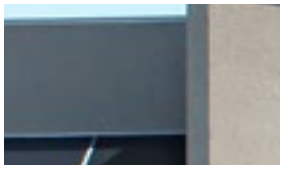
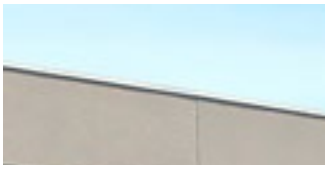
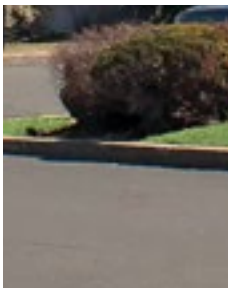




COMPLYING WITH EPA'S NESHAP 6X RULE FOR HAZARDOUS AIR POLLUTANTS



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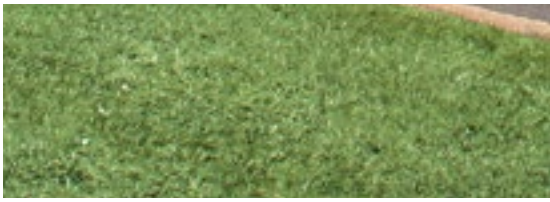

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Table of Contents

Section 1: The Clean Air Act and the NESHAP 6X Rule

Back in 1970, Congress passed a federal law known as the Clean Air Act. Designed to ensure that every American has clean air to breathe, the law has largely been successful in achieving its goal. Since first enacted into law, the Clean Air Act has helped bring about a dramatic reduction in harmful emissions including:

- A 98% drop in toxic lead emissions
- A 35% drop in sulfur dioxide emissions
- A 32% drop in carbon monoxide emissions

On their own, these figures are encouraging. But you when you take into account that the law accomplished these reductions over a period when the U.S. gross domestic product nearly doubled, the results are even more impressive.

The NESHAP 6X Rule

Under the Clean Air Act, the Environmental Protection Agency (EPA) is required to develop air emission standards for 187 hazardous air pollutants (HAPs). These HAPs are linked to cancer, birth defects and other serious health issues.

In 2008, the EPA introduced its National Emission Standards for Hazardous Air Pollutants (NESHAP). The NESHAP 6x rule went into effect in 2011 and included HAPs that apply to metal fabrication industries (also known as MFHAPs). Over 25,000 manufacturers in the United States are affected by this rule.

Materials considered to be MFHAPs that fall under the NESHAP 6x rule include:

- 0.1 percent by weight of cadmium, chromium, lead or nickel
- 1.0 percent by weight of manganese

The rule has significant implications for welding industries as manganese is a universal component of welding wire. In an effort to comply with NESHAP 6X rule, businesses should always check to see if the wire rod they purchased contains 1.0 percent or more of manganese.

Many welding shops unknowingly violate the rule, either because they are unaware the rule exists or they don't have adequate engineered controls in place to manage their weld fumes. Some shops simply open shop doors and windows, allowing hazardous smoke to escape out into the atmosphere in direct violation of the NESHAP 6X Rule.

Some shops that do have dust and fume control systems installed, still may not be complaint with the rule. Standard HVAC equipment that cleans indoor air before exhausting weld fumes out into the atmosphere is not adequate. Businesses need to verify if the clean air equipment is up to date, whether or not it exhausts dirty air outside and if it is properly designed to handle their industrial processes.

Section 2: Industries and Applications Impacted by the Rule

The NESHAP 6X rule applies to companies who engage 50 percent or more of their total labor in any of the below categories:

- electrical and electronic equipment finishing operations
- fabricated metal products manufacturing
- fabricated plate work (boiler shops) manufacturing
- fabricated structural metal manufacturing
- heating equipment manufacturing, except electric
- industrial machinery and equipment finishing operations
- iron and steel forging
- primary metal products manufacturing
- valves and pipe fittings manufacturing

Companies that employ the following six processes are also impacted by the NESHAP 6X rule:

- dry abrasive blasting (three types)
- dry grinding
- dry polishing with machines
- dry machining
- spray painting (two types)
- welding

Some exceptions to the rule do apply. The below industries and facilities are exempt from the NESHAP 6X rule:

- Military installations
- NASA facilities
- National nuclear security facilities
- Military munitions facilities
- Research or laboratories as defined in the Clean Air Act
- Tool, quality control and equipment repair facilities
- Welding facilities that use less than 2,000 lbs. of rod/ wire not containing HAPs

If your industry is listed in the first group of categories, engages in one of the above applications and you exhaust your air outdoors, then the rule may apply to you. The first step to understanding if NESHAP 6x rule impacts your business is to check the Material Safety Data Sheet (MSDS) for the base metals that you use, such as welding rods or wire. You'll find the list of hazardous materials in section 2 of a standard MSDS.

