 4, 2016, the EPA entered into a settlement agreement with Iowa-based Western Dubuque Biodiesel, LLC. The settlement resolves allegations that the company entered into a series of transactions in 2011, that resulted in the generation of more than 36 million invalid RINs. Western Dubuque will pay a civil penalty of $6 million.

The EPA alleged that in 2011, Western Dubuque entered into a series of transactions with NGL Crude Logistics, LLC (NGL), then known as Gavilon LLC, that resulted in the generation of more than 36 million invalid biomass-based diesel RINs. NGL is not a part of this settlement. The EPA and the U.S. Department of Justice filed a lawsuit against NGL, and entered into a separate settlement agreement with NGL on September 27, 2018, after more than a year and a half of litigation.

See: the Western Dubuque Biodiesel, LLC case.

Chemoil Corporation
On September 29, 2016, EPA entered into a settlement with Chemoil Corporation that requires the company to retire 65 million renewable fuel credits to resolve alleged violations of the Renewable Fuel Standard (RFS) program. The settlement resolves an enforcement action by EPA against Chemoil for violations of the Clean Air Act (CAA) involving its failure to comply with the RFS2 requirements. EPA alleged that Chemoil exported at least 48.5 million gallons of biodiesel from the United States in 2011, 2012, and 2013, without retiring the approximately 72.7 million biomass-based diesel RINs for that fuel. The EPA discovered the alleged violations as a result of tips from RFS program participants. EPA also alleged related reporting violations

The market value of the credits at the time of the settlement agreement -- along with an additional 7.7 million renewable identification numbers (RINs) already retired by Chemoil in the lead up to this settlement -- was more than $71 million. Chemoil will also pay a $27 million civil penalty under the settlement, the largest in the history of the EPA's fuel programs.

See the Chemoil Corporation case.

Montgomery Recycling Corporation
The EPA issued Montgomery Recycling Corporation (Montgomery Recycling) a Notice of Violation (NOV) on October 8, 2016. The NOV alleges that Montgomery Recycling generated more than 12.5 million invalid biomass-based diesel renewable identification numbers (RINs). Montgomery Recycling failed to produce any qualifying renewable fuel and transferred the majority of these invalid RINs to others.

The EPA entered into the following administrative settlement agreements to resolve alleged civil violations arising from the use of invalid Montgomery Recycling Corporation biomass-based diesel RINs.

Notification to Parties that Own, Transferred, or Used Gen-X Energy Group, Inc. or Southern Resources and Commodities, LLC RINs
The EPA informed Gen-X Energy Group, Inc. (Gen-X), and Southern Resources and Commodities, LLC (SRC) on December 24, 2015, that based on the plea agreement, United States of America vs. Scott Carl Johnson, and associated court filings, Renewable Identification Numbers (RINs) those companies produced were potentially invalid. The majority of these RINs were verified as A-RINs during the Renewable Fuel Standard Quality Assurance Plan (QAP) program's interim period. (See QAP rule.) This period started on February 21, 2013 and ended on December 31, 2014, but allowed retrospective verification of RINs generated from January 1, 2013.

On January 29, 2016, via email, the EPA notified companies that own, used, or transferred Gen-X or SRC potentially invalid RINs that they may assert an affirmative defense pursuant to 40 C.F.R. § 80.1473.

Under the regulations, parties are generally prohibited from transferring invalid RINs or using invalid RINs to meet the person's renewable volume obligation (RVO). 40 C.F.R. § 80.1460 (b)(2) and (c)(1). However, companies who used potentially invalid A-RINs for compliance with an RVO under § 80.1427, or companies who transferred potentially invalid A-RINs, may assert an affirmative defense for these actions.

The EPA separately entered into administrative settlement agreements with three obligated parties who collectively used more than 7.7 million unverified Gen-X Energy Group Inc. RINs, that were generated prior to when the interim QAP rule went into effect.

New Energy Fuels Inc. (NEF) and Chieftain Biofuels LLC (Chieftain)
The EPA issued New Energy Fuels Inc. (NEF) and Chieftain Biofuels LLC (Chieftain) a notice of violation (NOV) on July 28, 2015. The NOV alleges that NEF generated more than 10.2 million invalid biomass-based diesel renewable identification numbers (RINs) and Chieftain generated more than 4.8 million invalid biomass-based diesel RINs. NEF and Chieftain failed to produce any qualifying renewable

fuel and transferred the majority of these invalid RINs to others.

The EPA entered into the following administrative settlement agreements to resolve alleged civil violations arising from the use of invalid New Energy Fuels Inc. and Chieftain Biofuels, LLC biomass-based diesel RINs.

Washakie Renewable Energy, LLC
On March 19, 2015, EPA filed a civil Complaint against Washakie Renewable Energy, LLC and filed a Stipulation of Settlement and Order (settlement). The settlement resolves allegations that Washakie generated more than 7.2 million invalid biomass-based diesel renewable identification numbers (RINs) from January 29, 2010, to October 15, 2010. The settlement also resolves a number of related recordkeeping and reporting violations.

Washakie will pay a civil penalty of $3 million. EPA obtained mitigation of the harm caused by Washakie's generation of more than 7.2 million RINs by requiring Washakie to purchase and retire an equivalent number of biomass-based diesel RINs. Since Washakie replaced the 7.2 million RINs, the EPA entered into the following penalty only administrative settlement agreements to resolve the alleged civil violations arising from obligated parties' use of the 7.2 million invalid Washakie RINs.

See the Washakie Renewable Energy, LLC case.

Global E Marketing, LLC
The EPA issued Global E Marketing, LLC a notice of violation (NOV) on September 18, 2014. The NOV alleges the company generated more than 6 million invalid biomass-based diesel RINs without importing any qualifying renewable fuel and transferred the majority of these invalid RINs to others.

The EPA entered into the following administrative settlement agreements to resolve alleged civil violations arising from the use of invalid Global E Marketing, LLC biomass-based diesel RINs.

Green Diesel, LLC
On June 19, 2014, Philip Joseph Rivkin, a/k/a Felipe Poitan Arriaga, CEO of Green Diesel, LLC, was indicted by a federal grand jury in Houston, Texas for allegedly selling more than $29 million in fraudulent Renewable Fuel Credits. The indictment states that Rivkin claimed to produce millions of gallons of biodiesel and then generated and sold RINs based upon this claim. In reality, the indictment states, no biodiesel was ever produced. The 68-count indictment against Rivkin includes allegations of wire fraud, mail fraud, Clean Air Act false statements, and money laundering. An indictment is only a charge and is not evidence of guilt. All defendants are presumed innocent and are entitled to a fair trial at which the government must prove guilt beyond a reasonable doubt.

Rivkin, 49, was arrested in Houston on June 18, 2014, after he arrived from Guatemala, which had deported him for having fraudulently secured Guatemalan citizenship.

The EPA issued Green Diesel, LLC a NOV on April 30, 2012. The NOV alleges the company generated more than 60 million invalid biomass-based diesel RINs without producing any qualifying renewable fuel and transferred the majority of these invalid RINs to others.

The EPA entered into the following administrative settlement agreements to resolve alleged civil violations arising from the use of invalid Green Diesel, LLC biomass-based diesel RINs.

Imperial Petroleum, Inc. and e-Biofuels, LLC NOV
The EPA issued e-Biofuels, LLC and Imperial Petroleum, Inc. a NOV on December 18, 2013. The NOV alleges the companies generated more than 33.5 million invalid biomass-based diesel RINs without producing any qualifying renewable fuel and transferred the majority of these invalid RINs to others.

The EPA entered into the following administrative settlement agreements to resolve alleged civil violations

arising from the use of invalid e-Biofuels, LLC biomass-based diesel RINs.

Absolute Fuels, LLC
On March 29, 2013, Jeffrey David Gunselman, the owner of Absolute Fuels, LLC, was sentenced to more than 15 years in prison for selling more than $40 million in fraudulent RINs. He was also ordered to pay more than $54.9 million in restitution, and fined $175,000. In December of 2012, Gunselman pled guilty to an indictment charging 51 counts of wire fraud, 24 counts of money laundering and four counts of making false statements in violation of the Clean Air Act.

The EPA issued Absolute Fuels, LLC a NOV on February 2, 2012. The NOV alleges the company generated over 48 million invalid biomass-based diesel RINs without producing any qualifying renewable fuel and transferred the majority of these invalid RINs to others.

The EPA entered into the following administrative settlement agreements to resolve alleged civil violations arising from the use of invalid Absolute Fuels, LLC biomass-based diesel RINs.

Clean Green Fuels, LLC
On February 22, 2013, Rodney R. Hailey, the owner of Clean Green Fuels, LLC, was sentenced to more than 12 years in prison for selling about $9 million in fraudulent RINs. He was also ordered to pay restitution of about $42 million to over 20 companies and to forfeit $9.1 million in proceeds from the sale of fraudulent RINs that he used to purchase a house, cars, and jewelry.

On June 25, 2012, Rodney R. Hailey was found guilty of wire fraud, money laundering, and violating the Clean Air Act in the United States District Court for the District of Maryland. The jury found that Mr. Hailey ran a scheme in which he and his company generated and sold over 32 million RINs, but neither produced nor imported any renewable fuel.

On November 7, 2011, the EPA issued NOVs to 24 companies who retired invalid biomass-based diesel RINs, generated by Clean Green Fuels, LLC, to comply with their renewable volume obligations (RVOs).

The EPA entered into the following administrative settlement agreements to resolve alleged civil violations arising from the use of invalid Clean Green Fuels, LLC biomass-based diesel RINs
MARPOL Annex VI and the Act To Prevent Pollution From Ships (APPS)
Enforcement of MARPOL Annex VI Resources
Annex VI MOU
Penalty Policy
Low Sulfur Fuel Oil Non-availability
Enforcement Case Resolutions
MARPOL, the International Convention for the Prevention of Pollution from Ships, is concerned with preventing marine pollution from ships. Specifically, Annex VI of MARPOL addresses air pollution from ocean-going ships. The international air pollution requirements of Annex VI establish limits on nitrogen oxides (NOx) emissions and require the use of fuel with lower sulfur content, protecting people’s health and the environment by reducing ozone-producing pollution, which can cause smog and aggravate asthma. The requirements apply to vessels operating in U.S. waters as well as ships operating within 200 nautical miles of the coast of North America, also known as the North American Emission Control Area (ECA).

