



Title	ES-301-1.02 Cleaning/Washing - Aircraft, Vehicles and Equipment
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1) Activity Description:

The following guideline outlines aircraft, ground access vehicle (e.g., car, pickup truck, van, bus, shuttle) and ground service equipment (e.g., baggage tug, pushback tractor, belt loader, fire truck, deicer truck, catering truck, sweeper, power units) washing requirements and management of materials associated with washing and cleaning (e.g., detergents, wash water) of this equipment.

2) Potential Environmental Risks

- A. The following environmental concerns are associated with these activities:
1. Release of contaminants in wash fluids to storm sewer, waterways, or soils, such as:
 - i) Oil and Grease
 - ii) Fuels
 - iii) Solvents
 - iv) Soaps and Detergents
 - v) Propylene Glycol/Aircraft Deicing Fluid
 - vi) Ethylene Glycol/Radiator Coolant (Antifreeze)
 - vii) Pavement Deicers
 - viii) Sediments
 - ix) Hydraulic Fluids or other maintenance materials
 - x) Chlorine
- B. Potential consequences from performing the activity incorrectly are:
- i) Property damage, personal injury or damage to the environment
 - ii) Regulatory non-compliance, Notices of Violation, and related [financial & non-financial] penalties

3) Critical Operating Requirements

- A. Prohibited Activities
- i) Outdoor washing of aircraft, vehicles, and equipment is prohibited at DEN, except as outlined in this document.
 - ii) Discharge of wash water from aircraft, vehicle, and equipment washing to the storm sewer, waterways, or soil is prohibited at DEN.
 - iii) Discharge of any chemical into the sanitary sewer without DEN ES approval is prohibited at DEN.
- B. General Considerations
- i) Each tenant/operator or employee conducting cleaning/washing 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) Use dry washing techniques as feasible, such as sweeping, vacuuming, wiping, air blasting, or using dry absorbents or cleaners.
 - iii) Use only cleaning solutions that comply with Metro Wastewater Reclamation District and Denver Wastewater requirements. Contact DEN ES for product approval.
 - iv) Minimize mixing of wash water with stormwater through the use of berms, sloping, overhead cover, vacuum truck, and other appropriate means.

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- v) Practice good housekeeping procedures to keep the wash area clean and free of waste.
- vi) "Truck and car wash units" are exempt from Air Pollutant Emission Notice requirements (APENs) and Operating Permit requirements under Colorado air quality regulations (5 CCR 1001-5).

Indoor Washing Requirements

Use designated wash facility indoors. The wash facility should:

- Filter and recycle water where practical.
- For wash water that cannot be recycled, utilize appropriate pretreatment device(s) for separation of oils and grease and the settling of solids (e.g., oil/water separator, sand trap) prior to discharge to the sanitary sewer.

Outdoor Washing Requirements

Outdoor washing is prohibited unless approved in writing by DEN Environmental Services OR one of the following requirements is met:

- A dry washing method is employed.
- Washing is performed on a relatively impervious surface (e.g., concrete, plastic) and wash water is collected. Collected wash water must be profiled, manifested, and transported off site for appropriate disposal at a permitted facility, or appropriately pretreated prior to discharge to the sanitary sewer.
- Washing of aircraft, vehicles, and equipment is performed within a DEN dirty water (DIW) collection area with prior approval by DEN Environmental Services.

C. Training Requirements

- i) Employees should be trained in company aircraft, vehicle, and/or equipment washing/cleaning procedures as well as in spill response, which may include on-the-job training.
- ii) Employee training programs shall inform personnel at all levels of responsibility who are involved in industrial activities that may impact stormwater runoff. Stormwater training shall address topics such as spill response, good housekeeping, and material management practices. Contractor or temporary personnel shall be informed of plant operation and design features in order to prevent discharges or spills from occurring.

D. Storage and Materials Management Requirements

- i) Preferably, cleaning solutions should be stored indoors utilizing secondary containment if there is a drain in the vicinity. If cleaning solutions must be stored outdoors, secondary containment and cover must be used.
- ii) Maintain legible labels and markings on all containers and tanks; labels on all containers must have the name of the owner of the container, an associated contact telephone number, an appropriate hazard warning, and must clearly indicate the contents. In addition, the name on the label must match the name on the corresponding MSDS. More complete labeling instructions are in ES-301-4.11.

4) Planning Requirements

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- A. Complete the DEN Stormwater Management Plan (SWMP) Industrial Activities Survey/Matrix in Appendix B of the plan to assist in determining other potentially relevant environmental guidelines and whether coverage under a SWMP is required.
 - This document is available at <http://business.flydenver.com/environmental>.
 - If applicable, the operator will need to decide whether to use the DEN SWMP or generate their own SWMP for review by DEN Environmental Services.
- B. Prior to use, obtain approval from DEN Environmental Services for cleaning solutions used in wet washing methods in which wash water will be discharged to the sanitary sewer.
- C. Maintain adequate supplies of spill response equipment and materials near areas where cleaning/washing occurs and cleaning/washing solutions are stored, and where spills are likely to occur.

