

Attach Address Label

U.S. ENVIRONMENTAL PROTECTION AGENCY
AIRLINE DEICING QUESTIONNAIRE



Form Approved
OMB Control No. 2040-0267
Approval Expires 01/31/2009

The public reporting and recordkeeping burden for this collection of information is estimated to average 21 hours per response. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Avenue, N.W., Washington, D.C. 20460. Include the OMB control number (2040-0267) in any correspondence. Do not send the completed survey to this address.

INTRODUCTION

The U.S. Environmental Protection Agency (EPA) is conducting a survey of airline deicing and anti-icing activities as part of its effort to develop national effluent guidelines regulations for the airport deicing operations point source category. This questionnaire requests information on deicing and anti-icing operations that you performed or that were performed for your airline during the 2002/2003, 2003/2004, and/or 2004/2005 winter seasons. EPA is sending questionnaires to a sample of airline certificate holders to help the Agency compile a national assessment of deicing operations. EPA will also send a separate questionnaire to a sample of airport owners/operators.

This questionnaire is conducted under the authority of Section 308 of the Clean Water Act (Federal Water Pollution Control Act, 33 U.S.C. Section 1318). **All airlines that receive this questionnaire must respond to it within 60 days** of receiving it.

As explained in EPA's 2004 Effluent Guidelines Plan (69 FR 53719 September 2, 2004), the Agency has identified airport deicing operations for possible effluent guidelines rulemaking. Effluent guidelines (i.e., effluent limitations guidelines and standards) are developed pursuant to the Clean Water Act and are restrictions that may be applied to industrial discharges. EPA develops ELGs on an industry-by-industry basis using information collected during the rulemaking process.

OVERVIEW OF THE QUESTIONNAIRE

The questionnaire is divided into the following parts and sections:

PART A: TECHNICAL INFORMATION

- SECTION 1: General Airline Information
- SECTION 2: Airline Deicing and Anti-Icing Operations at each airport specified in Section 1
- SECTION 3: Pollution Prevention Practices at each airport specified in Section 1

PART B: DEICING COSTS AND OPERATIONS

- SECTION 1: Airline Deicing Costs and Operations
- SECTION 2: Airport-Specific Deicing Costs and Operations

The questionnaire includes questions on the deicing technologies employed, pollution prevention techniques, and economic and financial information for the last three winter seasons (i.e., 2002/2003, 2003/2004, and/or 2004/2005).

EPA will use the technical data collected in Part A of this questionnaire to develop an industry profile for deicing operations and to formulate regulatory options. EPA will also use these technical data together with the financial data collected in Part B of this questionnaire to estimate the costs and benefits associated with any new national effluent guidelines considered by EPA. Finally, EPA will characterize the economic status of the industry and estimate the possible economic impacts of regulations using the financial and economic data collected in Part B of this questionnaire.

COMPLETION OF THE QUESTIONNAIRE

Each section should be completed by the person(s) most knowledgeable about the information requested. All airlines must have the corporate official or designee responsible for directing or supervising the response to the questionnaire sign the Certification Statement on page v to verify and validate the information provided.

QUESTIONNAIRE ASSISTANCE

If you have any questions regarding completion of this questionnaire you can request assistance using EPA's e-mail helplines provided below. Please include the question number along with your questions. Respondents who desire assistance by telephone should send an e-mail with "Please Call Me" in the subject line. Please provide the call-back phone number, contact name, and desired day and time to call. The return phone call will be free of charge to the respondent.

EPA also has a website (see below) for the Deicing questionnaires where you can download a blank questionnaire or electronic questionnaire form, and obtain other information.

EPA AIRLINE DETAILED QUESTIONNAIRE E-MAIL ADDRESSES AND WEBSITE

Email Helpline for Technical Information (Part A)	airportdeicehelp.tech@erg.com
Email Helpline for Economic Information (Part B)	airportdeicehelp.econ@erg.com
Website	www.epa.gov/guide/airport
See the "Frequently Asked Questions" web page for updates and clarifications	

WHEN TO RETURN THE QUESTIONNAIRE

The response to this questionnaire is due 60 days after receiving it.