On this page:

MARPOL Annex VI
Annex VI Significant Provisions
Memorandum of Understanding between EPA and Coast Guard
Health and Environmental Effects
Fuel Oil Non-availability
Penalty Policy

Protocols with the U.S. Coast Guard
Enforcement Case Resolutions
Additional Information
MARPOL Annex VI
MARPOL was developed through the International Maritime Organization (IMO), a United Nations agency that deals with maritime safety and security, as well as the prevention of marine pollution from ships. MARPOL is the main international agreement covering all types of pollution from ships.

Air pollution from ships is specifically addressed in Annex VI of the MARPOL treaty. Annex VI includes requirements applicable to the manufacture, certification, and operation of vessels and engines, as well as fuel quality used in vessels in the waters of the United States.

Annex VI Significant Provisions
Annex VI of the MARPOL treaty is the main international treaty addressing air pollution prevention requirements from ships. It was implemented in the United States through the Act to Prevent Pollution from Ships, 33 U.S.C. §§ 1901-1905 (APPS). Annex VI requirements comprise both engine-based and fuel-based standards, and apply to U.S. flagged ships wherever located and to non-U.S. flagged ships operating in U.S. waters.

Annex VI establishes:
Limits on NOx emissions from marine diesel engines with a power output of more than 130 kW. The standards apply to both main propulsion and auxiliary engines and require the engines to be operated in conformance with the Annex VI NOx emission limits.
Limits on the sulfur content of marine fuels.
Ships operating up to 200 nautical miles off of U.S. shores must meet the most advanced standards for NOx emissions and use fuel with lower sulfur content., This geographic area is designated under Annex VI as the ECA.
Each regulated diesel engine in U.S. flagged vessels must have an Engine International Air Pollution Prevention (EIAPP) certificate, issued by EPA, to document that the engine meets Annex VI NOx standards. Certain vessels are also required to have an International Air Pollution Prevention Certificate (IAPP), which is issued by the United States Coast Guard (USCG). Ship operators must also maintain records on board regarding their compliance with the emission standards, fuels requirements and other provisions of Annex VI.
U.S. flagged vessels are subject to inspection for compliance with Annex VI. Non-U.S. flagged ships are subject to examination under Port State Control while operating in U.S. waters. The USCG or EPA may bring an enforcement action for a violation.
Annex VI and APPS contain oversight and enforcement provisions and violations may result in criminal and/or civil liability. More Information on Annex VI.

Memorandum of Understanding between EPA and Coast Guard
On June 27, 2011 the EPA and USCG entered into a Memorandum of Understanding (MOU) to enforce Annex VI MARPOL. The Annex VI MOU provides that EPA and USCG will jointly and cooperatively enforce the provisions of Annex VI and APPS. Efforts to be conducted by USCG and EPA include inspections, investigations and enforcement actions if a violation is detected. The efforts to ensure compliance with Annex VI and APPS include oversight of marine fueling facilities, on board compliance inspections, and record reviews.

Press Release
Memorandum of Understanding (MOU) to enforce Annex VI MARPOL Annex VI
EPA and Coast Guard Joint Letter to Industry regarding Annex VI requirements
Health and Environmental Effects
Ocean going vessels emit significant pollution that not only effect populations living near ports and coastlines, but also those living hundreds of miles inland. Marine diesel engines generate significant emissions of NOx, fine particulate matter (PM2.5), and sulfur oxides (SOx) that contribute to nonattainment of the National Ambient Air Quality Standards for PM2.5 and ozone.

These engines also emit hydrocarbons (HC), carbon monoxide (CO), and hazardous air pollutants or air toxics that are associated with adverse health effects. Emissions from these engines also cause harm to public welfare, and contribute to visibility impairment and other detrimental environmental impacts across the United States.

Large marine diesel engines are significant contributors to our national mobile source emission inventory and their contribution is expected to grow in the future. At the current rate, NOx emissions from ships are projected to more than double to 2.1 million tons a year while annual PM2.5 emissions are expected to almost triple to 170,000 tons a year by 2030.

Low Sulfur Fuel Oil Non-availability
New Procedure For Fuel Oil Non-Availability Reports (FONARS):

Effective immediately (June 28, 2019), ship owners and operators of vessels heading to ports in the United States that are unable to purchase compliant fuel oil may satisfy the MARPOL Annex VI Regulation 18.2.4 requirement to notify the competent authority of the relevant port of destination by notifying the cognizant U.S. Coast Guard Captain of the Port (COPT). Effective June 30, 2019 the U.S. Environmental Protection Agency will stop accepting Fuel Oil Non-Availability Reports and the FOND portal will be closed. Please see the U.S. Coast Guard Marine Safety Information Bulletin for additional details.

Interim Guidance on the Non-Availability of Compliant Fuel Oil for the North American Emission Control Area (Revoked)
Penalty Policy
On January 16, 2015, EPA released a penalty policy for violations of the sulfur in fuel standard and related provisions for ships. This action reinforces the agency’s commitment to pursue violations of U.S. and international air pollution requirements by ships operating in the North American and U.S. Caribbean Sea Emissions Control Areas. The policy applies to violations of new international standards for sulfur emissions from ships that went into effect on Jan. 1, 2015, and violations under the previous standards. This policy is intended to deter potential violators, ensure that the EPA assesses fair and equitable penalties and allow for the swift resolution of claims arising from noncompliance. The EPA is committed to enforcing marine emission standards to help prevent dangerous air pollution from harming public health in American communities.

North American and U.S. Caribbean Sea Emissions Control Areas Penalty Policy for Violations by Ships of the Sulfur in Fuel Standard and Related Provisions
Protocols with the U.S. Coast Guard
EPA and the Coast Guard have established the following protocols, pursuant to the MOU, for managing enforcement of Annex VI.

Protocols for Referral of Violations
APPS Enforcement Case Resolutions
APPS Enforcement Case Resolutions

Additional Information
Enforcement of the American Innovation and Manufacturing Act of 2020
Press Releases
EPA Announces Enforcement Actions to Control Hydrofluorocarbon Imports

Hydrofluorocarbons (HFCs) are a class of potent greenhouse gases commonly used in refrigeration and air conditioning, aerosols, and foam products. Their climate impact can be hundreds to thousands of times greater than carbon dioxide. The American Innovation and Manufacturing (AIM) Act, enacted by Congress in 2020, authorizes EPA to phase down the production and consumption of HFCs by 85 percent in a stepwise manner by 2036 through an allowance allocation and trading program. The AIM Act

also directs EPA to maximize reclamation of HFCs, minimize releases of HFCs from equipment, and facilitate the transition to next-generation technologies to replace HFCs.

The HFC Allocation Rule (40 C.F.R. Part 84) implements the congressional directive to phase down HFCs. It prohibits, starting on January 1, 2022, any person from importing "bulk regulated substances, except [b]y expending, at the time of import, consumption or application-specific allowance in a quantity equal to the exchange value weighted equivalent of the regulated substances imported . . . ." 40 C.F.R. § 84.5(b). In order to protect the program's integrity, ensure mandated reductions of HFCs, and maintain a level playing field for regulated companies, EPA pursues entities that seek to import or produce HFCs without the required allowances, that submit false or misleading information, or that fail to report required information under the AIM Act and its implementing regulations. Learn more about the AIM Act.

Tips
If you have information about violations of the AIM Act and its implementing regulations, please report it: https://echo.epa.gov/report-environmental-violations.

Enforcement
HVAC Services (pdf) (202.3 KB) (Notice of Violation)
Oldach Associates LLC (pdf) (204.7 KB) (Notice of Violation)
Open Mountain Energy LLC (pdf) (202.7 KB) (Notice of Violation)
Open Mountain Energy, LLC (pdf) (535.5 KB) (Consent Agreement and Final Order)
Resonac America, Inc. (pdf) (325.5 KB) (Consent Agreement and Final Order)
Sigma Air LLC (pdf) (1.1 MB) (Expedited Settlement Agreement)
Hanwha Cimarron LLC (pdf) (2.2 MB) (Expedited Settlement Agreement)
Applicable Enforcement Policies and Information
Expedited Settlement Agreement Pilot for the HFC Allocation Regulation Import Enforcement Program (pdf) (468.8 KB)
EPA has established an expedited settlement agreement (ESA) pilot program for certain violations of the HFC Allocation Rule. Cases that meet certain criteria – violations of 40 C.F.R. § 84.5(b) that are easily detected and easily corrected, by a first-time violator, with harm that can be fully remediated, and a civil penalty of no more than $100,000, among other requirements – may be eligible for the ESA pilot program, which is intended to allow expedited resolution of claims and utilizes a standardized consent agreement and final order to resolve each case. These cases are an exception to the penalty policies described further below.

Interim Penalty Policy Applicable To Certain Illegal Imports Of Bulk Regulated Substances Under 40 C.F.R. Part 84: Phasedown Of Hydrofluorocarbons, Appendix XII to the October 25, 1991 Clean Air Act Stationary Source Penalty Policy (pdf) (445.8 KB)
EPA calculates civil penalties for settlement purposes in cases involving violations of the HFC Allocation Rule at 40 CFR Part 84 by using the framework described in its Interim Penalty Policy Applicable to Certain Illegal Imports of Bulk Regulated Substances Under 40 CFR Part 84: Phasedown of Hydrofluorocarbons, Appendix XII to the October 25, 1991, Clean Air Act Stationary Source Penalty Policy.

Memo Designating HFC Program as Nationally Managed Program (pdf) (162 KB)
The EPA designated enforcement work associated with the AIM Act to be managed by the national Office of Enforcement and Compliance Assurance (OECA) until at least January 1, 2024, when it will re-evaluate the designation. This includes enforcement of the HFC regulations under 40 C.F.R. Part 84 and the greenhouse gas reporting requirements under 40 C.F.R. Part 98.
Enforcement of the Greenhouse Gas Reporting Program: HFC Importers
Press Releases
EPA Announces Enforcement Actions to Control Hydrofluorocarbon Imports

The Greenhouse Gas Reporting Program (GHGRP) requires large greenhouse gas (GHG) emission sources, hydrofluorocarbon (HFC) importers, fuel and industrial gas suppliers, and CO2 injection sites in

the United States to report GHG data and other relevant information. The GHGRP (codified at 40 CFR Part 98) covers 41 categories of sources, and ultimately requires approximately 7,600 direct emitting facilities and 1,000 suppliers to report their emissions annually. The data gathered via the GHGRP covers 85-90 percent of U.S. GHG emissions and is reported publicly each year. It can be used to track and compare facilities' GHG emissions, identify opportunities to cut pollution, minimize wasted energy, and save money.