5) Critical Tasks

- A. All aircraft, vehicle, and equipment washing activities utilizing wet methods must capture and contain wash fluids prior to disposal unless prior arrangements have been made with DEN Environmental Services.
- B. Check with Environmental Services for any questions.

6) Emergency Response

- A. Call DEN Communications Center immediately at 303-342-4200 for all spills regardless of whether any media was impacted. .
 - See Environmental Guideline *ES-301-5.02: Spill Response*
- B. Spills/releases should be contained and cleaned up as soon as possible using either manual (e.g., absorbents, shovel) or mechanical (e.g., vacuum, sweeper) means to minimize potential stormwater impacts. Containerized wastes should be properly labeled, stored, and disposed.
- C. Spills of any kind shall not be washed into any storm sewer or waterway, or onto any soils.

7) Inspection and Maintenance Requirements

- A. Pretreatment devices and sumps utilized in the collection of wash fluids should be included in a routine inspection and maintenance program.
 - See Environmental Guideline *ES-301-2.07: Maintenance of Pretreatment Devices*

8) Expected Records and Outputs

- A. Completed SWMP Industrial Activities Survey/Matrix (Appendix B of SWMP)
 - Obtain a copy of this document at <http://business.flydenver.com/environmental>.
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 - Complete and return to ES for evaluation.

- B. Spill and release records for any spills
 - Responsible party (for the spill) notifies DEN Communications Center.
 - Verbal or written reporting to regulatory agencies as required by their specific guidance is the responsibility of the operator.

- C. Evidence of training
 - 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.

- D. MSDSs for cleaning solutions/products
 - Manufacturers of cleaning products will supply these documents on demand. MSDSs for cleaning products should be made available to employees engaged in cleaning/washing activities and maintained on file by the Operator at the facility.

- E. Evidence of approval of any cleaning solutions used for wet methods
 - Metro Wastewater or DEN ES will issue a letter of approval for cleaning products on request, after review of product information provided by the Operator.

- F. Disposal profile, manifests and shipping forms
 - If off-site disposal of wash water occurs, a profile will be required by the disposal facility prior to shipping.
 - Based on the disposal profile, manifests and related forms (e.g., invoice) may be required. Manifests and profile forms can be obtained from the disposal facility for off-site disposal activities (manifests are required for hazardous waste).
 - All documents should be maintained on file by the Operator for at least three years.

9) References

- A. Phone Numbers

i) DEN Communications Center (for spill reporting)	(303) 342-4200
ii) Keith Pass (DEN Environmental Services)	(303) 342-2689
iii) Kim Ohlson (DEN Environmental Services)	(303) 342-2637
iv) DEN Environmental Services (Main Line)	(303) 342-2730

- B. Guidance Materials (list is not limited to the following)
 - i) Metro Wastewater Contribution Permit
 - ii) City and County of Denver Municipal Separate Storm Sewer System (MS4) Permit
 - iii) DEN Industrial Stormwater Permit
 - iv) DEN Stormwater Management Plan (SWMP), including SWMP Industrial Activities Survey/Matrix and Instructions (Appendix B)

- C. Training Materials (list is not limited to the following)
 - i) Company Standard Operating Procedures and/or On-the-Job Training materials
 - ii) Stormwater Pollution Prevention Training (DEN SWMP)

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D. Related Environmental Documents (list is not limited to the following)

- i) ES-301-2.07 Maintenance of Pretreatment Devices
- ii) ES-301-4.07 Potable Water-Using Municipal Activities
- iii) ES-301-5.02 Spill Response

E. Applicable Regulations (list is not limited to the following)

- i) Metro Wastewater Reclamation District Rules and Regulations, Sections 6.17-6.18
- ii) Denver Wastewater Management Division Rules and Regulations, Chapter 7
- iii) Denver Revised Municipal Code, Section 56-102
- iv) State Water Quality Regulations (Regulations 38, 61, and 65)
- v) 40 CFR 110.3 Discharge of Oil
- vi) 40 CFR 117.3 Determination of Reportable Quantities for a Hazardous Substance
- vii) 40 CFR 122-124 NPDES Regulations for Stormwater Discharges
- viii) DEN Rules and Regulations, Section 180
- ix) State Air Quality Control Commission Regulation No. 3 (5 CCR 1001-5)

F. Other Documents (list is not limited to the following)

- i) Sewer system as-built diagrams