If you wish to request an extension, you must do so **in writing** no later than one week of the due date of this questionnaire. Written requests may be e-mailed to Mr. Brian D'Amico at **damico.brian@epa.gov** or may be mailed to:

Postal Mail:

Mr. Brian D'Amico
U.S. Environmental Protection Agency
Engineering and Analysis Division (4303T)
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Courier Delivery:

Mr. Brian D'Amico
U.S. Environmental Protection Agency
Engineering and Analysis Division
1301 Constitution Avenue, NW (Room 6231)
Washington, DC 20004

WHERE TO RETURN THE QUESTIONNAIRE

After completing the questionnaire and certifying the information that it contains, use the enclosed mailing label to mail the completed questionnaire to:

U.S. Environmental Protection Agency
Airline Deicing Questionnaire
c/o Eastern Research Group, Inc.
14555 Avion Parkway, Suite 200
Chantilly, VA 20151

ELECTRONIC VERSION OF THE QUESTIONNAIRE

To complete the questionnaire electronically, an electronic form is available on EPA's website at **www.epa.gov/guide/airport**. However, the website version does not list the specific airport locations for which your airline must respond. The specific locations for your airline are provided only in this hard copy. See Section 2, Instructions for Part A, Sections 2 and 3 on page A-3.

The electronic questionnaire form is in Microsoft Word© format. You may save the file on your local computer. Detailed instructions for completing the electronic questionnaire form are provided on EPA's website.

This electronic form does not have the capability to fill in multiple copies of questions. To complete multiple copies for Part A, Sections 2 and 3 and Part B, Section 2 for the specified airport locations, individual files for these sections are provided on EPA's website. You may save a file for each specified airport and complete these sections electronically. See instructions for Part A, Sections 2 and 3 (page A-3) and Part B, Section 2 (page B-3).

If you complete the survey electronically, you must print the survey response, sign the Certification Statement on page v, and **submit it as a hard copy**.

CONFIDENTIAL BUSINESS INFORMATION

Regulations governing the confidentiality of business information are contained in the Code of Federal Regulations (CFR) at Title 40 Part 2, Subpart B. You may assert a business confidentiality claim covering part or all of the information you submit, other than effluent data and information or data that is otherwise publicly available, as described in 40 CFR 2.203(b):

“(b) Method and time of asserting business confidentiality claim. A business which is submitting information to EPA may assert a business confidentiality claim covering the information by placing on (or attaching to) the information, at the time it is submitted to EPA, a cover sheet, stamped or typed legend, or other suitable form of notice complying language such as ‘trade secret,’ ‘proprietary,’ or ‘company confidential.’ Allegedly confidential portions of otherwise nonconfidential documents should be clearly identified by the business, and may be submitted separately to facilitate identification and handling by EPA. If the business desires confidential treatment only until a certain date or until the occurrence of a certain event, the notice should so state.”

If no business confidentiality claim accompanies the information when it is received by EPA, EPA may make the information available to the public without further notice.

You may claim as confidential all information included in the response to a question by checking the Confidential Business Information (CBI) box next to the question number. Note that you may be asked to justify any claim of confidentiality at a later time, for example if someone requests access to your data. Note also that airport effluent data are not eligible for confidential treatment, pursuant to Section 308(b) of the Clean Water Act. In addition, information that is publicly available should not be claimed confidential. Note also that information claimed confidential cannot be accessed or used by the industry to evaluate data and analyses supporting the national effluent guidelines regulations. You may also claim all eligible information on the questionnaire as CBI by checking the global CBI box below.

Global CBI Check Box

- Please treat all eligible information as CBI. I understand that effluent data and data that is already publicly available may not be claimed CBI.