In order to protect the program's integrity, to ensure the public and policymakers have access to accurate data, EPA pursues enforcement actions against regulated entities who fail to properly report their GHG emissions under the GHGRP. Additionally, enforcement of the GHGRP is necessary to support the United States' bipartisan commitment to phasedown HFC production and consumption by 85% by 2036 under the American Innovation and Manufacturing Act of 2020 (AIM Act) and the Kigali Amendment to the 1987 Montreal Protocol. Accurate reporting of HFCs helps set sound policy and verify that the United States is meeting the goals of the AIM Act. Learn more about the GHGRP.

Applicable Enforcement Policies
1991 Clean Air Act Stationary Source Civil Penalty Policy

Enforcement
Artsen Chemical America, LLC (pdf) (276.2 KB) (Notice of Violation)
Artsen Chemical America, LLC (pdf) (7 MB) (Consent Agreement and Final Order)
Combs Investment Property, LP (pdf) (246.9 KB) (Notice of Violation)
Combs Investment Property, LP (pdf) (928 KB) (Consent Agreement and Final Order)
Harp USA, Inc. (pdf) (269.3 KB) (Notice of Violation)
Harp USA, Inc. (pdf) (375.3 KB) (Consent Agreement and Final Order)
Nature Gas Import and Export, Inc. (pdf) (253.2 KB) (Notice of Violation)
Nature Gas Import and Export Inc. (pdf) (406.6 KB) (Consent Agreement and Final Order)
Oldach Associates, LLC (pdf) (274.4 KB) (Notice of Violation)
Waysmos USA, Inc. (pdf) (268.7 KB) (Notice of Violation)
Waysmos USA, Inc. (pdf) (326.1 KB) (Consent Agreement and Final Order)
IGas Companies:
Assured Comfort AC Inc. (pdf) (290.4 KB) (Notice of Violation)
BMP International, Inc (pdf) (221.6 KB) (Notice of Violation)
BMP International, Inc., IGas USA, Inc., and Scales N Stuff, Inc (pdf) (5.8 MB) (Consent Agreement and Final Order)
BMP USA, Inc (pdf) (217.8 KB) (Notice of Violation)
Cool Master USA LLC (pdf) (252.7 KB) (Notice of Violation)
Golden G Imports LLC (pdf) (253.1 KB) (Notice of Violation)
LM Supply (pdf) (212 KB) (Notice of Violation)
Scales N Stuff, Inc. (pdf) (260.6 KB) (Notice of Violation)
Clean Air Act (CAA) Compliance Monitoring
Resources and Guidance Documents
Compliance Assistance Resources and Guidance Documents
Compliance Monitoring Resources and Guidance Documents
State Oversight Resources and Guidance Documents
EPA works with its federal, state and tribal regulatory partners to monitor and ensure compliance with clean air laws and regulations in order to protect human health and the environment. The Clean Air Act is the primary federal law governing air pollution.

On this page:

Compliance Monitoring Strategy
Major Program Areas for Compliance Monitoring under the Clean Air Act
Acid Rain Inspection and Trading Program
Applicability Determination Index (ADI)

Asbestos Demolition and Renovation
Mobile Sources
National Emission Standards for Hazardous Air Pollutants (NESHAP) Air Toxics
New Source Review/Prevention of Significant Deterioration (NSR/PSD)
Prevention of Accidental Releases
Standards of Performance for New Stationary Sources
Stratospheric Ozone Protection including chlorofluorocarbon (CFSs) and other Ozone-Depleting Substances (ODS)
Wood Heaters
Stack Testing
Risk Management Plan
Area Source Rule
Compliance Monitoring Strategy
EPA's CAA Stationary Source Compliance Monitoring Strategy (CMS) provides guidance to EPA and authorized states with respect to administering and implementing an Agency program for CAA compliance monitoring.

EPA and authorized states make decisions about compliance monitoring based on:
implementing an EPA or state plan, or
"for cause" - that is:
as a result of tips complaints, or
as a follow-up to previous monitoring activities.
Major Program Areas for Compliance Monitoring Under the Clean Air Act
EPA monitors compliance of regulated operations (facilities, activities, and entities) pursuant to CAA in several major program areas:

Acid Rain Inspection and Trading Program
The goal of the program is to achieve significant environmental and public health benefits through reductions in emissions of sulfur dioxide (SO2) and nitrogen oxides (NOx), the primary causes of acid rain. To achieve this goal at the lowest cost to society, the program employs both traditional and innovative, market-based approaches for controlling air pollution. In addition, the program encourages energy efficiency and pollution prevention.

See Acid Rain Program
Applicability Determination Index (ADI)
The general provisions of 40 CFR Parts 60 and 61 allow a source owner or operator to:

request a determination of whether a rule applies to them (applicability determinations); or
seek permission to use monitoring or record keeping which is different from the promulgated standards (alternative monitoring).
To ensure national consistency in implementing the NSPS and NESHAP programs, EPA maintains a compilation of such letters and memoranda since they were first issued. This compilation is currently available on the Applicability Determination Index (ADI) database Web site. The ADI also contains "regulatory interpretations" which are written responses that apply to the broad range of NSPS and NESHAP regulatory requirements as they pertain to a whole source category. The ADI is a computerized database which allows users to search by date, office of issuance, subpart, citation, control number, or keyword searches.

Asbestos Demolition and Renovation
The Asbestos National Emission Standards for Hazardous Air Pollutants (NESHAP) program focuses on renovation and demolition activities and waste disposal sites. It applies to asbestos generation during mining, manufacturing/fabricating, renovation and demolition and waste disposal.

EPA, state and local air program inspectors inspect renovation and demolition sites to determine compliance with the Asbestos National Emission Standards for Hazardous Air Pollutants (NESHAP)

Mobile Sources
EPA's Clean Air Act Mobile Sources Program promulgates emissions standards for virtually all motor vehicle and non-road vehicles and equipment and the fuels that are used in them. The mobile source standards apply to vehicles and engines, ranging from huge engines that power large marine vessels and locomotives, to small engines used in hand-held lawn and garden equipment. The fuels standards apply to all gasoline and diesel fuel used nationwide, including fuel that is produced at domestic refineries and fuel that is imported.

National Emission Standards for Hazardous Air Pollutants (NESHAP) Air Toxics
Section 112 of the CAA requires the EPA to establish, among other things, standards for emissions of hazardous air pollutants (HAP) for specific source categories. These standards require the maximum degree of reduction of HAPs at the time the standard is established, commonly referred to as "maximum achievable control technology" or "MACT." The National Emission Standards for Hazardous Air Pollutants (NESHAP) are found in 40 CFR Parts 61 and 63. The NESHAPS apply to both new and existing sources at the time that EPA establishes the standards. This applicability is somewhat different from NSR and NSPS for existing units, which is dependent on an action in the future.

New Source Review/Prevention of Significant Deterioration (NSR/PSD)
Sections 165 and 173 of the CAA and their implementing regulations require new or modified major sources that increase regulated air pollutants by designated thresholds to meet specific permitting requirements and install Best Available Control Technology (BACT) or Lowest Achievable Emission Rate (LAER) technology. Affected sources must also demonstrate that operation will not cause or contribute to a violation of the National Ambient Air Quality Standards (NAAQS). These controls are "technology-forcing" in that the best controls keep improving, so what represents BACT/LAER today may not be BACT/LAER in the future.

See NSR/PSD Enforcement
Prevention of Accidental Releases
Section 112(r) of the CAA also imposes a general duty on owners and operators of stationary sources producing, processing and storing extremely hazardous substances to:

identify hazards associated with an accidental release,
design and maintain a safe facility, and
minimize consequences of accidental releases that occur.
Section 112(r) requires EPA to establish regulations to prevent the accidental release of HAPs.

See Clean Air Act Section 112(r): Accidental Release Prevention / Risk Management Plan Rule Fact Sheet
Standards of Performance for New Stationary Sources
Section 111 of the CAA requires the EPA to develop Standards of Performance for New Stationary Sources which apply specific technology or limits to categories of stationary sources that cause or contribute significantly to air pollution. These standards are referred to as New Source Performance Standards (NSPS). The NSPS apply to new, modified, or reconstructed affected facilities in specific source categories such as manufacturers of glass, cement, rubber tires and wool fiberglass. As of 2012, EPA had developed 94 NSPS. EPA can delegate the responsibility to implement and enforce the NSPS (or a subset) to its partners (states, local, territorial, or tribal), however, even when delegated to the states, EPA retains authority to implement and enforce the NSPS.

Stratospheric Ozone Protection including chlorofluorocarbon (CFCs) and other Ozone-Depleting Substances (ODS)
The CAA Section 601-618, requires EPA to develop programs that protect the stratospheric ozone layer. The stratosphere, or "good" ozone layer, extends upward from about 6 to 30 miles and protects life on Earth from the sun's harmful ultraviolet (UV) rays. This natural shield has been gradually depleted by man-made chemicals like chlorofluorocarbons (CFCs) and hydro-chlorofluorocarbons (HCFCs). A

depleted ozone shield allows more UV radiation to reach the ground, leading to more cases of skin cancer, cataracts, and other health and environmental problems. EPA's regulatory programs that protect the ozone layer include:

phase-out of the production and import of ozone-depleting substances,
requirements for the service and disposal of stationary refrigeration and air-conditioning,
service of motor vehicle air-conditioning, and
labeling of products containing or manufactured with ozone depleting substances.
See Ozone Layer Protection

Wood Heaters
Residential wood heaters, which include wood stoves, contribute significantly to particulate air pollution. EPA has regulated wood heater particulate emissions since 1988. Wood heater model lines that are in compliance with the rule are referred to as EPA-certified wood heaters.

EPA's certification process requires manufacturers to verify that each of their wood heater model lines meet a specific particulate emission limit by undergoing emission testing at an EPA accredited laboratory.

Stack Testing
Beyond the CAA CMS, the CAA National Stack Testing Guidance provides additional guidance on implementing stack testing, one of the most important tools for determining whether a facility has the ability to comply with the CAA. The Stack Testing Guidance addresses legal and policy issues associated with the conduct of stack tests and the interpretation of test results.

Risk Management Plan
The Risk Management Plan Rule (RMP Rule) provides guidance for chemical accident prevention at facilities using extremely hazardous substances. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program.

A summary of the facility's Risk Management Program must be submitted to EPA and must be revised and resubmitted every five years. The Guidance for Conducting Risk Management Program Inspections under Clean Air Act Section 112(r) provides information on conducting on-site compliance evaluations at RMP facilities.