If you find that the materials listed on your MSDS contain more than 1.0 percent by weight of manganese, or over 0.1 percent by weight of cadmium, chromium, lead or nickel and you exhaust your air outdoors then the rule applies to you. You will need to conduct a Method 22 Fugitive Emissions Test to determine if you are in violation of the rule.

Section 3: Emissions Testing for HAPs

After inspecting the MSDS to confirm the existence of base metals classified as MFHAPs, a Method 22 Fugitive Emissions test will need to be done to see if you are in violation of the NESHAP 6X rule.

A Method 22 Fugitive Emissions test visually determines the presence of hazardous emissions from industrial processes. It is recommended to hire an environmental engineering consultant to conduct the test for accuracy in determining compliance.

How to Conduct a Method 22 Fugitive Emissions Test

To conduct the test, you will need two stopwatches. The person administering the test (the observer) needs to be positioned 15 feet or more from the exhaust stack with a clear view of the emerging exhaust. The sun will need to be at his or her back.

Lining up a dark background, the observer will start the watch in his or her left hand, allowing it to run continuously for 15 minutes.

Once the observer sees emissions appearing from the exhaust stack (opacity), then he or she starts the watch in the right hand. The observer will stop the right hand watch when smoke is no longer observed. In some cases, the right hand watch may run for the entire 15 minutes. If at the end of those 15 minutes, the right hand watch reads 20% or more opacity, meaning 3 minutes or more of the total time, then the company has failed the test. The NESHAP 6X rule likely applies and action will need to be taken.

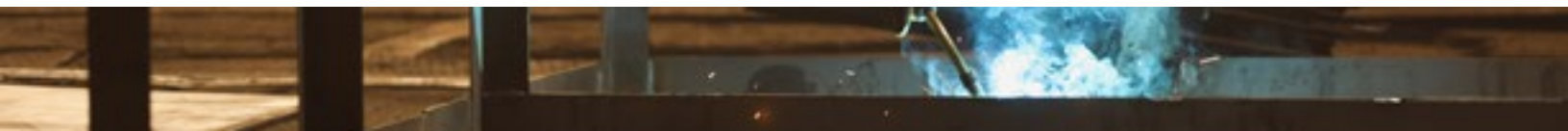
Action Steps After Failing the Method 22 Fugitive Emissions Test

Step 1: If a business has confirmed the use of MFHAPs that apply to NESHAP 6X rule and has failed the Method 22 Fugitive Emissions Test, then the first course of action is to notify the EPA.

The business will then need to review their processes and see if steps can be taken to reduce emissions. Employers may, for instance, try using different materials or settings in an effort to reduce air-borne pollutants. (It is important to note that equipment must always be used in accordance with the manufacturers' instructions.)

Step 2: Once a business has taken steps to reduce emissions, it will then need to conduct the Method 22 Fugitive Emissions Test again.

Step 3: If a business fails the test a second time, then corrective action must be taken to remedy the situation.



Section 4: Complying with NESHAP 6X Rule

A highly recommended option for companies who fail the Method 22 test is to install a dust and fume collector with high efficiency filter cartridges. Filtering welding fumes and other hazardous emissions, a high-quality cartridge system cleans contaminated air before either recirculating it back into the facility or exhausting it outdoors.

If your company chooses to exhaust the air outside, then you must contact your EPA regional office to learn which agency enforces the rule. The EPA mandates ongoing compliance annually specific to the operation.

The Benefits of Recirculated Air

Choosing to invest in a dust and fume collector that recirculates cleaned air back into the facility is a great option for many businesses as it provides multiple benefits for the company.

First and foremost, if your company opts to recirculate the air back into the facility, then the NESHAP 6X rule no longer applies. You will still be required to comply with the Occupational Safety and Administration's (OSHA) permissible exposure limits (PELs), however, to ensure a safe working environment for your employees.