Information covered by a claim of confidentiality will be disclosed by EPA only to the extent of, and by means of, the procedures set forth in 40 CFR Part 2, Subpart B. In general, submitted information protected by a business confidentiality claim may be disclosed to other employees, officers, or authorized representatives of the United States concerned with implementing the Clean Water Act. The authorized representatives include employees of other executive branch agencies, who may review CBI during the course of reviewing draft regulations.

Information covered by a claim of confidentiality will be made available to EPA contractors to enable the contractors to perform the work required by their contracts with EPA. All EPA contracts provide that contractor employees use the information only for the purpose of performing the work required by their contracts and will not disclose any CBI to anyone other than EPA without prior written approval from each affected business or from EPA's legal office.

GENERAL INSTRUCTIONS FOR QUESTIONNAIRE

A majority of the questions are specific to an airport where your airline operates. Responses to these questions should apply only to that specific airport.

EPA is providing copies of survey Sections 2 and 3 for each airport where your airline operates and for which information is requested.

Read all question-specific instructions and definitions of key terms. Carefully read the definitions of key terms (found on the following pages) and any instructions for specific questions.

Mark responses for each question for which the answer is known based on readily available data. Fill in the appropriate response(s) to each question. Please use **black ink** or **type** in the spaces provided. Answer the questions in sequence unless you are directed to SKIP. EPA prepared this questionnaire to be applicable to a variety of airlines; therefore, not all of the questions will apply to every airline. Complete each relevant item in the questionnaire. If the answer is zero, write "0" or "zero". If a question is not applicable to your airline, write "NA." If the information is unknown, write "Unknown." You are not required to provide engineering or "best professional judgement" estimates for questions for which the answer is not known based on readily available data.

Include any clarifying attachments. If additional attachments are required to clarify a response, please place the associated question number and your airline name in the top right corner of each page of the attachments. The following list contains examples of items which may be included as attachments to this questionnaire:

- Airline brochure, pamphlet, general description; and
- Pollution prevention or management practices and data.

The questionnaire requests information applicable to the last three winter seasons (i.e., 2002/2003, 2003/2004, 2004/2005).

You are not required to perform new or non-routine tests or measurements solely for the purpose of responding to this questionnaire. EPA intends that responses to all questions be based upon readily available data and information. The Comments page located at the end of each section can be used to note any methods or underlying assumptions used in providing responses.

Pay close attention to the measurement units requested (e.g., gallons, pounds). Report answers in the units that are specified, unless the question requires you to specify the units.

Indicate information that should be treated as confidential. You may claim as confidential all information included in the response to a question by checking the Confidential Business Information (CBI) box next to the question number. Note that you may be asked to justify any claim of confidentiality at a later time. See the CONFIDENTIAL BUSINESS INFORMATION section on page iii.

Questions? If you have any questions regarding the completion of this questionnaire, see the QUESTIONNAIRE ASSISTANCE section on page ii for assistance by e-mail or website.

BE SURE TO RETAIN A COPY OF THE COMPLETED QUESTIONNAIRE FOR YOUR RECORDS. EPA will review the information submitted and may request your cooperation in answering follow-up questions, if necessary, to complete analyses.

CERTIFICATION STATEMENT

The individual responsible for directing or supervising the preparation of the questionnaire must read and sign the Certification Statement listed below. The certifying official must be a responsible corporate official or his/her authorized representative.

Certification Statement

I certify under penalty of law that the attached questionnaire was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. The information submitted is, to the best of my knowledge and belief, accurate and complete. For the information claimed as company confidential business information pursuant to 40 CFR Part 2, Subpart B, I understand that the company may be asked to justify our claim at a later time, for example, if someone requests access to these data. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment as explained in Section 308 of the Clean Water Act.

Signature of Certifying Official_____
Date_____
Printed Name of Certifying Official()

Telephone Number_____
Title of Certifying Official_____
Airline Name

DEFINITIONS OF KEY TERMS

Aircraft Deicing Fluid (ADF) - Any fluid used for the purpose of deicing or anti-icing aircraft. These include, but are not limited to, Type I, II, III, and IV deicing fluid, hot water.