Area Source Rule
The Area Source Rule Implementation Guidance provides guidance regarding the implementation of the CAA Area Source Rules.
Resources and Guidance Documents for Compliance Assistance
On this page:
Air
Cross-Cutting
Emergencies
Land and Cleanup
Lead
Pesticides
Sector-Based
Small Business
Toxic Substances
Waste
Water
The compliance assistance program provides businesses, federal facilities, local governments and tribes with tools to help meet environmental regulatory requirements. Compliance assistance tools and methods include one-to-one counseling, online resource centers, fact sheets, guides and training.

Air
Applicability Determination Index - a database containing EPA memoranda on applicability and compliance issues associated with the New Source Performance Standards (NSPS) and National Emissions Standards for Hazardous Air Pollutants and chlorofluorocarbons (CFC).
Importing Vehicles and Engines into the U.S. – Provides information on EPA's importation regulations.
Motor Vehicle Air Conditioning - Provides fact sheets describing and recent regulations related to Section 609 of the Clean Air Act as well as links to other related topics. Regulations under Section 609 establish standards and requirements regarding the servicing of motor vehicle air conditioners (MVAC).
National Emission Standards for Hazardous Air Pollutants (NESHAP) - A list of the NESHAP standard source categories including implementation information and EPA contacts.
Resources to help you comply with Clean Air Act (CAA) Area Source Rules - "Area" sources are sources that emit less than 10 tons annually of a single hazardous air pollutant or less than 25 tons annually of a combination of hazardous air pollutants. This links provides resources to help you comply with the National Emission Standards for Hazardous Air Pollutants (NESHAP) Rules applicable to area sources.
Stationary Refrigeration and Air-Conditioning – Provides fact sheets describing Section 608 of the Clean Air Act and regulations related to Section 608. Regulations under Section 608 minimize the emission of refrigerants by maximizing the recovery and recycling of such substances during the service, repair, or disposal of refrigeration and air-conditioning equipment (i.e., appliances).
Cross-Cutting
Financing for Environmental Compliance
Pollution Prevention Resource Exchange (P2RX) – Resources to help businesses advance pollution prevention practices. Visit the Topic Hubs for pollution prevention information and expertise for specific industry sectors.
Emergencies
Emergency Response - information to help the regulated community better understand the regulations and to prevent, prepare for, and respond to environmental emergencies.
Land and Cleanup
Meeting Underground Storage Tank (UST) Requirements - Information to help UST owners and operators meet federal UST regulatory requirements.
Superfund Policies and Guidance - A collection of factsheets and guides describing the Superfund program's process and procedures.
Lead
Lead Policy and guidance - Resources to help you comply with regulations regarding lead in paint, water, air and waste.
Renovation, Repair and Painting Program - Compliance information for firms performing renovation, repair, and painting projects that disturb lead-based paint in homes, child care facilities and pre-schools built before 1978
Pesticides
Pesticide Registration Manual - A resource for companies and individuals who want to have their pesticide products registered for sale in the United States.
Sector-Based
Compliance Assistance Centers: Easy to understand compliance information targeted to the following sectors and environmental topics: agriculture; automotive service and repair; automotive recycling, chemical manufacturers; colleges and universities; construction; federal facilities; food processing; health care; local governments, metal finishing; paints and coatings; printers; ports; transportation; tribes; and US/Mexico/Canada border environmental issues.
Environmental Laws Applicable to Construction and Operation of Biodiesel Production - A road map of information on federal environmental programs and federal, state, and local agency roles as they apply to the design, building, and operating biodiesel manufacturing facilities.
Mining and Mineral Processing Compliance Assistance Resources for the Gold and Copper Industries
Small Business
Small Business Compliance
Small Entity Compliance Guides
Office of Small Business Programs eNews

Toxic Substances
New Chemicals Program Policies - Information on how the premanufacture notice (PMN) process works and on related programs
Sustainable Futures Initiative - shows companies how to use the new chemicals program's computer models to screen PMNs or exemption notices before they submit them to EPA.
Guidance Materials for Premanufacture Notice (PMN) Submitters
TSCA/RRP Inspection Information Sheet: Confidential Business Information
TSCA/RRP Information Sheet: Access to Private Property
Compliance Advisory: Managing Asbestos in Schools
Waste
Leak Detection and Repair (LDAR): A Best Practices Guide - is intended for use by regulated entities, such as petroleum refineries and chemical manufacturing facilities, as well as compliance inspectors. The guide provides a set of best practices that can be used to implement an effective/model LDAR program.
Water
Compliance Guidance under the Safe Drinking Water Act: Provide links to guidance related to the implementation of the rules and regulations under the Safe Drinking Water Act.
National Pollutant Discharge Elimination System (NPDES) Permit Program Information and Compliance Resources: Search NPDES publications by keyword or program area to find factsheets, permit applications and other resources specific to your activities.
Safe Drinking Water Act (SDWA): Consumer Confidence Reports (CCR) Compliance Help: Drinking water system owners and operators can use the materials and tools provided to assist them in complying with requirements of the Consumer Confidence Report (CCR) Rule.
Troubleshooting Manual for Small, Facultative, Partial-Mix Aerated, and Complete-Mix Aerated Wastewater Lagoons (pdf) (1.6 MB)
Intended for use by operators at small wastewater treatment plant (WWTP) lagoons, also called wastewater stabilization ponds. The Manual is designed to help lagoon operators identify causes of lagoon upset conditions and the corresponding troubleshooting steps.
Clean Air Act Stationary Source Compliance Monitoring Strategy
The Clean Air Act Stationary Source Compliance Monitoring Strategy:

provides national consistency in developing stationary source air compliance monitoring programs, while at the same time provide states/locals with flexibility to address local air pollution and compliance concerns.
improves communication between states, tribes, and local governments and regions on stationary source air compliance monitoring programs, and enhance EPA oversight of these programs.
provides a framework for developing stationary source air compliance monitoring programs that focuses on achieving measurable environmental results.
provides a mechanism for recognizing and utilizing the wide range of tools available for evaluating and determining compliance
establishes a consistent level of evaluation coverage and environmental and public health protection by all delegated agencies, including EPA where EPA has direct implementation authority.
This guidance is implemented through the annual National Program Managers Guidance which defines program priorities, implementation strategies and regional performance measures. Regional performance measures are negotiated and set with the regions through the Annual Commitment System (ACS) measures.

Clean Air Act Stationary Source Compliance Monitoring Strategy (pdf) (516.5 KB, October 2016)
Acid Rain Program
On this page:

Overview
SO2 Reductions
NOX Reductions
Applicability Determinations

Acid Rain Program Regulations
Overview
Landscape image at sunset.
The Acid Rain Program (ARP), established under Title IV -Acid Deposition Control (pdf) (156.3 KB) requires major emission reductions of sulfur dioxide (SO_2) and nitrogen oxides (NO_x), the primary precursors of acid rain, from the power sector. The SO_2 program sets a permanent cap on the total amount of SO_2 that may be emitted by electric generating units (EGUs) in the contiguous United States. The program was phased in, with the final 2010 SO_2 cap set at 8.95 million tons, a level of about one-half of the emissions from the power sector in 1980. NO_x reductions under the ARP are achieved through a program that applies to a subset of coal-fired EGUs and is closer to a traditional, rate-based regulatory system. Since the program began in 1995, the ARP has achieved significant emission reductions. See our annual progress reports for more information on the progress of the ARP.

The ARP was the first national cap and trade program in the country and it introduced a system of allowance trading that uses market-based incentives to reduce pollution. Reducing emissions using a market-based system provides regulated sources with the flexibility to select the most cost-effective approach to reduce emissions, and has proven to be a highly effective way to achieve emission reductions, meet environmental goals, and improve human health.

Permit applications for the Acid Rain Program are available here.

Learn more about:
Acid Rain Program Results
Clean Air Markets Progress Report
Allowances and allowance trading
Continuous Emissions Monitoring systems and emissions monitoring
Emissions and allowance data collected
Additional Reading
The following links exit the site

Plain English Guide to the Clean Air Act
Lessons Learned from Three Decades of Experience with Cap-and-Trade (PDF)(November 2015)
The SO_2 Allowance Trading System and the Clean Air Act Amendments of 1990: Reflections on Twenty Years of Policy Innovation (PDF)(January 2012)

SO_2 Reductions
Photo showing emissions from smokestack.
Title IV of the Clean Air Act set a goal of reducing annual SO_2 emissions by 10 million tons below 1980 levels by means of a two-phase cap and trade program for fossil fuel-fired power plants:

Phase I (began in 1995)
Affected 263 units at 110 mostly coal-burning electric utility plants located in 21 eastern and midwestern states. An additional 182 units joined Phase I of the program as substitution or compensating units, bringing the total number of Phase I affected units to 445.
Phase II (began in 2000)
Added more units to the Acid Rain Program, which with Phase II encompasses over 2,000 units in all. Units that were included for the first time in Phase II included smaller units fired by coal, oil, and gas. The program affects utility units serving generators with an output capacity of greater than 25 megawatts and all new utility units.
Reductions in SO_2 emissions are facilitated through a market-based cap and trade system. The allowance trading system includes low-cost rules of exchange that tailor EPA's administrative role and facilitate allowance trading as a viable compliance strategy for reducing SO_2.

Under this system, EPA sets a cap on overall emissions. SO_2 allowances are then allocated to affected units serving generators greater than 25 megawatts. All new units based on their historic fuel

consumption and specific emission rates. Each allowance permits a unit to emit one ton of SO2.

Sources may choose among several options to reduce emissions. Sources may sell or bank (save) excess allowances if they reduce emissions and have more than they need, or purchase allowances if they are unable to keep emissions below their allocated level. At the end of the year, each source must hold sufficient allowances to cover its SO2 emissions (each allowance represents one ton of emissions).

NOx Reductions

Photo of bright sun and clouds.

The Acid Rain Program called for a two million ton reduction in NOx emissions below 1980 levels by 2000. A significant portion of these reductions have been achieved by coal-fired utility boilers that have installed low-NOx burner technologies.

As with the SO2 emission reduction requirements, the NOx program was implemented in two phases, beginning in 1996 and 2000:

Phase I ran from 1996 to 1999 and covered Group 1 Boilers.
Phase II began in 2000 and covers Group 1 and Group 2 Boilers
(For definitions of the types of boilers covered under the phases of the ARP, visit NOx Reductions under Phase II)
The NOx program embodies many of the same principles of the SO2 trading program, in that it also has a results-oriented approach, flexibility in the method to achieve emission reductions, and program integrity through measurement of the emissions. However, it does not "cap" NOx emissions as the SO2 program does, nor does it utilize an allowance trading system.

