



Title	ES-301-1.05 Maintenance of Aircraft, Vehicles, and Equipment
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Revision Date:	April 2, 2019

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1) Activity Description: Maintenance of Aircraft, Vehicles, and Equipment

The action of draining, changing, or adding maintenance fluids such as oil, hydraulic fluid, or antifreeze in the course of routine maintenance of airplanes, vehicles, and equipment. Includes the use of grease guns, pressurized gases (such as CFCs), and miscellaneous maintenance equipment such as air conditioning recharge equipment and wheel-balancing dynamometers.

2) Potential Environmental Risks

- A. The following environmental concerns are associated with these activities:
 - i) Fuel and oil spills
 - ii) Fire hazard
 - iii) Air pollution and odors
 - iv) Inappropriate disposal of maintenance fluids into storm or sanitary sewer system drains
 - v) Inappropriate disposal of waste materials

- B. Potential consequences from performing the activity incorrectly:
 - i) Property damage, personal injury or damage to the environment
 - ii) Regulatory and judicial enforcement actions and related [financial & non-financial] penalties

3) Critical Operating Requirements

- A. Prohibited Activities
 - i) Performing this activity in areas not designed and/or authorized for this activity.
 - ii) Spills of any kind shall not be washed into any storm sewer system or waterway, or onto any soils.
 - iii) Any discharge to the sanitary sewer that violates Metro Wastewater Rules and Regulations.

- B. General Considerations
 - i) Each operator and tenant conducting maintenance 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.
 - ii) Drain and properly dispose of all spent fluids such as greases, oils, antifreezes, brake fluids, solvents or cleaning solutions, blast media, paints, hydraulic fluids, battery electrolyte, transmission fluids, and filters.
 - iii) Perform maintenance activities indoors or under covered areas whenever possible. When performing maintenance in an uncovered area, block storm drains from leaks or spills.
 - iv) Activities such as painting, stripping, battery charging, and welding may require air permitting.

- C. Training Requirements
 - i) Employee training programs shall inform personnel at all levels of responsibility who are involved in industrial activities that may impact Stormwater runoff. Training shall address topics such as spill response, good housekeeping, and material management practices.

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Contractor or temporary personnel shall be informed of plant operation and design features in order to prevent discharges or spills from occurring.

4) Planning Requirements

- A. Maintain adequate supplies of spill response equipment and materials in accessible locations where spills are likely to occur.
- B. Complete the Stormwater Management Plan (SWMP) survey/matrix to assist in determining if a SWMP is required for the activity.
 - i) This document is available at <http://business.flydenver.com/environmental>.
 - ii) If applicable, the operator will need to decide whether to use the DEN SWMP or generate their own SWMP for review by DEN ES.
 - iii) Plan space within maintenance areas accordingly; notify Environmental Services if significant maintenance activities will be performed outside.

5) Critical Tasks

- A. Do not hose down work areas to any sewer system or drain. As an alternative, use mops or dry sweeping compound. Dispose of wastewater from mops and dispose of dry sweeping compounds appropriately.
- B. Maintain clean equipment by eliminating excessive amounts of external oil and grease buildup. Dispose of rags properly or picked up and cleaned with a contracted qualified launderer.
- C. Maintain legible labels and markings on all containers and tanks.
- D. Store chemicals and waste generated from maintenance activities in containers that are in good condition and in secondary containment (e.g. on a spill pallet).
- E. Store chemicals in a manner that will minimize impact to stormwater (e.g. indoors).
- F. "Oil" (as defined in 40 CFR Part 112) stored in containers of the capacity of 55 gallons or more, must be managed in accordance with an SPCC plan prepared by the container owner (e.g. secondary containment). Storage requirements must be included in the plan.

6) Emergency Response

- A. If a spill occurs, refer to Environmental Guideline ES-301-5.02 Spill Response.
 - i) Call DEN Communications Center immediately at 303-342-4200 for all spills.
 - ii) Control spills to minimize property damage and eliminate imminent risk to human health and the environment.
 - iii) Utilize drip pans and absorbent materials at maintenance areas where incidental spillage is possible.
 - iv) Spills of any kind shall not be washed into any sewer or waterway, or onto any soils.
 - v) Containerize all collected wastes and evaluate for proper labeling, storage, and disposal. Refer to ES-301-6.01 through 6.06 for guidance on waste management.

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7) Inspection and Maintenance Requirements

- A. Routinely inspect pavement in maintenance areas for the presence of spills and leaks. Immediately clean up any spills.
- B. Routinely inspect sumps, pretreatment devices, and other collection/treatment systems in the maintenance area. Clean and maintain as necessary as per ES-301-2.07 Maintenance of Pretreatment Devices.
- C. Conduct inspections in accordance with SPCC (if an SPCC plan is required).

8) Expected Records and Outputs

- A. Waste management records (profiles, manifests, sample results, etc.)
 - i) Based on the disposal profile, manifests and related forms may be required. Manifests & profile forms can be obtained from the disposal facility for off-site disposal activities (manifests **are required** for hazardous, special and universal waste).
 - ii) Operator must maintain waste management records at the facility for a minimum of 3 years.
 - iii) Operator must maintain appropriate documentation for disposed wastes at the facility.
 - iv) See ES-301-6.01 for additional guidance on waste classification and disposal requirements.
- B. Evidence of training on SWMP, SPCC Plan, and Operator SOPs, as applicable
 - i) While formal certifications are not always necessary, some form of “proof of training” (such as sign-in sheets and handouts) is expected and should be maintained on file by the operator.
- C. DEN Stormwater Management Plan (SWMP) survey/matrix.
 - i) Obtain a copy of this document at <http://business.flydenver.com/environmental>.
 - ii) Complete form and return to DEN ES for evaluation
 - iii) Maintain survey/matrix on file after review by DEN ES.
- D. Maintenance Log
 - i) Operator/tenant should maintain maintenance records at the facility documenting maintenance and waste management activities.

9) References

- A. Phone Numbers
 - i) DEN Communications Center (for spill reporting) (303) 342-4200
 - ii) DEN Environmental Services (Main Line) (303) 342-2730
 - iii) Kimberly Ohlson (DEN Environmental Services) (303) 342-2637
- B. Related Environmental Documents (list is not limited to the following)
 - i) ES-301-2.04 Painting and Paint Removal
 - ii) ES-301-2.08 Metal Finishing, Coating, Machining, and Cooling

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- iii) ES-301-5.02 Spill Response
 - iv) ES-301-6.01 General Waste Management
 - v) ES-301-4.03 Cleaning/Washing – Outdoor Areas and Structures
 - vi) ES-301-1.02 Cleaning/Washing Aircraft, Vehicles and Equipment
- C. Other Documents (list is not limited to the following)
- i) DEN Rules and Regulations
 - ii) DEN Stormwater Management Plan
 - iii) CDPHE Compliance Bulletin, Hazardous Waste, Contaminated Shop Towels and Reusable Absorbents
- D. Training Materials (list is not limited to the following)
- i) Operational procedures training (On-the-Job)
 - ii) Operator/Tenant Standard Operating Procedures

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