REDUCING POLLUTION ASSOCIATED WITH AIRCRAFT DEICING ACTIVITIES

INTRODUCTION

I. Industry[1] adopts this Voluntary Pollution Reduction Program ("Voluntary Program") with the goal of achieving, on a national basis, substantial adoption of Pollution Reduction Technologies that will reduce discharges to the environment associated with aircraft deicing activities, enhancing our nation's waters and aquatic ecosystems. Pollution Reduction Technologies may include, but are not limited to:

A. Pollution Prevention: examples may include improved Aircraft Deicing Fluid ("ADF") (*e.g.*, ADF formulations that exert a lower oxygen demand in waters), improved ADF application techniques (*e.g.*, application systems that utilize less ADF while maintaining flight safety), weather forecasting technologies that allow more efficient use of ADF, physical snow/ice removal techniques, enhanced training, ice-phobic materials on aircraft; and

B. ADF-Impacted Stormwater Management: examples may include systems and processes for collecting, storing, treating, recycling and/or otherwise managing the runoff that results from applying ADF to aircraft.

II. The Voluntary Program will be implemented over a 5 year period from September 30, 2012 to September 30, 2017 (the "Program Period") and will consist of the following seven components listed below and further described herein:

A. Conduct outreach and facilitate information exchange regarding this Voluntary Program;

B. Encourage the development, testing and commercially appropriate deployment of Pollution Reduction Technologies;

[1] A4A, ACI-NA, AAAE and RAA

C. Provide information characterizing the environmental benefits of appropriate Pollution Reduction Technologies;

D. Develop a quantitative pollution reduction goal to be achieved through the adoption of Pollution Reduction Technologies;

E. Provide an inventory of adopted Pollution Reduction Technologies;

F. Compare the environmental benefits of adopted Pollution Reduction Technologies with the quantitative pollution reduction goal; and

G. Report the results of the six components above to the U.S. Environmental Protection Agency ("EPA").

STRUCTURE OF VOLUNTARY PROGRAM

III. This Voluntary Program is structured to reflect the unique nature of the air transportation industry and aircraft deicing activity. Unique factors not common to other industries include:

A. The use of ADF is critical to the safe operation of aircraft under certain operating conditions and is mandated by federal law and the Federal Aviation Administration ("FAA");

B. The frequency and intensity of aircraft deicing and associated activities are dictated by natural processes beyond human control (specifically weather conditions) and are a function of fleet mix, frequency of aircraft operations, the role and location of an airport facility within the National Airspace System, and many other factors;

C. Aircraft deicing only occurs seasonally and, in many areas of the country when it does occur, it occurs only intermittently and for short time periods;

D. Air transportation is an extremely heavily regulated activity, particularly to ensure safety of operations. Such regulations include:

1. Object free areas;

2. Height restrictions;

3. Vehicular movement;

4. Occupational/environmental;

5. Etc.;

E. There is no "average airport." Airports are highly variable regarding geology, hydrology, climate, weather, geographic location, environmental conditions, etc.;

F. The existing infrastructure at airports, constraints on adding infrastructure (*e.g.*, availability of on-site land) and access to facilities not under Industry control (*e.g.*, publicly-owned treatment works (POTWs)), will vary; and

G. Performance and implementation of specific Pollution Reduction Technologies will vary based on above factors.

IV. Owing to these unique factors and the fact that the Clean Water Act's existing stormwater permitting program addresses discharges associated with aircraft deicing activities, it is understood that this Voluntary Program does not and shall not be construed to:

A. Impose or imply any unique, specific or additional obligation on any individual airport, airline, fixed-base operator or other entity to deploy any specific Pollution Reduction Technology;

B. Impose or imply any constraint or limit of any type on ADF usage;

C. Impose or imply any constraint or limit of any type (including effluent limit) on any specific discharges associated with ADF usage; or

D. Impose or imply any constraint or limit of any type on aircraft operations.

PROGRAM COMPONENTS

V. ***Outreach to Facilitate Information Exchange***: Industry, to the extent practicable and subject to legal restraints, will facilitate information exchange regarding Pollution Reduction Technologies through the following avenues:

A. ACI-NA/A4A Deicing Conference (conducted at least biennially) (EPA, FAA and other government agencies staff are invited to participate as appropriate);

B. AAAE Large Hub Winter Operations and Deicing Conference:

C. A4A Environment Council;

D. ACI-NA Environmental Affairs Committee;

E. AAAE Environmental Services Committee; and

F. RAA Environmental Committee.

G. This Component is subject to and limited by antitrust prohibitions precluding exchange of information or agreements regarding subjects such as: price or service-related terms (*e.g.*, service fees, warranty terms, methods of recouping costs); boycotts or blacklists (*e.g.*, limiting or refusing to do business with suppliers or category of suppliers); requiring suppliers to use certain standards or specifications; competitively-sensitive internal information (*e.g.*, product pricing, cost-effectiveness); or contract bids or requests for proposals.