Applicability Determinations

An applicability determination is a formal EPA response to questions about how regulations apply to a particular situation. Below are EPA’s responses to written requests for applicability determinations under 40 CFR 72.6. They illustrate the facts EPA considers when deciding how Acid Rain Program regulations (codified at 40 CFR 72.6) apply. The references after each description highlight the key provisions applied in each response. Each determination is based on application of 40 CFR 72.6 to the specific facts in each case and may not apply to other cases.

Acid Rain Program Applicability Determinations
Acid Rain Program 1994 Applicability Determinations
Acid Rain Program 1995 Applicability Determinations
Acid Rain Program 1996 Applicability Determinations
Acid Rain Program 1997 Applicability Determinations
Acid Rain Program 1998 Applicability Determinations
Acid Rain Program 1999 Applicability Determinations
Acid Rain Program 2000 Applicability Determinations
Acid Rain Program 2001 Applicability Determinations
Acid Rain Program 2002 Applicability Determinations
Acid Rain Program 2003 Applicability Determinations
Acid Rain Program 2004 Applicability Determinations
Acid Rain Program 2006 Applicability Determinations
Acid Rain Program 2008 Applicability Determinations
Acid Rain Program 2009 Applicability Determinations
Acid Rain Program 2011 Applicability Determinations
Acid Rain Program 2021 Applicability Determinations
Acid Rain Program Regulations
Read the Acid Rain Program regulations, which are contained in 40 CFR Parts 72 through 78.

Table of Contents 40 CFR Parts 72 – 78
40 CFR Part 72: Permits
40 CFR Part 73: Allowance System
40 CFR Part 74: Opt-In
40 CFR Part 75: Continuous Emissions Monitoring
40 CFR Part 76: NOx
40 CFR Part 77: Excess Emissions
40 CFR Part 78: Appeal Procedures
Next, learn more about the results of the Acid Rain Program.

Or, learn more about:

Acid Rain
Clean Air Markets
Clean Air Act
Clean Air Status and Trends Network (CASTNET)
National Atmospheric Deposition Program (NADP)
Long-Term Monitoring (LTM) Network
Asbestos Demolition and Renovation Compliance Monitoring
Related Information
Asbestos
EPA, state and local air program inspectors inspect renovation and demolition sites to determine compliance with the Asbestos National Emission Standards for Hazardous Air Pollutants (NESHAP), 40 CFR sections 61.140 through 61.157.

Inspectors:
review notification documents
inspect job sites
collect physical evidence necessary to document compliance or noncompliance
The Asbestos NESHAP program focuses on renovation and demolition activities and waste disposal sites. It applies to asbestos generation during mining, manufacturing/fabricating, renovation and demolition and waste disposal.

Depending upon the type of operation, owners and/or operators may be required to:
notify the appropriate state or local air program authority
conduct a thorough self-inspection
use renovation and/or demolition techniques that do not cause visible emissions
Regulated material removed during a renovation or demolition must be managed and buried in an approved landfill.

Questions and answers about the asbestos NESHAP.
Mobile Sources Compliance Monitoring Program
Compliance with the vehicle and engine emissions standards is the responsibility of the vehicle or engine manufacturer. Vehicles and engines used in the United States must be manufactured under the terms of an emissions certificate of conformity issued by EPA. Imported vehicles and engines must be EPA-certified, with certain very limited exceptions. The removal or disabling of vehicle or engine emission controls by any person is prohibited.

Refiners and fuel importers have the primary responsibility of compliance with the motor vehicle fuels standards. Parties in the fuel distribution system are responsible for ensuring that motor vehicle fuel is not contaminated and is used in the proper locations and times. For example, more stringent gasoline standards apply during the summer high ozone season and to reformulated gasoline used in certain ozone nonattainment areas. Vehicles and equipment may only use fuels designated and registered for that type of vehicle or equipment.

Compliance Monitoring

EPA reviews applications for emissions certificates from vehicle and engine manufacturers, and conducts emissions testing of vehicles and engines on the production line and in-use following introduction into commerce. EPA works in conjunction with the United States Customs and Border Protection to ensure that imported vehicles and engines are certified. In addition, light-duty vehicle emissions are checked periodically through state-implemented “inspection and maintenance” programs in most ozone nonattainment areas. EPA conducts inspections of:

vehicle and engine manufacturing facilities,
emission laboratories,
dealers of vehicles and mobile engines and
suppliers and installers of vehicle and engine parts.

EPA conducts fuels inspections primarily at:

retail outlets
terminals
refiners
importers
fuels testing laboratories

Refiners and importers are required to test all their gasoline and submit reports to EPA. In addition, refiners and importers are required to use independent laboratories to conduct quality assurance testing of reformulated gasoline when it is produced and quality surveys of reformulated gasoline when it is sold at retail outlets, and to submit reports to EPA of this testing.

National Emission Standards for Hazardous Air Pollutants Compliance Monitoring

National Emission Standards for Hazardous Air Pollutants (NESHAP) are stationary source standards for hazardous air pollutants. Hazardous air pollutants (HAPs) are those pollutants that are known or suspected to cause cancer or other serious health effects, such as reproductive effects or birth defects, or adverse environmental effects.

EPA develops national enforcement initiatives that focus on significant environmental risks and noncompliance patterns. For Fiscal Years 2014 to 2016, the Cutting Hazardous Air Pollutants National Initiatives Strategy focuses on categories of sources that emit HAPs.

Compliance Monitoring

EPA conducts inspections of facilities subject to the regulations to determine compliance. EPA inspections include:

Reviewing reports and records
Interviewing facility personnel knowledgeable of the facility
Inspecting the processes that have emissions points subject to the standard sampling wastewater discharges, if applicable
Inspecting against design and work practice standards
Reviewing leak detection and repair methods

Sources subject to NESHAPs are required to perform an initial performance test to demonstrate compliance. To demonstrate continuous compliance, sources are generally required to monitor control device operating parameters which are established during the initial performance test. Sources may also be required to install and operate continuous emission monitors to demonstrate compliance. Consistent with EPA’s Clean Air Act Stationary Source Compliance Monitoring Strategy, NESHAP sources that meet the Clean Air Act definition of “major source” generally receive a full compliance evaluation by the state or regional office at least once every two years.

EPA issued National Stack Testing Guidance to address issues associated with the conduct of stack tests, such as:

Issuance of waivers
Notification requirements
Observation of tests

Representative performance
Stoppages and postponement of tests
The guidance is not a regulation, nor is it intended to change any underlying regulatory requirements specified in individual NSPS, NESHAP, MACT, state or local regulations. The guidance merely documents and clarifies existing regulatory requirements and Agency guidance on stack testing.

For additional information on NESHAPs, MACT standards and hazardous air pollutants, see the EPA's Hazardous Air Pollutants Web site.
Air Enforcement
Información relacionada disponible en español (Related Information in Spanish)

EPA regulates emissions of air pollution from mobile and stationary sources under the Clean Air Act (CAA). For more on EPA's enforcement process, go to Basics on enforcement.

On this page:

Stationary Sources
New Source Review and Prevention of Significant Deterioration
Air Toxics
New Source Performance Standards
Mobile Sources
New Vehicles and Engines
Fuels
Ocean-Going Vessels and Large Ships
Hydrofluorocarbon Enforcement
American Innovation and Manufacturing Act 2020
Clean Air Act, Greenhouse Gas Reporting Program: HFC Importers
Compliance Monitoring and Assistance
On other pages:

Air Enforcement Policy, Guidance and Publications
Search for air cases and settlements
Find air enforcement data
Stationary Sources
Stationary sources include facilities such as factories and chemical plants, which must install pollution control equipment and meet specific emission limits under the CAA.

New Source Review (NSR) and Prevention of Significant Deterioration (PSD). These requirements require certain large industrial facilities to install state-of-the-art air pollution controls when they build new facilities or make modifications to existing facilities. Failure to install controls results in emission of pollutants that can degrade air quality and harm public health. Learn more about New Source Review.

Reducing air pollution from the largest source of emissions is one of EPA's national enforcement initiatives. EPA is taking action to eliminate or minimize emissions from coal-fired power, acid, glass and cement plants and petroleum refineries.

Coal-fired power plants. There are approximately 1,100 coal-fired electric utility units in the United States with an overall capacity of 340,000 megawatts. This sector emits approximately two-thirds of the nation's emissions inventory of sulfur dioxide (SO_2) and approximately one-third of the nitrogen oxides (NO_x). Investigations of this sector have identified a high rate of noncompliance with NSR/PSD when old plants are renovated or upgraded. Learn more about Sulfur Dioxide and Nitrogen Dioxide.

Plants that manufacture sulfuric and nitric acid, which are used in fertilizer, chemical and explosive production. Acid production plants emit many thousands of tons of nitrogen oxides, sulfur dioxide, and sulfuric acid mist each year. EPA investigations have found a high rate of non-compliance with NSR/PSD

in connection with plant expansions and process changes.

Glass manufacturing plants. There are approximately 125 large glass plants operating in the United States. These plants emit approximately 200,000 tons per year of NOx, SO2 and particulate matter (PM). Investigation of this sector has shown that there have been a significant number of plant expansions but few applications for the installation of pollution controls required under NSR/PSD.

Cement manufacturing plants. Cement manufacturing plants are the third largest industrial source of air pollution, emitting more than 500,000 tons per year of SO2, NOx and carbon monoxide. EPA determined that many cement manufacturers made changes to existing facilities without applying for and obtaining pre-construction permits. The pollution can contribute to respiratory illness and heart disease, the formation of acid rain, reduced visibility, and can be transported over long distances before falling on land or water.

Petroleum refineries. Since 2000, EPA has engaged in an enforcement initiative specifically focused on addressing air emissions from petroleum refineries and has reached innovative, multi-issue, multi-facility settlement negotiations with major petroleum refining companies. These settlements have resulted in significant emission reductions of NOx, SO2, benzene, volatile organic compounds and PM.
Air Toxics. National Emission Standard for Hazardous Air Pollutants (NESHAP). Leaks, flares, and excess emissions from refineries, chemical plants and other industries can contain hazardous air pollutants (HAPs) that are known or suspected to cause cancer, birth defects, and seriously impact the environment. Leaking equipment is the largest source of HAP emissions from petroleum refineries and chemical manufacturing facilities. Cutting emissions of air toxics EPA's National Enforcement and Compliance Initiatives.