Besides the obvious health benefits, the biggest advantage to investing in a dust and fume collector that recirculates cleaned air back inside the facility is the financial savings they provide. Because the heated or cooled air is recycled back into the facility instead of being vented outside, companies save significantly on energy costs. Some businesses report savings into the tens or even hundreds of thousands of dollars after purchasing a high quality dust and fume collector.

What to Look for in a Quality Dust & Fume Collection System

There are a few criteria to keep in mind in your search for a high-quality dust and fume collector.

- **Make sure the equipment is OSHA, NFPA and EPA complaint.** To ensure your new equipment is fully compliant, choose an industrial air filtration supplier well-versed in OSHA, NFPA and EPA regulation. They can help you find the right equipment that suits your specific needs while keeping your business complaint.
- **Factor in total cost of ownership.** Choosing equipment with the lowest upfront price does not always guarantee savings in the long run. Dust and fume collectors that recirculate air and have lower maintenance costs are better long-term investments.
- **Choose the right system for your business and applications.** When selecting your industrial air filtration equipment, you can go with multiple options to suit your specific applications. Source capture systems with movable arms or hoods are the preferred choice for applications using smaller parts such as welding. Ambient air filtration is used for larger work spaces when source capture is not practical. Businesses may want to consider booths or customized enclosures for a compromise between the two systems.

Section 5: Diversitech Solutions

A leader in industrial air filtration equipment, Diversitech has been supplying businesses with clean air solutions since 1984. Our equipment meets and often exceeds OSHA, NFPA and EPA standards. Prioritizing our customers, our commitment to offering customized solutions is unparalleled in the industry. We can provide a range of products that will keep your business complaint with the NESHAP 6X rule.

Source Capture Products

A preferred choice for welding applications, source capture products collect contaminants at source, before they can contaminate indoor or outdoor air.

FRED Portable Fume Extractors

Our FRED series professional grade portable fume extractors are the industry standard for eliminating smoke, dust and fumes. Capturing contaminants right at source, FRED portable fume extractors have powerful blowers with a high face-velocity. Equipped with our standard MERV 15 rated Nanofiber filter, these fume extractors can remove particulate as small as 0.5 micron. Cleaner air is guaranteed.

Their flexible, externally articulated capture arms allow for easy positioning so contaminants are removed right as they are produced. Our patented Injection Self-Cleaning System (ICS-360) extends filter life expectancy while improving aggregate filter efficiency. Routine service is faster and easier, reducing total cost of ownership. Optional Afterfilter module with HEPA filter available. Visit Diversitech's website for more details.

Downdraft Tables

The trusted choice of North America's largest manufacturers, Diversitech's DD series of industrial downdraft tables are built to withstand the most demanding applications. Its ventilated work surface captures dust right at source, so indoor air quality remains uncompromised.
You can configure our downdraft tables to suit dozens of industrial applications. As standard, the table comes fitted with a multi-stage spark arrestance baffle for fire prevention, dual 10" exhaust silencers for noise reduction and high capture face velocity (250 fpm). An automatic reverse-pulse filter cleaning system reduces overall maintenance requirements.
The DD series of industrial tables can be built-to-order in almost any configuration. Optional HEPA Afterfilter available. Visit our website for a complete list of available models and options.

Downdraft Booths

Diversitech's self-contained downdraft booths are the ideal solution for the collection of toxic dust and fumes. Able to withstand the toughest applications, these compact workstations capture airborne contaminants right at source to maintain indoor air quality.

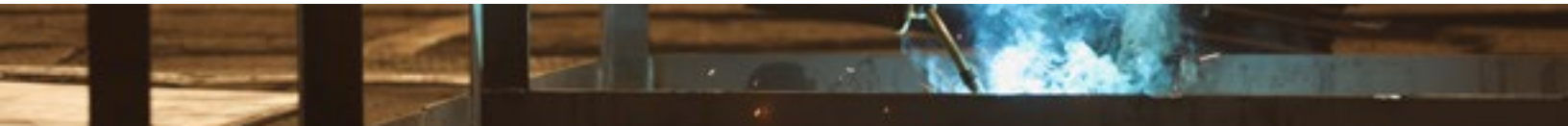
Available in various sizes and dimensions, all clean air booths come standard with 48" high side and back walls, ventilated work surface, dust-proof light kit and a controllable backdraft hood to better contain contaminants and improve the performance of the table. The downdraft and backdraft suction removes dust high above the table surface, ensuring a cleaner air facility. All booths come with high capture face velocity, washable reusable metal mesh prefilters and optional HEPA Afterfilter with frame.