Aircraft Deicing Pad - An area specifically designed and used for aircraft deicing/anti-icing and which is served by a deicing stormwater collection and/or segregation system. Aircraft deicing pads include specially designed deicing pads and also other paved areas designated for deicing/anti-icing operations and retrofitted with a collection and/or segregation system.

Airfield - Air operation areas including aircraft movement areas (e.g., ramps, aprons, taxiways, runways, aircraft parking areas, loading ramps) and any other operational areas (e.g., general aviation and cargo areas) which are used by aircraft.

Anti-icing - The prevention of the accumulation of frost, snow, or ice on an aircraft. This may include chemical means (application of glycol-based fluids).

Clean Water Act (CWA) - Federal legislation enacted by Congress to “restore and maintain the chemical, physical, and biological integrity of the Nation’s waters” (Federal Water Pollution Control Act of 1972, as amended, 33 U.S.C. 1251 et seq.).

Deicing - The removal of frost, snow, or ice from an aircraft or an airfield. This may include chemical and mechanical means (e.g., application of glycol-based fluids or hot water, use of brooms).

Deicing Stormwater - Any stormwater, runoff, or snow melt that comes in contact with or is generated from deicing and/or anti-icing fluids or chemicals (including hot water), for example, stormwater containing used ADF that is collected from deicing pads, or stormwater that is contaminated with runway deicing chemicals.

Discharge - The conveyance of deicing stormwater to: (1) United States surface waters such as rivers, lakes, and oceans, or (2) a publicly owned, privately owned, federally owned, combined, or other treatment works.

Pollutant - Under the Clean Water Act, a dredged spoil, solid waste, incinerator residue, filter backwash, sewage sludge, munitions, chemical waste, biological material, certain radioactive material, heat, wrecked or discarded equipment, rock sand, cellar dirt, and industrial, municipal, and agricultural waste (40 CFR 122.2).

Pollution Prevention - The use of materials, processes, or practices that reduce or eliminate deicing stormwater. It includes practices that result in conservation or more efficient use of deicing and/or anti-icing material (e.g., enhanced weather prediction). It includes source reduction prior to recycling, treatment, or disposal that reduces the amount of any pollutant or contaminant entering any waste stream or otherwise released into the environment. Source reduction can include equipment or technology modifications, process or procedure modifications, substitution of raw materials, and improvements in housekeeping, maintenance, training, or inventory control (e.g., ADF application training for airline personnel, use of non-glycol based fluids).

PART A: TECHNICAL INFORMATION
SECTION 1: GENERAL AIRLINE INFORMATION

Attach Airline Address Label Here

1. Is the mailing address on the mailing label correct?

- Yes (*Skip to Question 3*)
- No

2. Please print the correct mailing address.

Airline Name

Street Address, Post Office Box, or Roadway Intersection

City

State

Zip Code

3. Provide the following information for the primary contact for the technical information supplied in Part A of this questionnaire:

Primary Contact Name

(_____) _____
Telephone Number

Title

(_____) _____
Fax Number

E-mail Address

Convenient time to call:
between ___ am/pm and ___ am/pm
(Eastern Time)

Street Address or Post Office Box

City

State

Zip Code

4. Provide the following information for the secondary contact for the technical information supplied in Part A of this questionnaire:

Secondary Contact Name

Telephone Number

Title

Fax Number

E-mail Address

Street Address or Post Office Box

Convenient time to call:
between ___ am/pm and ___ am/pm
(Eastern Time)

City

State

Zip Code

SECTION 2: AIRLINE DEICING AND ANTI-ICING OPERATIONS

Instructions for Part A, Sections 2 and 3

Please complete Part A, Sections 2 and 3 for each of the following airport locations at which this airline operates.

