

## PART 190 - AIRCRAFT DEICING REGULATIONS

### 190.01 Compliance and Applicability

All aircraft deicing and the management of bulk aircraft deicing fluid (“**ADF**”) shall be conducted in compliance with Denver International Airport (“**DEN**”) Rules and Regulations, including Part 180 and this Part 190, the Fire Code of the City and County of Denver, all applicable local, State, and Federal laws and regulations, and applicable provisions of the Airport Manager’s Bulletins, including as they may be amended.

### 190.02 Definitions

As used in this Part 190, unless the context clearly requires otherwise:

- 190.02-1 ADA.** “ADA” means Aircraft Deicing Authorization.
- 190.02-2 ADF.** “ADF” means aircraft deicing fluid.
- 190.02-3 ADS.** “ADS” means Denver International Airport’s aircraft deicing system owned by the City and County of Denver (“City”).
- 190.02-4 ADS User.** “ADS User” means any airline acting as a Self-Deicer or any Primary or Secondary Deicing Company that provides aircraft deicing services.
- 190.02-5 Airport Operations.** “Airport Operations” means the Department of Aviation’s Operations Division.
- 190.02-6 CEO.** “CEO” means the City and County of Denver, Department of Aviation’s Chief Executive Officer.
- 190.02-7 Deicing Year.** “Deicing Year” means the annual period starting on July 1 and ending on June 30.
- 190.02-8 EG.** “EG” means environmental guideline within DEN’s ISO 14001 certified Environmental Management System (EMS). DEN’s EGs can be accessed at <http://business.flydenver.com/environmental>. EGs that address industrial activities are also described in DEN’s Stormwater Management Plan (SWMP).
- 190.02-9 ES.** “ES” or “Environmental Services” means the Department of Aviation’s Environmental Services Section.
- 190.02-10 GSE.** “GSE” means ground support equipment.

- 190.02-11 Limited Deicing.** “Limited Deicing” means deicing aircraft surfaces in accordance with Section 190.07-1 below
- 190.02-12 Operator.** “Operator” means the company with whom the City has entered into a contract for the maintenance, operation and management of the ADS.
- 190.02-13 Primary Deicing Company.** “Primary Deicing Company” means the preferential deicing company which is contracted by an airline to provide deicing services.
- 190.02-14 RTM.** “RTM” means Ramp Tower Manager or, if the RTM is unavailable, the Controller in Charge.
- 190.02-15 Secondary Deicing Company.** “Secondary Deicing Company” means a deicing company which is contracted by an airline to perform aircraft deicing services if the Primary Deicing Company cannot perform the service.
- 190.02-16 Self-Deicer.** “Self-deicer” means an airline which is conducting its own aircraft deicing operations at DEN.
- 190.02-17 Senior Vice President.** “Senior Vice President” means the Senior Vice President of Aviation – Operations. The Senior Vice President supervises the Operations Division of the Department of Aviation.
- 190.02-18 Snow Plan.** “Snow Plan” means the Denver International Airport Snow and Ice Control Plan.
- 190.02-19 Supplier.** “Supplier” means a company selected by an airline or ADF Selection Committee to supply ADF to the ADS.
- 190.02-20 SWMP.** “SWMP” means the Denver International Airport Stormwater Management Plan prepared pursuant to the requirements of DEN’s Colorado Discharge Permit System (CDPS) permit COS-0000008 for stormwater associated with industrial activities. DEN’s SWMP may be accessed at <http://business.flydenver.com/environmental>.

### **190.03 Deicing Facilities**

The Airport’s facilities include the ADS, which: (i) receives and stores Type I and Type IV ADF; (ii) delivers undiluted Type I ADF and Type IV ADF to airlines for their use; (iii) recovers spent ADF from authorized deicing areas; and (iv) reclaims propylene glycol from the spent ADF.

No tenant or Airport user, including any airline, shall construct or alter any facility on the Airport, including but not limited to the ADS or a separate facility for the receipt, storage, and distribution of ADF, unless such construction or alteration is performed under and according to the terms of a

lease, permit, or other agreement signed by the CEO, and in compliance with the Airport's Tenant Development Guidelines.