New Source Performance Standards (NSPS). Newly constructed sources or those that are modified or reconstructed must follow these standards to control excess emissions of NOx, SO2, and particulate matter.

Mobile sources
Motor vehicle engines and off-road vehicles and engines must meet CAA emissions standards. These standards apply to cars, trucks, buses, recreational vehicles and engines, generators, farm and construction machines, lawn and garden equipment, marine engines and locomotives. In addition, the composition of fuels used to operate mobile sources, including gasoline, diesel, ethanol, biodiesel and blends of these fuels, are also regulated under the CAA. Learn more about transportation and air quality.

New vehicles and engines must have an EPA-issued certificate of conformity before import or entry into the United States demonstrating that the engine or vehicle conforms to all applicable emissions requirements. The CAA also requires emissions labels for certified vehicles and engines. See examples of cases and settlements related to vehicles and engines.

Illegal imports. Since 2008, there has been a steady flow of illegally imported uncertified motorcycles, equipment containing small gasoline-powered engines (e.g., generators, mowers, chainsaws, etc.), and recreational vehicles. Uncertified vehicles and engines can emit harmful air pollutants at 30% or more above allowable standards. EPA is working with U.S. Customs to stop illegal vehicles and engines at the ports and requiring exportation. Learn more about importing vehicles and engines.

Defeat devices. It is a violation of the CAA to manufacture, sell, or install a part for a motor vehicle that bypasses, defeats, or renders inoperative any emission control device. For example, computer software that alters diesel fuel injection timing is a defeat device. Defeat devices, which are often sold to enhance engine performance, work by disabling a vehicle's emission controls, causing air pollution. As a result of EPA enforcement, some of the largest manufacturers of defeat devices have agreed to pay penalties and stop the sale of defeat devices.

Tampering. The CAA prohibits anyone from tampering with an emission control device on a motor vehicle

by removing it or making it inoperable prior to or after the sale or delivery to the buyer. A vehicle's emission control system is designed to limit emissions of harmful pollutants from vehicles or engines. EPA works with manufacturers to ensure that they design their components with tamper-proofing, addresses trade groups to educate mechanics about the importance of maintaining the emission control systems, and prosecutes cases where significant or imminent harm is occurring.

Fuels. The CAA regulates fuel used in motor vehicles and non-road equipment. Clean fuels help reduce harmful emissions from a wide variety of motor vehicles, engines, and equipment.

Standards. EPA regulations require that all fuel and fuel additives produced, imported and sold in the United States meet certain standards. EPA conducts targeted and random inspections to evaluate compliance with these standards and brings enforcement actions against parties that violate these standards to reduce harmful emissions caused by fuel that does not meet the applicable standards. See diesel and gasoline fuels enforcement actions.

Renewable Fuels. Transportation fuel sold in the U.S. must contain a minimum volume of renewable fuel to reduce greenhouse gas emissions and the use of petroleum fuels. Renewable fuel producers and importers generate renewable identification number (RINs) for each gallon of renewable fuel. Refiners and importers must acquire RINs to show compliance with the standard. EPA investigates and pursues enforcement actions against anyone generating, transferring and using invalid RINs. Learn more about renewable fuels. See Renewable Fuels Standards enforcement actions.

Fuel Waivers. EPA, with the concurrence of the U.S. Department of Energy (DOE), has the authority to temporarily waive fuel or fuel additive requirements in emergency situations when the fuel supply suffers major disruptions. This helps ensure that an adequate supply of fuel is available, particularly for emergency vehicle needs. In such circumstances EPA works closely with state and other federal agencies to determine an appropriate response.
Ocean-Going Vessels and Large Ships. The CAA regulates new and in-use U.S. flagged compression-ignition marine engines (also called marine diesel engines), vessels containing such engines, emissions from such engines, as well as the sulfur content of marine fuel. EPA’s strategy to address emissions from all ships that affect U.S. air quality includes enforcement of CAA standards, as well as implementation and enforcement of the international standards for marine engines and their fuels contained in Annex VI to the International Convention on the Prevention of Pollution from Ships (a treaty called MARPOL) under the authority of the Act to Prevent Pollution from Ships (APPS).

Enforcement of MARPOL Annex VI. The EPA and the U.S. Coast Guard (USCG) agreed to jointly enforce U.S. and International air pollution requirements for vessels operating in U.S. waters. Learn more about MARPOL Annex VI.

Engine and Fuel Standards. EPA regulates air pollution from various marine diesel engines. EPA has adopted standards that apply to Category 3 (C3) engines installed on U.S. vessels, such as large ships and ocean vessels, and to marine diesel fuels produced and distributed in the United States. Learn more about other marine diesel engines.

Hydrofluorocarbon Enforcement
American Innovation and Manufacturing Act of 2020. The American Innovation and Manufacturing Act (AIM Act), enacted by Congress in 2020, authorizes EPA to phase down the production and consumption of hydrofluorocarbons (HFCs) by 85 percent in a stepwise manner by 2036 through an allowance allocation and trading program. The AIM Act also directs EPA to maximize reclamation of HFCs, minimize releases of HFCs from equipment, and facilitate the transition to next-generation technologies to replace HFCs. HFCs are potent greenhouse gases, with a climate impact that can be hundreds to thousands of times greater than carbon dioxide. EPA enforces the AIM Act and its regulations against violators who seek to produce or import HFCs without the required allowances, who submit false or misleading information, or who fail to report required information. Learn more about the AIM Act.

Clean Air Act, Greenhouse Gas Reporting Program: HFC Importers. Data on greenhouse gas (GHG) emissions helps the public and policymakers understand the sources and magnitude of emissions contributing to climate change. There are approximately 9,000 large greenhouse gas emission sources, fuel and industrial gas suppliers, and CO2 injection sites in the United States, which together account for 85 to 90 percent of U.S. GHG emissions. These sources and hydrofluorocarbon importers must report their GHG data and other relevant information under the Greenhouse Gas Reporting Program (GHGRP) each year. EPA pursues enforcement actions against sources that fail to properly report their GHG emissions. Learn more about the GHGRP.

Compliance Monitoring and Assistance

EPA works with its federal, state and tribal regulatory partners through a comprehensive Clean Air Act compliance monitoring program. Compliance monitoring ensures that the regulated community obeys environmental laws/regulations through on-site inspections and record reviews that can lead to enforcement when necessary. The CAA compliance assistance program provides businesses, federal facilities, local governments and tribes with tools to help meet environmental regulatory requirements.

Fact Sheet: Clean Air Act Section 112(r): Accidental Release Prevention / Risk Management Plan Rule

This factsheet describes how EPA is required to publish regulations and guidance for chemical accident prevention at facilities that pose the greatest risk of harm from accidental releases. The fact sheet has also been translated to Spanish and Vietnamese.

Fact Sheet: Clean Air Act Section 112(r): Accidental Release Prevention / Risk Management Plan Rule (pdf) (123.7 KB, April 2020)

[Spanish] Fact Sheet: Clean Air Act Section 112(r): Accidental Release Prevention / Risk Management Plan Rule (pdf) (146 KB)

[Vietnamese] Fact Sheet: Clean Air Act Section 112(r): Accidental Release Prevention / Risk Management Plan Rule (pdf) (181.6 KB)

Demonstrating Compliance with New Source Performance Standards and State Implementation Plans

Section 111 of the Clean Air Act authorizes the EPA to develop technology based standards which apply to specific categories of stationary sources. These standards are referred to as New Source Performance Standards (NSPS) and are found in 40 CFR Part 60. The NSPS apply to new, modified and reconstructed affected facilities in specific source categories such as manufacturers of glass, cement, rubber tires and wool fiberglass. As of 2013, there are approximately 90 NSPS.

The NSPS are developed and implemented by EPA and are delegated to the states. However, even when delegated to the states, EPA retains authority to implement and enforce the NSPS.

Compliance Monitoring

Sources subject to NSPS are required to perform an initial performance test to demonstrate compliance. To demonstrate continuous compliance, some NSPS require sources to utilize continuous emission monitors. Sources may also be required to monitor control device operating parameters to demonstrate continuous compliance. Consistent with EPA’s Clean Air Act Stationary Source Compliance Monitoring Strategy, NSPS sources that meet the Clean Air Act definition of “major source” generally receive a full compliance evaluation by the state at least once every two years.

In general, EPA measures NSPS compliance by requiring affected facilities to conduct initial performance tests. Initial performance tests are followed by required continuous monitoring of operating parameters and/or direct monitoring of the regulated emissions.

Also, the National Stack Testing Guidance focuses on those issues associated with the conduct of stack tests and the interpretation of the test results.

State Implementation Plans

Section 110 of the Clean Air Act requires states to submit to EPA State Implementation Plans (SIPs) which provide for the implementation, attainment, maintenance and enforcement of the National Ambient Air Quality Standards.

States have the primary role for enforcing SIPs. However, upon approval by EPA, SIPs become enforceable as federal law. Federal requirements for SIPs can be found in 40 CFR Part 51.

EPA monitors compliance of SIPs via review of state-issued air permits. EPA review ensures that the permits are written in accordance with applicable SIP provisions. EPA may bring enforcement actions against affected sources that violate the provisions of or fail to obtain an air permit.

Residential Wood Heater Compliance Monitoring Program
Related Information
EPA Certified Wood Heater Database
Residential Wood Heaters
Burn Wise
Final New Source Performance Standards for Residential Wood Heaters

Wood Heater: Installation, Operation, and Maintenance
Noncatalytic Wood Heaters: Installation, Operation, and Maintenance
Catalytic Wood Heaters: Installation, Operation, and Maintenance
On this page:

Compliance Monitoring Updates
Wood Heater Certification Test Report Review: Deficiency Categories
Certificate of Compliance Renewal Policy
Certification Test Report Submission: Electronic Reporting Tool Wood Heater Module
EPA Contact

Residential wood heaters, which include wood and pellet stoves, hydronic heaters and forced-air furnaces, can contribute significantly to particulate air pollution which may pose serious health concerns. In 2015, EPA strengthened the clean air standards for residential wood heaters to make heaters significantly cleaner and improve air quality in communities where people burn wood for heat.

Residential wood heaters must comply with the applicable emission standards and other requirements of the 2015 Rule in order to be EPA-certified. Manufacturers must participate in a certification program and have their wood heaters undergo certification testing at an EPA accredited laboratory to verify their heaters meet the required emission standards. Thereafter, manufacturers may obtain an EPA Certificate of Compliance for each of their wood heaters to enable the manufacturer to manufacture, offer for sale, advertise, or import a wood heater into the United States.