Airport Name

Airport City and State

Airport Name

Airport City and State

Airport Name

Airport City and State

Airport Name

Airport City and State

Airport Name

Airport City and State

FOR EACH AIRPORT LOCATION LISTED ABOVE, COMPLETE PART A, SECTION 2 (AIRLINE DEICING AND ANTI-ICING OPERATIONS) AND SECTION 3 (POLLUTION PREVENTION PRACTICES). EPA HAS PROVIDED YOU WITH THE NUMBER OF COPIES OF PART A, SECTIONS 2 AND 3 NEEDED FOR THESE AIRPORT LOCATIONS.

You do not need to provide information in Sections 2 and 3 for airport locations not listed above.

Electronic Questionnaire

If you use the electronic questionnaire to complete your response, please note that the electronic questionnaire form on EPA's website does not list the specific airport locations shown above. See "Electronic Questionnaire" on page ii of the Introduction. Detailed instructions for completing the electronic questionnaire form are provided on EPA's website.

This electronic form does not have the capability to fill in multiple copies of questions. To complete multiple copies for Sections 2 and 3, an individual file for these sections is provided on EPA's website. To prepare your response, use the following procedure:

1. Open the MS Word file for Part A, Section 2 and 3.
2. Save a file on your local computer for each airport location listed above.
3. Enter the airport name and your airline ID in the spaces provided on each page.
4. Complete the responses to each question and save the airport file on your computer.

If you complete the survey electronically, you must print the survey response, sign the Certification Statement on page v, and **submit it as a hard copy**.

Part A, Sections 2 and 3 of the questionnaire collect information for each airport location listed on page A-3.

Airport Name:

CBI?
 Yes 5. Were deicing and/or anti-icing operations performed on your aircraft at any time during the 2002/2003, 2003/2004, and/or 2004/2005 winter seasons (hereafter referred to as the **last three winter seasons**) at this airport location?

Yes

No **(If no, then no further questions apply to this airport location. Skip to Question 5 for the next airport location.)**

CBI?
 Yes 6. Where were your **aircraft** deicing/anti-icing operations performed at this airport location? Check all that apply.

Passenger terminal gates/apron areas

Cargo apron areas

Aircraft deicing/anti-icing pad(s)

Infrared deicing hangar

Taxiway(s)

Aircraft parking apron(s)

Airfield Ramp(s)

Other (*Specify*): _____

CBI?
 Yes 7. Did you perform deicing/anti-icing operations on your own aircraft at this airport location?

Yes (*Complete Questions 8 through 12*)

No (*Skip to Question 13*)

CBI?
 Yes 8. What type(s) of equipment was used for applying deicing/anti-icing fluids for your aircraft deicing/anti-icing operations at this airport location? Check all that apply.

Mobile deicing trucks

Handheld bottles/containers

Fixed boom(s)

Other (*Specify*): _____

CBI?
 Yes 9. a. Did you perform aircraft deicing/anti-icing for another airline at this airport location?

Yes

No (*Go to Question 10*)

b. Provide the name of the airline(s).

Instructions for Questions 10, 11, and 12

Questions 10, 11, and 12 are specific to the 2002/2003, 2003/2004, and 2004/2005 winter seasons, respectively. In part a, provide the name, amount purchased, formulation, percent concentration/range, and chemical brand name for the deicing/anti-icing chemicals and materials purchased for use on all aircraft your airline deiced (i.e., your aircraft and/or other airline aircraft).

In part b of these questions, indicate the aircraft deicing/anti-icing materials and/or practices used by your airline for the 2002/2003, 2003/2004, and/or 2004/2005 winter seasons.

AND: If you have chemical usage reports for deicing/anti-icing chemicals, you may attach copies of these reports.

Reports attached

Airport Name:

CBI?
 Yes

10. a. Provide the following information for the **Aircraft** deicing and anti-icing chemicals purchased by your airline (for your own aircraft and/or other airline aircraft) in the **2002/2003 winter season** at this airport location. Check all that apply. If aircraft deicing/anti-icing was not performed by your airline during this winter season, check here and go to Question 11.