## **190.04 Authorization to Conduct Deicing; Responsibilities**

### **190.04-1 City and Operator**

The City has entered into an agreement with the Operator for maintenance, operation, and management of the ADS. The Operator:

- a. has the exclusive right to operate the ADS, except for any portion of the ADS that DEN leases to an ADS User;
- b. is responsible for ensuring delivery of ADF as requested by ADS Users; the Operator is not responsible for purchasing ADF (*see* Section 190.04-2);
- c. has the exclusive right to collect, process, distill, and reclaim all ADF used at any location on the Airport.

Maintenance, operation, and management services shall be provided by the Operator at a reasonable and non-discriminatory charge.

### **190.04-2 Aircraft Deicing Fluid Supplier**

An ADF Selection Committee, composed of representatives from airlines that use ADF from the ADS, will select a company to supply fluid to the ADS (the "Supplier"). The Supplier selected by the ADF Selection Committee may enter into an agreement with the Operator to blend ADF on site for use in the ADS.

The Supplier may enter into agreements with the airlines and Primary/Secondary Deicing Companies for the sale of ADF from the ADS. All fees and charges imposed by the Supplier for ADF distributed from the ADS must be paid by the airlines and Primary/Secondary Deicing Companies who purchase it. The Operator will provide ADF usage records to the Supplier and the City; the Operator may provide usage records for an airline or ADS User to that user upon request by that particular airline or ADS User.

The airlines are responsible for purchasing ADF and ensuring adequate supplies of ADF are available on-site. The Operator will provide ADF inventory records to the Supplier. The ADF Selection Committee is responsible for ensuring that adequate supplies of ADF are delivered in a timely manner and available on site.

### **190.04-3 ADS User ADA Deadline**

All ADS Users must meet the requirements of Section 190.04-4 on or before September 15<sup>th</sup> each year.

## **190.04-4 Aircraft Deicing Authorization; Self-Deicers and Primary/Secondary Deicing Companies**

### **190.04-4(1) ADA Required; Application and Issuance**

An ADA must be obtained by each Self-Deicer and each Primary or Secondary Deicing Company prior to performing aircraft deicing. ADAs are issued by the Senior Vice President or authorized representative, and must be renewed annually. ADA applications shall be submitted to the Senior Vice providing the information required by and in a form acceptable to the Senior Vice President, as noted in Section 190.04-4(2) below. Upon submission of a complete application demonstrating eligibility for an ADA under these Rules, an ADA will be issued to the Self-Deicer and Primary/Secondary Deicing Company. Copies of each ADA issued by the Senior Vice President will be provided to ES.

### **190.04-4(2) Requirements for issuance of ADA**

Each deicing season, all ADS Users shall apply for an ADA using the form required by DEN. The following requirements must be satisfied before an ADA will be issued:

- a. Each Self-Deicer and Primary/Secondary Deicing Company must provide evidence to the Senior Vice President, which is subject to review and approval by ES, that all personnel conducting deicing operations have received training consistent with Environmental Guideline *Aircraft Deicing*.
- b. Each Self-Deicer and Primary/Secondary Deicing Company which is applying for its first ADA at DEN must meet the requirements in subparagraph (a) and must also submit to the Senior Vice President: (i) evidence of demonstrated experience performing aircraft deicing services, and (ii) a proposed work plan for its DEN operations, which shall include an equipment and staffing plan for such operations.
- c. An ADF User must prepare and submit to DEN an SPCC Plan if the ADF User has leases or other agreements that specifically delineate an area or areas of operational control subject to 40 CFR Part 112, *i.e.*, they meet or exceed 1,320 gallons total aboveground storage capacity for oil (including fuel, hydraulic fluid, etc.) in containers of 55 gallons or greater (including fuel tanks on deice trucks that are not used for motive power). Each ADF User that will require any onsite fuel storage equal to or greater than 55 gallons in any single aboveground container (including deice truck fuel tanks that are not used for motive power) outside of its lease area or area of operational control is required to prepare an SPCC Plan pursuant to 40 CFR Part 112. SPCC Plans shall be submitted to ES for review prior to the issuance of the ADA.