To help consumers buy EPA-certified wood heaters, check out the EPA Certified Wood Heater Database.

Compliance Monitoring Updates

June 6 , 2023 – Per the EPA's corrective action response to the Office of Inspector General's (OIG) February 28, 2023, Residential Wood Heater Report, EPA Regions (Regions) received two lists of wood heater model lines. The first list was a "federally cleared list" and provided model lines that have undergone an in-depth review and were cleared of any identified deficiencies. The second list included model lines certified using the now-withdrawn broadly applicable cordwood test methods (ALT 125 and ALT 127 based on ASTM E3053). Model lines will be removed from the second list as they reach expiration of their Certificate of Compliance. At that point, the subject model lines will either retest with a valid test method or cease production and sale. As is already the case, wood heater manufacturers may retest these model lines at any time and do not have to wait until their current Certificates of Compliance expire to submit renewal applications. EPA will also expedite its review of any such early renewals. The Regions may share the two lists with their states that are interested in factoring this information into wood heater related decision making. These lists will be updated and re-distributed to the Regions on a quarterly basis.

OIG's investigation of the Residential Wood Heater Program and EPA's corrective action response can be found at the following link:
https://www.epa.gov/office-inspector-general/report-epas-residential-wood-heater-program-does-not-provi

de-reasonable.

June 2, 2022 – EPA is committed to ensuring all wood stoves and other wood-burning device manufacturers, laboratories, States, and the public are aware of potential certification testing deficiencies in new and existing Certificate of Compliance applications. EPA has posted a list of all deficiencies that could result in a revocation of existing certificates or new application denials in order to assist manufacturers and laboratories and expedite their efforts to address any certification testing deficiencies.

Further, EPA has identified a number of categories where manufacturers will be required to re-test existing model lines upon renewal. EPA will continue to provide in-depth reviews of incoming renewal applications and may change these categories in the future.

April 5, 2021 -- EPA is committed to ensuring that new wood stoves and other wood-burning devices comply with Clean Air Act standards to reduce health-harming pollution. In light of information from states and other stakeholders provided in late 2020 and early 2021, the agency is taking a number of actions to address concerns about the methods and manner in which new wood stoves are being tested for compliance with the 2015 New Source Performance Standards under the Clean Air Act.

These actions will take time and continued engagement with stakeholders. Given the concerns raised, EPA is carefully reviewing both current and new Certifications of Compliance and will take steps as appropriate. More information is available at EPA-Approved Test Labs and Third-Party Certifiers for Residential Wood Heaters.

Wood Heater Certification Test Report Deficiency Review: Deficiency Categories
As part of the wood heater certification test report review process, EPA is working to address deficiencies identified in how certification testing was conducted and/or in the documentation of certification testing. As of May 1, 2022, EPA has issued 57 minor deficiency letters, 1 moderate deficiency letter, and 12 major deficiency letters to wood heater manufacturers.

Major, moderate, or minor deficiencies are identified problems or irregularities that are or could result in a determination that the certification test is invalid. The agency’s determination that such a certification test is invalid may serve as a basis for revoking a Certificate of Compliance regardless of the deficiency category.

Major deficiency letters concern problems or irregularities with the certification test that could potentially affect emissions and therefore pose a risk to human health and/or the environment if the certification were to be maintained. Upon receipt of a major deficiency letter and prior to the agency initiating the revocation of the Certificate of Compliance, the manufacturer may choose to stop sales, re-test, and submit a valid certification test report documenting compliance with the emission standard. If the manufacturer chooses not to stop sales, chooses not to re-test, or if the re-test is determined to be invalid or fails to meet the emission standard, EPA will proceed with the revocation of the Certificate of Compliance in accordance with the Wood Heater Rule. Information on wood heater model lines currently or recently subject to the revocation process can be found at Filings, Procedures, Orders and Decisions of EPA's Administrative Law Judges by using the case information in the Wood Heater Model Line Certificate of Compliance Revocations Proceedings chart to search the e-docket database.
Moderate deficiency letters concern regulatory and/or test method problems or irregularities that occurred during the certification test but likely do not affect emissions or create an unlevel playing field between manufacturers. However, the irregularities are inconsistent with the requirements of the Wood Heater Rule or test method(s) used. Therefore, manufacturers are required to re-test prior to renewal of their Certificate of Compliance and will not be granted a waiver to re-testing upon renewal. This applies to the re-review of existing certifications that are not yet due for renewal; new applications and renewals will be required to re-test prior to processing the request.
Minor deficiency letters generally concern problems or irregularities with the documentation of the certification test report, which may be addressed by the manufacturer submitting a revised certification test report. That submission is required to provide either clarifying or additional information to confirm the

certification test was completed in accordance with the Wood Heater Rule and applicable test method. However, it is important to note that if the information obtained from the manufacturer uncovers potential emission-related issues, this determination could be upgraded to either moderate or major deficiency.
Wood Heater Model Line Certificate of Compliance Revocations Proceedings
Docket Number Date Filed Case Name Status
CAA-HQ-2022-8422 09/30/2021 England's Stove Works, Inc. Closed
Recent Revocations
Manufacturer Model Certificate of Compliance Number Date Revoked
England's Stove Works, Inc. 15-SSW01, 50-SHSSW01, 50-TRSSW01, 15-W03, 50-SHW03, and 50-TRW03; 193-19 March 29, 2022
List of Wood-Fired Appliance Test Report Deficiency Items - Subpart AAA - Wood Heaters and Pellet Heaters (pdf) (181.51 KB, March 2023)
Deficiencies by Category: EPA Wood Heater Appliance Test Report Deficiency Items: Major, Moderate, And Minor Irregularities (pdf) (193 KB)
Certificate of Compliance Renewal Policy
Submission Timing
To receive a timely renewal of a Certificate of Compliance, a manufacturer should submit a complete application no later than 90 calendar days before the Certificate is set to expire to allow for sufficient time for EPA to process the renewal request.
Renewal requests submitted less than 90 days before the Certificate of Compliance expires will be processed as quickly as resources allow. However, they may not be processed before expiration despite the agency's best efforts. In this case, the manufacturer must halt sales after the Certificate's expiration. Sales after expiration and prior to renewal are prohibited pursuant to 40 CFR §§ 60.538(c)(1) and 60.5480(c)(1).
Denial of Waivers of Retesting (40 CFR §§ 60.533(g) and 60.5475(g))
EPA expects that it will deny a manufacturer's request for Certificate of Compliance renewal without a new valid certification test if one of the below conditions are met:

Manufacturers who submit a renewal application after the Certificate of Compliance has expired should not expect to be granted a waiver from certification testing. Manufacturers should expect to re-test and submit a new application for a certificate in those circumstances.
Given potential impacts on human health and the environment, EPA expects to deny waivers from certification testing for the following wood heaters:
Wood Heater and Central Heater model lines where a "moderate" deficiency is identified in a letter issued by EPA.
Certification test reports at or above the following emissions values:
Wood Heaters (pellet or crib wood fuel) - 1.9 g/hr weighted average.
Hydronic Heaters (pellet or crib wood fuel) - 0.09 lb/mmBTU heat output per individual burn rate.
Hydronic Heaters (cordwood fuel) – 0.14 lb/mmBTU heat output per individual burn rate as determined by the cord wood test methods and procedures in § 60.5476 or an alternative cord wood test method approved by EPA.
Forced-Air Furnaces – (cordwood fuel) – 0.14 lb/mmBTU heat output per individual burn rate as determined by the cord wood test methods and procedures in § 60.5476 or an alternative cord wood test method approved by EPA.

Please note, the EPA follows the
https://www.epa.gov/sites/production/files/2020-08/documents/tid-024.pdf for the rounding of emission calculations.
Wood heaters originally tested under ASTM 3053 test method. Further, the re-test must be conducted under an EPA-approved test method at renewal consistent with EPA's notice for withdrawal of ALT125/ALT127 test methods.
EPA is continually evaluates the above conditions and reserves the right to change, modify, or act at variance with the above without notice.

Please note: Any request for a model name changes or model name addition to the Certificate of

Compliance may not require re-testing.

Certification Test Report Submission: Electronic Reporting Tool Wood Heater Module
EPA's Electronic Reporting Tool (ERT) has been updated to include a Wood Heater Application and Certification Module allowing manufacturers to use and submit a standardized certification test report. The use of the ERT wood heater module is currently voluntary. However, in support of manufacturers who are proactive in their use of the new tool, EPA is committed to prioritizing the review and certification of test report submissions via the ERT over traditional applications. To ease the transition, the Agency is implementing ERT training sessions specifically tailored for individual manufacturers and their laboratories and is also providing ongoing support services for those who choose to adopt this tool.

For additional information about the Electronic Reporting Tool, please refer to (https://www.epa.gov/electronic-reporting-air-emissions/electronic-reporting-tool-ert).
Clean Air Act National Stack Testing Guidance
Related Information
Regional Contacts for Stack Test Method Issues or Other Stack Test Questions
Air Emission Measurement Center Guideline Documents
GD 55 – Memo on Number of Test Runs to Demonstrate Compliance (pdf) (107.8 KB)
The Clean Air Act (CAA) National Stack Testing Guidance:

expands upon CAA Compliance Monitoring Strategy and the High Priority Violation Policy to fully address the concerns raised by the IG on this issue.
improves uniformity on how stack tests are conducted for determining and demonstrating compliance with the NSPS (40 CFR Part 60), NESHAP (40 CFR Part 61), and MACT (40 CFR Part 63).
improves coordination between EPA and state/local agencies.
enhances EPA oversight of state/local programs to ensure that the tool of stack testing is being sufficiently and properly utilized.
Guidance for Conducting Risk Management Program Inspections Under Clean Air Act Section 112(r)
This guidance is for implementing agencies that conduct inspections of facilities (i.e., stationary sources) subject to 40 CFR Part 68, also known as the EPA Risk Management Program.
Area Source Rule Implementation Guidance
EPA is required under the Clean Air Act (CAA) to identify 30 hazardous air pollutants (HAPs) posing the greatest health threat in urban areas, which EPA has identified in its Urban Air Toxics Strategy. The CAA also requires EPA to identify sufficient area source categories to ensure that area sources representing ninety percent of area source missions of the thirty urban HAPs are subject to regulations. The purpose of this guidance is to:

prioritize the area source rules to help delegated agencies and implementing regions focus their limited resources on the most significant standards to achieve emission reductions to the greatest extent possible;
identify recommended approaches to ensuring compliance with individual rules; and
provide delegated agencies and implementing regions flexibility to address regionally significant issues.
The guidance also addresses other implementation issues such as data reporting.