Deicing/Anti-Icing Chemical	Check (✓) if Used	Amount Purchased ^a	As Purchased Formulation	As Purchased Percent Concentration	Brand Name of Chemical
Type I Ethylene Glycol-Based Fluid	<input type="checkbox"/>	_____ gal/season	<input type="checkbox"/> Ready to Apply <input type="checkbox"/> Concentrate	_____ %	
Type II Ethylene Glycol-Based Fluid	<input type="checkbox"/>	_____ gal/season	<input type="checkbox"/> Ready to Apply <input type="checkbox"/> Concentrate	_____ %	
Type IV Ethylene Glycol-Based Fluid	<input type="checkbox"/>	_____ gal/season	<input type="checkbox"/> Ready to Apply <input type="checkbox"/> Concentrate	_____ %	
Type I Propylene Glycol-Based Fluid	<input type="checkbox"/>	_____ gal/season	<input type="checkbox"/> Ready to Apply <input type="checkbox"/> Concentrate	_____ %	
Type II Propylene Glycol-Based Fluid	<input type="checkbox"/>	_____ gal/season	<input type="checkbox"/> Ready to Apply <input type="checkbox"/> Concentrate	_____ %	
Type III Propylene Glycol-Based Fluid	<input type="checkbox"/>	_____ gal/season	<input type="checkbox"/> Ready to Apply <input type="checkbox"/> Concentrate	_____ %	
Type IV Propylene Glycol-Based Fluid	<input type="checkbox"/>	_____ gal/season	<input type="checkbox"/> Ready to Apply <input type="checkbox"/> Concentrate	_____ %	
Isopropyl Alcohol-Based Fluid	<input type="checkbox"/>	_____ gal/season	<input type="checkbox"/> Ready to Apply <input type="checkbox"/> Concentrate	_____ %	
Other: (Specify)	<input type="checkbox"/>	_____ gal/season _____ lb/season	<input type="checkbox"/> Ready to Apply <input type="checkbox"/> Concentrate	_____ %	

a - Season = 2002/2003 winter season.

- b. Indicate if your airline used any of the following aircraft deicing/anti-icing materials and/or practices at any time in the 2002/2003 winter season. Check all that apply.

- | | |
|--|---|
| <input type="checkbox"/> Hot Water | <input type="checkbox"/> Mechanical (e.g., brooms, ropes) |
| <input type="checkbox"/> Infrared | <input type="checkbox"/> Store Aircraft in Hangar |
| <input type="checkbox"/> Forced air system | |

- c. What happened to the left over aircraft deicing and anti-icing chemicals that were purchased by your airline and not used during this winter season?

Airport Name:

CBI?
 Yes

11. a. Provide the following information for the **Aircraft** deicing and anti-icing chemicals purchased by your airline (for your own aircraft and/or other airline aircraft) in the **2003/2004 winter season** at this airport location. Check all that apply. If aircraft deicing/anti-icing was not performed by your airline during this winter season, check here and go to Question 12.

