

**BY ORDER OF THE COMMANDER
934TH AIRLIFT WING**

**934TH AIRLIFT WING INSTRUCTION
32-1005**



20 MARCH 2014

Civil Engineering

**PROCEDURES FOR MANAGEMENT OF
DEICING/ANTI-ICING OPERATIONS**

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This instruction implements Air Force Policy Directive (AFPD) 32-10, *Installations & Facilities*. This instruction outlines responsibilities and procedures necessary to ensure that the 934th Airlift Wing's use of aircraft de-icing/anti-icing fluids occurs in a manner that minimizes water resource impacts and facilitates consistent compliance with effluent limitations established under National Pollutant Discharge Elimination System permit MN0052141. This instruction applies to de-icing and anti-icing operations conducted by 934th Airlift Wing (934 AW) organizations on 934 AW facilities. Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the AF Form 847, *Recommendation for Change of Publication*; route AF Form 847s from the field through Major Command (MAJCOM) publications/forms managers. Ensure that all records created as a result of the processes prescribed in this publication are maintained in accordance with Air Force Manual (AFMAN) 33-363, *Management of Records*, and disposed of in accordance with the Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS) located at <https://www.my.af.mil/gcss-af61a/afirms/afirms/>.

SUMMARY OF CHANGES

This publication has been substantially revised and must be completely reviewed. Changes have been made to update organizational names, office symbols, and operating procedures due to reorganization of base operating service responsibilities since the previous version.

1. Background. The 934 AW mission at times requires flying operations during periods of cold and inclement weather. At such times, the use of aircraft de-icing/anti-icing fluids (ADAF) is

necessary to ensure that mission obligations can be met while maintaining the safety of both the aircrew and the local community. Use of ADAF always includes the potential for impacts to storm water runoff. Environmental regulatory programs address this potential by requiring commercial airports and military installations to develop and implement “best management practices” that prevent or reduce water pollution associated with ADAF use.

2. Best Management Practices. The responsibilities and procedures prescribed by this wing instruction incorporate best management practices (BMPs) that were developed, approved and communicated by HQ USAF/CVA to all major commands and installations, for implementation to the maximum extent possible. However, implementation of BMPs in no way authorizes deviation from the requirements of any applicable Technical Order.

3. Responsibilities.

3.1. 934th Airlift Wing Operations Group Commander (934 OG/CC):

3.1.1. Evaluate mission requirements and make decisions regarding postponement or cancellation of sorties that would require use of ADAF. Evaluations should consider the impact of mission cancellation or delay on such things as combat readiness, aircrew currency, customer requirements, environmental impacts, and safety.

3.1.2. Coordinate with 934th Aircraft Maintenance Squadron (934 AMXS/MXAA) when critical missions are anticipated to coincide with adverse weather.

3.2. 934 AMXS/MXAA:

3.2.1. Prior to critical missions that are anticipated to coincide with icing conditions, if hangar space is available place the designated aircraft into the hangar (building 821) or fuel cell facility (building 870) to prevent aircraft ice formation.

3.2.2. When ADAF use is necessary, conduct the ADAF application in a manner to allow maximum ADAF collection by sweeper trucks operated by CEO. Cover/block stormwater inlets during ADAF application and collection to prevent flow of ADAF into storm sewers.

3.2.3. Communicate anticipated ADAF application to 934 Civil Engineering Operations (CEO) to ensure that CEO can schedule personnel to accomplish snow removal and ADAF sweeping operations from the ramp areas where ADAF application will occur. During normal operating hours, coordination will occur through the CEO Customer Service Desk (713-1918).

3.2.4. Train assigned personnel on the proper use of ADAF application equipment and the ADAF operating procedures prescribed by Technical Order 42C-1-2, *Anti-icing, De-Icing and Defrosting of Parked Aircraft*. Conduct all ADAF application in a manner that minimizes over spray of the ADAF.

3.2.5. Aircraft Maintenance Squadron will record and report ADAF application data on the spreadsheet/log provided by 934th Civil Engineering Environmental Flight (934 MSG/CEV). After each ADAF application event, record the following data:

3.2.5.1. Type of fluid applied (normally “PG-1” for propylene glycol type 1).

3.2.5.2. Gallons of raw fluid applied, OR gallons of ADAF mixture applied.

- 3.2.5.3. Percent (%) of glycol in applied ADAF mixture.
 - 3.2.5.4. Aircraft location(s) (i.e., spot number) where application occurred.
 - 3.2.5.5. Number of 934 AW C-130s deiced.
 - 3.2.5.6. Number of transient aircraft deiced.
 - 3.2.5.7. Type of transient aircraft deiced.
 - 3.2.5.8. Name of person entering data.
- 3.3. 934 CEO:
- 3.3.1. Train assigned personnel on the proper use and operating procedures for snow removal equipment, ADAF sweeper trucks, and pavement deicer/anti-icer application equipment.
 - 3.3.2. Schedule personnel to accommodate 934 AMXS/MXAA requests for snow removal, pavement deicing/anti-icing, and ADAF sweeping operations from the ramp areas where ADAF application will occur. To the maximum extent practicable, remove snow from aircraft spots to be used for aircraft deicing, prior to the application of ADAF.
 - 3.3.3. Establish and implement a call-in procedure to ensure that snow removal, pavement deicing/anti-icing and ADAF collection are accomplished when needed outside of normal operating hours. Notify 934 AMXS/MXAA how personnel call-in will be initiated.
 - 3.3.4. When necessary, discharge collected glycol-impacted storm water to the sanitary sewer through interior floor drains connected to the sanitary sewer system (e.g, Building 837 wash rack, building 744 CE).
 - 3.3.5. Maintain records of pavement deicing chemical usage, and provide monthly reports to 934 MSG/CEV documenting monthly quantities used for each pavement deicing chemical.
- 3.4. 934 MSG/CEV:
- 3.4.1. Apply for and maintain National Pollutant Discharge Elimination System (NPDES) permits through the Minnesota Pollution Control Agency.
 - 3.4.2. Develop and maintain the facility Storm Water Pollution Prevention Plan.
 - 3.4.3. Conduct storm water discharge monitoring and analyses according to regulatory permit requirements.
 - 3.4.4. Accomplish data reporting to regulatory agencies, higher headquarters, and Metropolitan Airports Commission.
 - 3.4.5. Investigate ADAF-related pollution prevention opportunities, in coordination with 934th Airlift Wing Aircraft Maintenance and 934th Airlift Wing Operations Group.

3.5. 934 LRS/LGRVM Vehicle Maintenance: Accomplish conversion of sweeper vehicle(s) for use in ADAF collection each year prior to start of deicing season.

TODD J. MCCUBBIN, Colonel, USAFR
Commander

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

AFPD 32-10, *Installations & Facilities*, 04 March 2010

Technical Order 42C-1-2, *Anti-icing, De-Icing and Defrosting of Parked Aircraft*

Air Force Manual (AFMAN) 33-363, *Management of Records*, 01 March 2008

Adopted Forms

AF Form 847, *Recommendation for Change of Publication*

Abbreviations and Acronyms

ADAF—Aircraft De-icing/Anti-icing Fluids

AFPD—Air Force Policy Directive

AFMAN—Air Force Manual

AFRIMS—Air Force Records Information Management Systems

BMP—Best Management Practices

MAJCOM—Major Command

NPDES—National Pollutant Discharge Elimination System

OPR—Office of Primary Responsibility

RDS—Records Disposition Schedule