#### **190.04-5 Compliance with SWMP and Snow Plan**

Each ADS User shall comply with the Airport's SWMP and the Airport's Snow and Ice Control Program (a/k/a the "Snow Plan") during all deicing operations.

#### **190.04-6 Safety and Training**

Each Self-Deicer airline and each Primary or Secondary Deicing Company is responsible for establishing training on and enforcing proper safety procedures for their personnel. In addition, per CDPS permit COS-000008, annual stormwater pollution prevention training is required for personnel that conduct aircraft deicing and defrosting. The training must include a description of the actions required by those applying ADF (*e.g.*, spill notifications, proper disposal of out-of-spec fluids, *etc.*).

### **190.05 Aircraft Deicing Procedures**

#### **190.05-1 Compliance**

All aircraft deicing operations will be conducted in accordance with Federal Aviation Administration (FAA) directives, aircraft manufacturer's specifications, the Airport's CDPS permit and associated SWMP, the Ramp Snow Removal Plan, and DEN Rules and Regulations.

#### **190.05-2 Aircraft Positioning**

Aircraft shall be positioned in such a manner that the spray created while performing deicing does not contaminate other vehicles or people (*e.g.*, overspray on food trucks, loading trucks, ramp service vehicles, or personnel). Aircraft shall be positioned in a manner which ensures that all runoff of ADF applied to an aircraft will fall within the industrial waste collection trench drains.

#### **190.05-3 Minimum Number of Deicing Trucks**

A minimum of two (2) trucks per narrow body aircraft and three (3) trucks per wide body aircraft is required for full aircraft deicing. When the RTM allocates deice spots, those deicers that meet the minimum requirements will have priority over any deicer that does not meet the minimums. Any deviation from the above procedures must be approved by the Senior Vice President or authorized designee.

#### **190.05-4 Deicing with Aircraft Engines Running**

Engines running during deicing operations is authorized only on Deice Pads A, B, C, WA, E, J, DS West/East, and the commuter area east of C concourse. All airlines conducting deicing operations with engines running must follow established company procedures which are described in written company manuals.

## **190.06 Approved Deicing Fluids**

Only propylene glycol-based fluids shall be used for aircraft deicing at DEN. No other products shall be used.

## **190.07 Approved Deicing Locations**

### **190.07-1 Limited Deicing**

Limited Deicing may be performed at the locations stated below, but must be in accordance with the following requirements:

- a. In no event may the total amount of deicing fluid used in a limited deicing exceed 25 gallons neat (undiluted) ADF per aircraft;
- b. Volume of ADF applied per aircraft must be demonstrable (*e.g.*, metered) and may be audited by Airport Operations and/or ES; and
- c. During any gate deicing, the ADS User shall ensure that all ADF falls on the pavement between the industrial waste collection trench drains and the concourse.

### **190.07-1(1) Limited Deicing Locations**

Limited Deicing may occur only at the following locations:

- a. All concourse gates.
- b. Deice Pads A, B, C, J, WA, Commuter area east of C Concourse. .
- c. Deice Pad E with coordination and prior notification to the RTM and ES.
- d. South Cargo Ramp not including ramp taxiways.
- e. General Aviation Ramp not including ramp taxiways..
- f. DS West/East ramp/pad fully north of the trench drain with coordination and prior notification to the RTM and ES.
- g. Any other area designated by the CEO or authorized designee with coordination and prior notification to the RTM and ES.

### **190.07-2 Full Aircraft Deicing Locations**

Full aircraft deicing may occur only at the following areas:

- a. Deice Pads A, B, C, J, DS West/East and WA.
- b. Deice Pad E with coordination and prior notification to the RTM and ES.
- c. South Cargo Ramp, not including ramp taxiways.
- d. General Aviation Ramp not including ramp taxiways.
- e. Any other area designated by the CEO or authorized designee with coordination and prior notification to the RTM and ES.