Deicing/Anti-Icing Chemical	Check (✓) if Used	Amount Purchased ^a	As Purchased Formulation	As Purchased Percent Concentration	Brand Name of Chemical
Type I Ethylene Glycol-Based Fluid	<input type="checkbox"/>	_____ gal/season	<input type="checkbox"/> Ready to Apply <input type="checkbox"/> Concentrate	_____ %	
Type II Ethylene Glycol-Based Fluid	<input type="checkbox"/>	_____ gal/season	<input type="checkbox"/> Ready to Apply <input type="checkbox"/> Concentrate	_____ %	
Type IV Ethylene Glycol-Based Fluid	<input type="checkbox"/>	_____ gal/season	<input type="checkbox"/> Ready to Apply <input type="checkbox"/> Concentrate	_____ %	
Type I Propylene Glycol-Based Fluid	<input type="checkbox"/>	_____ gal/season	<input type="checkbox"/> Ready to Apply <input type="checkbox"/> Concentrate	_____ %	
Type II Propylene Glycol-Based Fluid	<input type="checkbox"/>	_____ gal/season	<input type="checkbox"/> Ready to Apply <input type="checkbox"/> Concentrate	_____ %	
Type III Propylene Glycol-Based Fluid	<input type="checkbox"/>	_____ gal/season	<input type="checkbox"/> Ready to Apply <input type="checkbox"/> Concentrate	_____ %	
Type IV Propylene Glycol-Based Fluid	<input type="checkbox"/>	_____ gal/season	<input type="checkbox"/> Ready to Apply <input type="checkbox"/> Concentrate	_____ %	
Isopropyl Alcohol-Based Fluid	<input type="checkbox"/>	_____ gal/season	<input type="checkbox"/> Ready to Apply <input type="checkbox"/> Concentrate	_____ %	
Other: (Specify)	<input type="checkbox"/>	_____ gal/season _____ lb/season	<input type="checkbox"/> Ready to Apply <input type="checkbox"/> Concentrate	_____ %	

a - Season = 2003/2004 winter season.

- b. Indicate if your airline used any of the following aircraft deicing/anti-icing materials and/or practices at any time in the 2003/2004 winter season. Check all that apply.

- | | |
|--|---|
| <input type="checkbox"/> Hot Water | <input type="checkbox"/> Mechanical (e.g., brooms, ropes) |
| <input type="checkbox"/> Infrared | <input type="checkbox"/> Store Aircraft in Hangar |
| <input type="checkbox"/> Forced air system | |

- c. What happened to the left over aircraft deicing and anti-icing chemicals that were purchased by your airline and not used during this winter season?

Airport Name:

CBI?
 Yes

12. a. Provide the following information for the **Aircraft** deicing and anti-icing chemicals purchased by your airline (for your own aircraft and/or other airline aircraft) in the **2004/2005 winter season** at this airport location. Check all that apply. If aircraft deicing/anti-icing was not performed by your airline during this winter season, check here and go to Question 13.

Deicing/Anti-Icing Chemical	Check (✓) if Used	Amount Purchased ^a	As Purchased Formulation	As Purchased Percent Concentration	Brand Name of Chemical
Type I Ethylene Glycol-Based Fluid	<input type="checkbox"/>	_____ gal/season	<input type="checkbox"/> Ready to Apply <input type="checkbox"/> Concentrate	_____ %	
Type II Ethylene Glycol-Based Fluid	<input type="checkbox"/>	_____ gal/season	<input type="checkbox"/> Ready to Apply <input type="checkbox"/> Concentrate	_____ %	
Type IV Ethylene Glycol-Based Fluid	<input type="checkbox"/>	_____ gal/season	<input type="checkbox"/> Ready to Apply <input type="checkbox"/> Concentrate	_____ %	
Type I Propylene Glycol-Based Fluid	<input type="checkbox"/>	_____ gal/season	<input type="checkbox"/> Ready to Apply <input type="checkbox"/> Concentrate	_____ %	
Type II Propylene Glycol-Based Fluid	<input type="checkbox"/>	_____ gal/season	<input type="checkbox"/> Ready to Apply <input type="checkbox"/> Concentrate	_____ %	
Type III Propylene Glycol-Based Fluid	<input type="checkbox"/>	_____ gal/season	<input type="checkbox"/> Ready to Apply <input type="checkbox"/> Concentrate	_____ %	
Type IV Propylene Glycol-Based Fluid	<input type="checkbox"/>	_____ gal/season	<input type="checkbox"/> Ready to Apply <input type="checkbox"/> Concentrate	_____ %	
Isopropyl Alcohol-Based Fluid	<input type="checkbox"/>	_____ gal/season	<input type="checkbox"/> Ready to Apply <input type="checkbox"/> Concentrate	_____ %	
Other: (Specify)	<input type="checkbox"/>	_____ gal/season _____ lb/season	<input type="checkbox"/> Ready to Apply <input type="checkbox"/> Concentrate	_____ %	

a - Season = 2004/2005 winter season.

