



MAINTENANCE - METAL FINISHING, COATING, MACHINING, & COOLING

ENVIRONMENTAL GUIDELINES



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PURPOSE

The purpose of this document is to provide guidance on DEN's expectations for operations that involve metal finishing, coating, machining and cooling to prevent air pollution, odors, and inappropriate disposal of metal scraps and soil contamination. This supports the City and County of Denver's air quality permit and efforts to remain in compliance with RCRA, which requires best management practices to prevent improper disposal and air pollution. Each operator and tenant conducting these activities is responsible for understanding the applicable regulations and managing their activities; accordingly, this Environmental Guideline is meant as guidance only and does not supersede any regulations.

ACTIVITY DESCRIPTION

Business partners that take part in this activity are the airline hangars. The processes include:

- Metal Finishing processes, which are used to prepare the surface of a part for better adhesion, improved surface hardness, and improved corrosion resistance. Typical metal finishing operations include chemical conversion coating, anodizing, electroplating, and any operation that chemically affects the surface layer of a part.
- Coating Applications involves a material being applied to the surface of a part to form a decorative or functional solid film. The most common coatings are primers and topcoats. Facilities can apply coatings to aircraft components using several methods of application, which include spraying, brushing, rolling, and dipping. Nearly all coatings used contain a mixture of organic solvents.
- Metal Machining and Parts Cooling involves the use of cutting oils, lubricating oils, greases, machine coolants, and degreasing solvents to build or modify parts.
- Proper storage and disposal of metal scraps and coating

EXPECTATIONS

Best Practices:

- Owner/operator/tenants handling ignitable and reactive wastes must be able to demonstrate that these wastes are protected from ignition sources. Such protection includes "NO SMOKING" signs placed where ignitable and reactive wastes are stored, designation of separate smoking areas, and additional handling requirements.
- To avoid dangerous accidents, fire, or explosions, special care must be taken in handling ignitable, reactive, or incompatible materials and wastes.
- All scrap metal must be stored in the appropriate containers to prevent spillage
- All hazardous chemicals must be stored in the appropriate containers and be placed on secondary containment, and labeled per RCRA and USDOT requirements, preferably indoors.



- All operations that take part in these activities must be aware of their hazardous waste generator status and dispose of waste within the required timelines.
- Employees handling hazardous wastes must receive site-specific training.
- Properly identify and characterize hazardous wastes using SDS, analytical testing, and available regulatory guidance.
- Owner/operator/tenants must take precautions against the combined storage of materials and/or wastes that might react dangerously with one another, or with the unit in which they are stored. Such a reaction might cause a fire or explosion, or the release of toxic gases or fumes.
- To determine if particular wastes or storage units are compatible, the RCRA regulations list some common potentially incompatible wastes (40 CFR 264, Appendix V). For compatibility of wastes not listed in the regulations, the owner/operator/tenant may need to test the waste and/or the storage unit for compatibility.
- Develop procedures for the various recordkeeping requirements that apply to airports as a part of your hazardous waste management programs. A filing system must be in place for the uniform hazardous waste manifest forms as well as training and inspection information. These records must be kept for at least 3 years.
- Ensure proper storage of all a hazardous materials
- Each operator conducting coating activities must have and APEN
- Ensure proper ventilation for metal coating applications
- It is preferable to use a paint booth when conducting metal coating activities
- To make sure the facility is operating properly, the owner/operator must visually inspect the facility for malfunction, deterioration, operator errors, and leaks.
- Inspections should follow a written inspection schedule developed and followed by the owner/operator / tenant.
- The schedule identifies the types of issues to be inspected and frequency inspections should be conducted.
- Unit-specific inspections or requirements also must be included in the schedule. The owner/operator must record inspections in a log or summary and must remedy any problems identified during inspections.
- Wear appropriate PPE
- Train all employees in the proper handling of hazardous materials, hazardous wastes, and spill response procedures. Records of these trainings should be maintained and available upon request.
- Employees involved in the handling of hazardous wastes may need to receive site-specific training per RCRA guidance. Site-specific hazardous waste training records for employees may need to be maintained on site by the generator for a minimum of three years.
- Make all SDSs and chemical hygiene plans available to all employees.
- Maintain records of equipment inspection reports for a minimum of 3 years. The owner/operator/tenant must record equipment inspections in a log or summary and must remedy any problems identified during inspections.
- The inspections should follow a written inspection schedule developed and followed by the owner/operator/tenant.
- These inspections will ensure the proper maintenance and operation of critical equipment used for these activities.



- All non-municipal wastes must be profiled by the landfill for disposal. This frequently requires chemical analysis be performed by an EPA-certified analytical laboratory.
- Originating shipping and disposal forms must be developed and kept on site.
- Manifests and LDR forms must be obtained from the disposal facility in a timely fashion or notifications to USEPA must be made. (Manifest forms can be obtained from the Colorado Department of Public Health & Environment)
- All manifests should be maintained on file by the generator for at least three years.
- Manufacturers will supply these documents on demand. SDSs should be made available to all employees and maintained on file by the Generator at the facility. Generator knowledge documentation must be kept on site.

Shall Not:

- Conduct metal finishing, coating, machining, and cooling activities outdoors without DEN Environmental Services approval
- Place hazardous materials in non-designated locations
- Place hazardous materials that are incompatible with each other in the same locations
- Conduct any kind of coating without a paint booth and an APEN
- Hazardous waste cannot be left unidentified, unclassified, and inadequately managed due to lack of knowledge of regulatory requirements.
- Discharge hazardous chemicals down floor drains and storm drains
- Controlled or uncontrolled release of any kind to outside air, water or soil.

REFERENCES

Contacts

- DEN Communications Center (for spill reporting): 303-342-4200
- DEN Environmental Services (Main Line): 303-342-2730; DENEnvironmental@flydenver.com

Additional Resources

- DEN Stormwater Management Plan (SWMP)
- DOT Labeling and Placarding Guidance
- SPCC Plan
- 40 CFR 50, 51, 53 and 58 National Ambient Air Quality Standards
- 40 CFR 63 NESHAP for Aerospace Manufacturing and Rework Facilities
- 40 CFR 117.3 Determination of Reportable Quantities for a Hazardous Substance
- 40 CFR 261-282 Federal RCRA Regulations
- 40 CFR 401 Effluent Limitation Guidelines
- 40 CFR 433 Effluent Guidelines and Standards for Metal Finishing



- C.R.S. 25-8-101 through 703 Colorado Wastewater Quality Control Act
- 5 CCR 1002-61 Colorado Discharge Permit System (CDPS) Regulations
- Metro Water Recovery Rules and Regulations
- Denver Wastewater Management Division Rules and Regulations
- DIA Rules and Regulations Section 180.01 through 180.03-5
- Article II Section 56-16, 56-17, 56-102 of the City and County of Denver Municipal Code.