## **190.08 Locations Where Deicing is Prohibited**

Aircraft deicing is prohibited on airport ramp taxiways, taxiways, and runways. No aircraft will be deiced in an area that has not been approved by the CEO or authorized designee.

## **190.09 Deicing Notification, Coordination, and Approval**

- (a) All ADS Users must notify and receive approval from Airport Operations (Ramp Tower) prior to conducting any deicing on a designated deice pad at any time. Prior to authorizing the deicing, Airport Operations will verify that the collection system at that location is in deice capture mode (*i.e.*, valves are positioned properly to allow the spent ADF to be captured). Notification is not required for limited deicing at a Concourse gate, the South Cargo ramp, or a General Aviation Ramp. Commonly used deicing areas will remain in deice capture mode during the normal deicing season (October through April); however, deicing areas may be in a non-deice, or non-capture, mode based on time of year (spring/summer) or history of use. Deicing operations conducted without authorization from Airport Operations may cause the City to be charged by the Colorado Department of Public Health and Environment with a violation of the Airport's industrial stormwater permit. The notice and authorization requirements of this Rule 190.09 are critically important to ensure the proper operation of the Airport's systems for capturing spent ADF and protection of the environment.
- a. The City's RTM is located in the Concourse B Ramp Control Tower. The RTM will coordinate pad allocation prior to aircraft pushback or as necessary to ensure maximum utilization of the pads and spots. The RTM will issue deice spot assignments, and may delegate this assignment to the ADS Users, as applicable.
  - b. All aircraft, GSE, and ground personnel shall remain inside the non-movement area while engaged in deice operations.
  - c. GSE shall not be parked in or around an unoccupied deice parking space. All GSE shall be moved to an area designated for GSE parking.
  - d. When needed, aircraft marshallers will direct taxiing aircraft to a designated deice spot.

## **190.10 Procedures for Loading, Transfer and Storage of ADF**

Loading, transfer and storage of ADF must be performed in accordance with DEN's EGs, which can be accessed at <http://business.flydenver.com/environmental>.

## **190.11 Spills**

Spills of any kind (*e.g.*, ADF, fuel, hydraulic fluid) must be reported immediately to the DEN Operations Division Communications Center (303-342-4200). Spills must be contained and cleaned up by the responsible party in accordance with Airport Rule and Regulation Part 180 - Environmental Management.

### **190.12 Disposal of “Unused” or “Out-of-Spec” Fluids**

The disposal of unused or out-of-spec fluids from deice vehicles must be coordinated with Airport Operations, ES, and the Operator. Unused or out-of-spec fluids shall be recycled to the extent practicable. The Operator, upon acceptance of the material, will coordinate transfer locations for the material. Materials not acceptable for recycling must be disposed off-site at an appropriately permitted facility.

### **190.13 Parking of Deice Trucks**

Deicing vehicles and support equipment shall be parked in designated parking places and will not be parked in aircraft operating areas unless actively engaged in deice operations or in support of aircraft in the gate. Parking locations shall be identified in the ADA application for approval by the Senior Vice President.

### **190.14 Deicing Training**

Deicing training may be allowed with coordination and prior notification to the RTM and ES. Deicing training, when allowed, will be performed in accordance with Environmental Guideline *Aircraft Deicing* and at a location approved by the Senior Vice President or authorized designee in coordination with ES.

### **190.15 ADF Usage Reporting**

Each ADS User must track and record ADF usage on a monthly basis, including beginning and ending inventories in tankage. This data is for use in the End-of-Year Reconciliation pursuant to the ADS Operator Agreement, and is a reporting requirement of DEN’s industrial stormwater permit. ADF usage and inventory reports are required to be submitted to ES on a monthly basis. The report must include total gallons (neat or undiluted) each of Type I and Type IV fluids applied during the month just completed, as well as the total gallons (neat or undiluted) each of Type I and Type IV fluids in inventory at the start and end of the prior month. These inventories may be a cumulative total for all the trucks and/or storage tanks in a deicer’s fleet.