H. Reporting on the activities of the Industry Associations is subject to each Association's bylaws, etc.

VI. ***Encourage Developing, Testing and Deploying Pollution Reduction Technologies***: Industry, to the extent practicable and subject to legal restraints, will encourage development, testing and, as commercially appropriate (as determined by Industry), deployment of Pollution Reduction Technologies. Recognizing association activities are subject to applicable by-laws, examples of potential activities include:

A. Industry participation in SAE G-12 Committee (Aircraft Deicing Fluids Committee, Aircraft Deicing Facilities Committee, New Technologies Committee, etc.);

B. Industry will work with FAA, DOT, NASA and DOD to encourage technology development and deployment; and

C. This Component is subject to and limited by antitrust prohibitions precluding exchange of information or agreements regarding subjects such as: price or service-related terms (*e.g.,* service fees, warranty terms, methods of recouping costs); boycotts or blacklists (*e.g.,* limiting or refusing to do business with suppliers or category of suppliers); requiring suppliers to use certain standards or specifications; competitively-sensitive internal information (*e.g.,* product pricing, cost-effectiveness); or contract bids or requests for proposals.

VII. ***Characterize the Environmental Benefits of Pollution Reduction Technologies***: Industry will gather "existing readily available public information" to characterize the environmental benefits of specific Pollution Reduction Technologies, including:

A. Manufacturer-Provided Information, for example, regarding environmental characteristics of ADF and fluid savings associated with use of ADF trucks;

B. Research/Reports, for example, ACRP Report 14 (Deicing Planning Guidelines and Practices for Stormwater Management Systems) (2009);

C. Studies/analyses/assessments regarding the estimated benefits of appropriate pollution prevention technologies and stormwater management methods;

D. For the purposes of this Voluntary Agreement, "existing, readily available public information" is meant to identify readily-available manufacturer information, reports, and studies/analyses/assessments of various Pollution Reduction Technologies assembled by the Industry that are deemed appropriate for public disclosure by the entity that undertook or commissioned the study. It is not meant to include or require:

1. Feasibility studies or other Pollution Reduction Technology assessments that may have been considered but have not been deployed;

2. Initiating or completing any study/analysis/assessment to quantify or estimate the benefit of measures adopted; or

3. Disclosing any study/analysis/assessment that quantifies or estimates the benefit of measures adopted, but which may be considered to be confidential for any reason by its owner.

VIII. ***Develop a Quantitative Pollution Reduction Goal***: Industry agrees to develop a quantitative pollution reduction goal that, on a national basis, will reflect a substantial adoption of Pollution Reduction Technologies, enhancing our nation's waters and aquatic ecosystems. This pollution reduction goal will be stated in terms of a national estimate of the reduction in oxygen demand projected to result from Pollution Reduction Technologies adopted during the Defined Period relative to what otherwise would have occurred absent industry adoption of such technologies. Industry may also document significant reductions in oxygen demand resulting from the adoption of Pollution Reduction Technologies prior to the Defined Period.

IX. ***Inventory Pollution Reduction Technologies Adopted***: Industry will inventory Pollution Reduction Technologies adopted during the Defined Period at the Defined Set of Airports (and at other airports at the Industry's discretion).

A. "Defined Set of Airports" – means a list of airports at which, collectively on a national basis, approximately 80 percent of the ADF typically is applied.

Additional airports may be included at Industry's discretion at any time during the Program.

B. Industry will identify the Pollution Reduction Technologies adopted during the Defined Period through one or more surveys conducted by Industry during and/or at the conclusion of the Program. The Defined Period shall be the period from January 1, 2005 to September 30, 2017.

X. ***Compare the Environmental Benefits of Pollution Reduction Technologies with the Quantitative Pollution Reduction Goal***: Industry will compare the environmental benefits of Pollution Reduction Technologies adopted during the Defined Period to the quantitative pollution reduction goal established under this Program.

XI. ***Reporting:*** Industry will report to EPA on the Voluntary Program as follows:

A. **Initial Report:** No later than November 30, 2012, Industry will provide a report consisting of the following:

1. The list of airports included in the "Defined Set of Airports;" and

2. A summary of any outreach that has been conducted or planned to facilitate the information exchange in support of the Voluntary Program (this summary may be in the form of a table or other useful format).

B. **Phase I Report:** No later than September 30, 2014, Industry will provide a report consisting of the following:

1. A summary of Industry activities that have been conducted or planned from the time the Initial Report was filed to:

a. further facilitate information exchange and outreach; and

b. encourage the development, testing and, as commercially appropriate, deployment of Pollution Reduction Technologies;

2. Publicly available information characterizing the environmental benefits of Pollution Reduction Technologies developed in accordance with VII, above; and

3. An articulation of the quantitative pollution reduction goal developed in accordance with VIII, above.

C. **Phase II Report:** No later than 60-days following the Program's September 30, 2017 closing date, Industry will provide a report consisting of the following:

1. An update of elements 1 and 2 of the Phase I Report; and

2. A comparison of the environmental benefits of the Pollution Reduction Technologies adopted during the Defined Period to the pollution reduction goal developed in accordance with VIII, above.

XII. Summary of Key Dates

Establish/Initiate Voluntary Program	September 30, 2012
Initial Report	November 30, 2012
Phase I Report	September 30, 2014
End Voluntary Program	September 30, 2017
Phase II Report	November 30, 2017