Whether you weld, grind, debur, cut, sand, finish, solder, paint or mix, the DD Downdraft Booth provides the perfect, flexible, all-in-one solution. You can go to our website for a complete list of available models and options.

Environmental Booths

Completely customizable to accommodate your specific application, Diversitech's environmental booths offer a turnkey solution for filtering dust, fumes, composite and metal finishing from large work pieces. Common options include various depth, width, height of the booth, dustproof light kits, custom backdraft hoods, crane slots, strip curtain and HEPA after-filters. Filtration systems and sizes range from 3000 to 6500 CFM. One of Diversitech's engineers can work with you to determine which environmental booth is best suited for your application.

Be sure to check out our website to see our complete list of available models and options.



Ambient Air Filtration Products

For those applications where source capture is impractical, Diversitech offers a number ambient air filtration solutions. Use alongside source capture for an even cleaner air facility.

A Series Ambient Air Cleaners

Diversitech's A Series Ambient Air Cleaners are designed to collect dust, smoke and other airborne particulate. The T configuration of drawing dirty air in through the sides and exhausting clean air out, creates a circular airflow pattern to effectively purify the air in your facility. Easy-to-install, these air filters come equipped with powder coated steel frames and light-weight polyethylene plastic panels. The modular configuration allows units to be combined with multiple modules in a double or quad setup to increase the amount of filter media. The A Series have multiple stage filtration systems that include MERV 7 prefilters, MERV 8 panel filters and MERV 14 primary mulit-pocket bag filters to effectively collect airborne toxins.

Ideal applications for Diversitech's Ambient Air Cleaners include: welding smoke and fumes, wood dust, oil mist and smoke from machining and dust from grinding. Optional HEPA filters available. Visit our website for a complete list of available models and options.

Filterhawk Cartridge Dust Collectors

The Filterhawk Series from Diversitech features an innovative, modular design that effectively eliminates dust, smoke and other airborne contaminants. Its durable, heavy-duty, powder-coated steel construction can withstand continuous operation industrial applications.

The Filterhawk's vertical filter works with its reverse pulse cleaning system to separate dust from filters. It simultaneously prevents dust re-entrainment with baffles below, giving you a more cost-effective filter system to operate and maintain. The Filterhawk's powerful turbo-nozzle pulse-cleans each filter cartridge individually, blowing off the maximum amount of material. These cartridge dust collectors come standard with open-pleat Nano-tech MERV 15 Nanofiber filters for effective air filtration. Optional HEPA Afterfilters available.

Ideal applications for the Filterhawk Series includes: welding, sanding, deburring and grinding.
Check out our website for a complete list of Filterhawk models and options.

Section 6: Conclusion

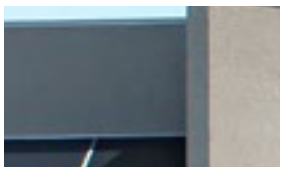
Complying with NESHAP 6X rule not only benefits the health of your employees and the environment, it's the law. By failing to implement appropriate measures to reduce harmful emissions, your company risks receiving hefty fines from government agencies.

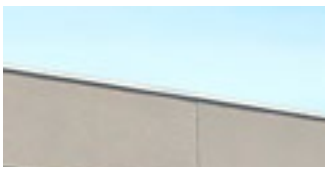
Installing effective dust and fume collection systems is a practical solution that not only protects workers and the environment, it benefits your bottom line. Choosing air filtration equipment that recirculates cleaned air back into your facility can provide significant savings long-term. You can rest easy knowing that you are making the morally and fiscally responsible decision for your business.

Questions about which filtration equipment is right for you? Please call one of Diversitech's experts. We will be happy to provide you with a complete assessment of your needs.



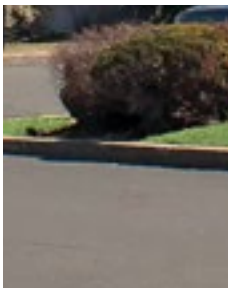








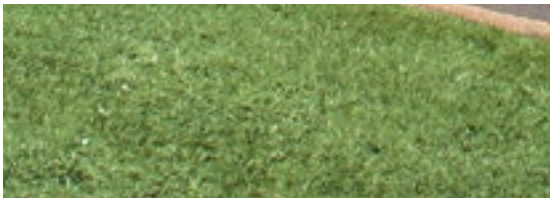










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