Issue date: June 4, 2010
Greenhouse Gases (GHGs)
Greenhouse Gas Emissions: EPA provides information about emissions levels, sources of GHGs, partnership (voluntary programs), and options for cutting emissions.

Climate Change
EPA studies and reports on Climate Change as it impacts various populations and the natural environment. Learn about climate change's effects on the energy sector, transportation, and water, along with other climate change research.

Indoor Air

Indoor Air Quality: EPA does not regulate indoor air, but we do offer assistance in protecting your indoor air quality. Find information about mold, radon, formaldehyde and other indoor air quality issues.

Mold
Currently, there are no EPA regulations or standards for airborne mold contaminants. Learn more about mold on our Mold and Moisture site.

Policy and Guidance
Mold Remediation in Schools and Commercial Buildings: guidelines for the remediation/cleanup of mold and moisture problems in schools and commercial buildings. Includes measures designed to protect the health of building occupants and remediators.
Radiation
Congress designated EPA as the primary federal agency charged with protecting people and the environment from harmful and avoidable exposure to radiation. EPA responds to emergencies, assists in homeland security, assesses radiation risks, sets protective limits on emissions, and informs people about radiation and radiation hazards.

Radiation Resources Outside of EPA: Cell Phones: Wireless technology devices such as cell phones and computer networks are regulated by the US Federal Communication Commission (FCC) and the US Food and Drug Administration (FDA).

Laws and Regulations
Radiation Regulations and Laws
Radiological Emergency Response
Radiation Protection: International Response
Policy and Guidance
Radiation Information for Technical Users and the Regulated Community
Stationary Sources
The Clean Air Act (CAA) requires major stationary sources to install pollution control equipment and to meet specific emissions limitations. In addition, under the 1990 CAA amendments, major stationary sources must obtain operating permits.

Clean Air Markets
EPA’s Clean Air Markets Division (CAMD) runs programs that reduce air pollution from power plants to address environmental problems such as acid rain, ozone and particle pollution, and interstate transport of air pollution.

The Clean Air Markets website includes data and progress statistics, compliance resources for program participants, and the main program sites:
Acid Rain Program (ARP)
Cross-State Air Pollution Rule (CSAPR)
Six Criteria Air Pollutants: Carbon Monoxide, Ground-level Ozone, Lead, Nitrogen Oxides, Particulate Matter, and Sulfur Dioxide
The Clean Air Act (CAA) requires EPA to set National Ambient Air Quality Standards (NAAQS) for six common air pollutants. EPA must designate areas as meeting (attainment) or not meeting (nonattainment) the standard. States are required to develop a general plan to attain and maintain the NAAQS in all areas of the country, and a specific plan to attain the standards for each area designated nonattainment for a NAAQS.

Laws and Regulations
National Ambient Air Quality Standards (NAAQS): standards and implementation information for each of the six common air pollutants. Find information on sources for each pollutant, why the pollutant is of concern, health and environmental effects, and current efforts to help reduce the pollutants
Six Criteria Air Pollutants: Designations: find information on the process EPA, the states, and the tribes follow to designate areas as "attainment" or "nonattainment" for each of the pollutants

State Implementation Plan Status and Information: identifies how states and EPA work together to ensure that the agency's NAAQS are met and maintained
New Source Performance Standards (NSPS)
The Clean Air Act (CAA) requires EPA to create a list of the important categories of stationary sources of air pollution, and to establish Federal standards of performance for new sources within these categories. These New Source Performance Standards (NSPS) apply to newly constructed sources or those that undergo major upgrades or modifications. The standards include both equipment specifications as well as operation and measurement requirements.

Laws and Regulations
New Source Performance Standards: includes selected NSPS. NSPS are published at 40 CFR 60.
Compliance
New Source Performance Standards and State Improvement Plans Compliance Monitoring
Applicability Determination Index (ADI): NSPS and NESHAP memoranda and letters, including applicability determinations and regulatory interpretations.
New Source Review (NSR)/Prevention of Significant Deterioration (PSD)
The Clean Air Act (CAA) requires all areas of the country to meet or strive to comply with the National Ambient Air Quality Standards (NAAQS). One of the key programs designed to achieve compliance with the NAAQS is the New Source Review (NSR) program, a preconstruction review process for new and modified stationary sources.

Laws and Regulations
NSR: Regulations and Standards
Compliance
RACT/BACT/LAER Clearinghouse (RBLC): database with case-specific information on the "Best Available" air pollution technologies that have been required to reduce the emission of air pollutants from stationary sources
Enforcement
Air Enforcement: New Source Review and Prevention of Significant Deterioration
Policy and Guidance
NSR: Policy and Guidance
New Source Review Policy and Guidance Database: a database with policy and guidance documents interpreting NSR and PSD construction permit regulations.
Ozone Layer Protection
Under Title VI of the Clean Air Act (CAA), EPA is responsible for programs that protect the stratospheric ozone layer.

Laws and Regulations
Ozone Layer Protection: Regulatory Programs: Information about the phase-out of chlorofluorocarbons (CFCs) and hydrochlorofluorocarbons (HCFCs), stationary refrigeration and air conditioning (Section 608), motor vehicle air conditioning (Section 609), the Montreal Protocol, and more.
Compliance
Importing Bulk Ozone Depleting Substances
Stratospheric Ozone Including CFCs Compliance Monitoring
Enforcement
Enforcement Actions Under Title VI of the Clean Air Act
Operating Permits/Title V
Operating permits are legally enforceable documents that permitting authorities issue to air pollution sources after the source has begun to operate.

Laws and Regulations
Operating Permits: Current Regulations and Regulatory Actions
Policy and Guidance
OAR Policy and Guidance: Operating Permits (Title V): including policy and guidance memos and white papers.

Title V Policy and Guidance Document Index: a searchable database of policy and guidance documents that interpret title V and its regulations.
Toxic Air Pollutants (Hazardous Air Pollutants)
The Clean Air Act (CAA) requires EPA to regulate emissions of toxic air pollutants from a published list of industrial sources referred to as "source categories." Toxic air pollutants include mercury, polychlorinated biphenyls (PCBs), benzene and volatile organic compounds (VOCs).

Laws and Regulations
National Emissions Standards for Hazardous Air Pollutants (NESHAPs): An alphabetical list of NESHAPs by source category, including area sources.
Compliance
NESHAPs Compliance Monitoring: Information about inspections, evaluations and investigations.
Enforcement
National Compliance Initiative: Creating Cleaner Air for Communities by Reducing Excess Emissions of Harmful Pollutants
Transportation: Mobile Sources
The Clean Air Act (CAA) mandates controls on air pollution from mobile sources by regulating both the composition of fuels and emission-control components on motor vehicles and nonroad engines. Vehicle fuel standards for gasoline and diesel are met by refiners/ importers, and by other parties in the fuel distribution system.

Regulation of vehicles includes vehicle emission limits for hydrocarbons (HC), carbon monoxide (CO), and nitrogen oxides (NOx), and particulates in the case of diesel vehicles. These limits, which must be met by the vehicle manufacturers, apply to on-road vehicles, off-road vehicles, and non-road sources (e.g., marine engines, locomotives, and lawn and garden equipment). Under the 1990 CAA amendments, vehicle standards are being made more stringent, in stages, through 2005 or later.

Vehicle safety information is available from the National Highway Traffic Safety Administration.

Browse by vehicle/fuel type:
On-road Vehicles and Engines Nonroad Vehicles and Engines Fuels and Fuel Additives
Cars and light trucks
Heavy trucks, buses, engines
Motorcycles
Aircraft
Diesel boats and ships
Forklifts, generators and compressors (gasoline and propane)
Gasoline boats and personal watercraft
Lawn and garden (small gasoline equipment)
Locomotives
Nonroad diesel equipment
Ocean vessels and large ships
Snowmobiles, dirt bikes, and ATVs
E15 (ethanol and gasoline blend)
Diesel
Gasoline
Renewable and alternative fuels
Browse by information type:
Laws and Regulations
Emissions Standards Reference Guide: Federal emissions standards for on-road and nonroad vehicles and engines, and related fuel sulfur standards.
Engine Testing Regulations, including 40 CFR 1065.
Mobile Sources Air Toxics: Regulations: Fuels such as ethanol, diesel fuels and more.
Transportation and Climate: Regulations and Standards
Compliance

Compliance Monitoring: Air Mobile Sources Program: Information about inspections, evaluations and investigations for vehicles, engines and fuels.
Fuels and Fuel Additives: Compliance Information
Importing Vehicles and Engines
Enforcement
Air Enforcement: Mobile Sources
Policies and Guidance
State and Local Transportation Resources: Policy and Guidance: Directions for state and local governments on how to implement strategies for controlling transportation sector emissions.
Visibility/Haze
One of the most basic forms of air pollution - haze - degrades visibility in many American cities and scenic areas. Since 1988 the federal government has been monitoring visibility in national parks and wilderness area.
Office of Mountains, Deserts and Plains (OMDP)
What We Do
Created during EPA's 50th anniversary, the Office of Mountains, Deserts and Plains (OMDP), which reports to the Office of Land and Emergency Management, was established to address cross-media, cross-program, and cross-agency issues associated with advancing cleanups and reuse of Superfund and non-Superfund abandoned hardrock mining sites across the country. The Office provides support for federal hardrock mining cleanup sites; serves as a central contact for other federal partners, states and tribes with responsibility for or impacted by these sites; identifies and facilitates reprocessing or recovery of critical mineral from abandoned hardrock mine sites; evaluates innovative technologies and reuse options; coordinates and advances cleanup of abandoned uranium mines on or surrounding the Navajo Nation; and supports efforts of conservation organizations to voluntarily undertake projects (Good Samaritan projects) to improve environmental conditions at abandoned hardrock mine sites.

Programs and Projects with OMDP Involvement:
Cleanups
Cleanups at Federal Facilities
Climate Change and Land
Education
FEDFacts
Greener Cleanups
Hazardous Waste
Land Revitalization
Programs and Projects of the Office of Land and Emergency Management (OLEM)
RE-Powering America's Land
Risk Management Plan Rule
Superfund
Superfund Redevelopment Program
Technologies for Cleaning Up Contaminated Sites
Tribal Lands
Location: EPA Headquarters at WJC Building West, Washington, D.C.

Mail code: 5101T

OMDP Organization
Shahid Mahmud, Director