

US EPA ARCHIVE DOCUMENT

COMMUNITY INFORMATION SHEET



Could your family be affected?

The Pollution Prevention Assistance Division (P2AD) of the Georgia Department of Natural Resources provides pollution prevention assistance and training to companies that have metal operations. P2AD has also developed the Pollution Prevention Partners (P3) program as a means of getting companies involved in formalized pollution prevention.

— U.S. EPA

Targeted outreach is needed to meet the needs of small and mid-size companies.

Regional trade shows and conferences may be a good place for these companies to keep up with the latest technologies and meet vendors and government and university technical assistance providers.

Why do metal operations need to reduce air pollution?

People who are exposed to toxic air pollutants at sufficient concentrations, for sufficient durations, may increase their chances of getting cancer or experiencing other serious health effects, such as reproductive problems, birth defects, and aggravated asthma.

Pollution prevention can reduce the impact of air pollution by using materials, processes, or practices that reduce or eliminate air pollution at the source.

Metal operations manufacture and finish metal parts ranging from paper clips to car bodies and spiral staircases. Activities at metal operations include metal fabrication, surface preparation, metal finishing, and other processes, all of which may release pollutants into the air and may contribute to health concerns in the shop and in the community.

The best metal operations implement pollution prevention strategies not only to help comply with federal, state, local, and Tribal laws but also to further minimize impacts on human health and the environment. Check with your state, local, and Tribal agencies for existing regulations.

What kinds of air pollutants may come from metal operations?

- Metal operations can produce emissions of toxic air pollutants, including metals.
- Lubricants, degreasers, and cleaners can release some toxic air pollutants and volatile organic compounds (VOC). Chemicals in these substances can also react in the air to

form ground-level ozone (smog), which has been linked to a number of respiratory effects.

- Toxic air pollutants and particle pollution (dust) containing metals can result from the fumes generated by soldering or welding operations. While federal, state, local, and Tribal regulations limit the amount of emissions from metal operations, dangerous releases of toxic air pollutants can occur if a metal operation is not in compliance with regulations.

How can metal operations reduce air pollution?

Making changes in operation work practices can stop pollutants at the source and increase production efficiency. By evaluating and improving work practices, operations can decrease emissions, reduce production costs, and protect employee and public health.

Examples of changes in work practices that help reduce air pollution include:

Substituting Materials

- Use cleaners with low toxic air pollutant and VOC content.
- Use metalworking fluids that are less volatile.

Changing Cleaning Procedures

- Use cleaning procedures that reduce the amount of solvent needed
- Collect and reuse old solvent.
- Reduce storage time between metalworking and finishing, to avoid using rust inhibitors.

The Solvent Alternatives Guide (SAGE) is an online guide for solvent and process alternatives for cleaning equipment.

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Metal Operations

Changing Processes

- Install an induction furnace for metal casting. This will reduce particle pollution by 75%.
- Remove all paint and solvents from metals before welding, to avoid generating toxic fumes.
- Use welding materials and processes that reduce fumes.

As a community, what can you do to help reduce air pollution from metal operations?

Make Connections

- Get to know local owners and operators. They know best about the materials and processes used in their business and the regulations with which they must comply.
- Keep local media aware of progress by sending them updates. Publicity can reward success and attract more public involvement.

Make a Plan

- One idea is to form a work group that includes local metal operations owners and operators to develop and implement workable pollution reduction plans.

Locate Resources

- Use the “For Further Information” list below to find governmental and nonprofit contacts who can provide help with analysis, technical information, equipment, and funding.

Encourage Pollution Prevention

- Small metal operations may need funding in order to attend or provide training.
- Improved skills lead to reduced toxic air pollutant exposure for workers.
- Work with pollution prevention organizations to reach metal operators.
- Help sponsor trade show exhibits and training workshops to show the latest technologies.

Reward Facilities

- Use media connections to provide coverage for successful efforts. Positive publicity can mean increased business.
- Visibly displayed awards or certificates may also increase business.

For Further Information

- National Association of Metal Finishers: www.namf.org, (407) 281-6445
- EPA Air Toxics Web Site: www.epa.gov/ttn/atw
- EPA’s Sector Strategies Partnership Program for the Metal Finishing Sector: www.epa.gov/sectors/metalfinishing/index.html, (202) 566-1961
- EPA’s Sector Strategies Partnership Program for the Metal Casting Sector: www.epa.gov/sectors/metalcasting/index.html, (202) 566-1407
- Community Information Sheet for Electroplating Operations
- Community-Based Projects: www.epa.gov/air/toxicair/community.html
- Community information, regional, state contacts: www.epa.gov/epahome/whereyoulive.htm
- Pollution prevention awards: State, local, and Tribal government agencies, universities
- Training opportunities: Local metal operations trade association
- Solvent Alternatives Guide SAGE: www.sage.rti.org
- Toxicity of Solvents: Integrated Risk Information Systems (IRIS) (www.epa.gov/iris), Air Toxics Health Effects Notebooks (www.epa.gov/ttn/atw/hapindex.html)
- For more information, please see the Resources section of the Owner/Operator Information Sheet.