- b. Indicate if your airline used any of the following aircraft deicing/anti-icing materials and/or practices at any time in the 2004/2005 winter season. Check all that apply.

- | | |
|--|---|
| <input type="checkbox"/> Hot Water | <input type="checkbox"/> Mechanical (e.g., brooms, ropes) |
| <input type="checkbox"/> Infrared | <input type="checkbox"/> Store Aircraft in Hangar |
| <input type="checkbox"/> Forced air system | |

- c. What happened to the left over aircraft deicing and anti-icing chemicals that were purchased by your airline and not used during this winter season?

Airport Name:

- CBI?**
 Yes
- 13.** a. Did another airline perform aircraft deicing/anti-icing operations on your own aircraft at this airport location?
- Yes
 No (*Go to Question 14*)
- b. Provide the airline name(s).
-

- CBI?**
 Yes
- 14.** Did a fixed-base operator (FBO) or private contractor perform aircraft deicing/anti-icing on your aircraft at this airport location?
- Yes (*Complete Questions 15 through 17*)
 No (*Skip to Question 18*)
- b. Provide the company name(s).
-

Instructions for Questions 15, 16, and 17

Questions 15, 16, and 17 are specific to the 2002/2003, 2003/2004, and 2004/2005 winter seasons, respectively. In part a, provide the name, amount used, formulation, percent concentration/range, and chemical brand name for the deicing/anti-icing chemicals and materials used on all aircraft the fixed-base operator or contractor deiced (i.e., your aircraft).

In part b of these questions, indicate the aircraft deicing/anti-icing materials and/or practices used by the fixed-base operator for the 2002/2003, 2003/2004, and/or 2004/2005 winter seasons.

AND: If you have chemical usage reports for deicing/anti-icing chemicals, you may attach copies of these reports.

- Reports attached

Airport Name:

CBI?
 Yes

15. a. Provide the following information for the **Aircraft** deicing and anti-icing chemicals used by the FBO or contractor (for your own aircraft) in the **2002/2003 winter season** at this airport location. Check all that apply. If aircraft deicing/anti-icing was not performed by the FBO or contractor during this winter season, check here and go to Question 16.

Deicing/Anti-Icing Chemical	Check (✓) if Used	Amount Used (as purchased) ^a	As Purchased Formulation	As Purchased Percent Concentration	Brand Name of Chemical
Type I Ethylene Glycol-Based Fluid	<input type="checkbox"/>	_____ gal/season	<input type="checkbox"/> Ready to Apply <input type="checkbox"/> Concentrate	_____ %	
Type II Ethylene Glycol-Based Fluid	<input type="checkbox"/>	_____ gal/season	<input type="checkbox"/> Ready to Apply <input type="checkbox"/> Concentrate	_____ %	
Type IV Ethylene Glycol-Based Fluid	<input type="checkbox"/>	_____ gal/season	<input type="checkbox"/> Ready to Apply <input type="checkbox"/> Concentrate	_____ %	
Type I Propylene Glycol-Based Fluid	<input type="checkbox"/>	_____ gal/season	<input type="checkbox"/> Ready to Apply <input type="checkbox"/> Concentrate	_____ %	
Type II Propylene Glycol-Based Fluid	<input type="checkbox"/>	_____ gal/season	<input type="checkbox"/> Ready to Apply <input type="checkbox"/> Concentrate	_____ %	
Type III Propylene Glycol-Based Fluid	<input type="checkbox"/>	_____ gal/season	<input type="checkbox"/> Ready to Apply <input type="checkbox"/> Concentrate	_____ %	
Type IV Propylene Glycol-Based Fluid	<input type="checkbox"/>	_____ gal/season	<input type="checkbox"/> Ready to Apply <input type="checkbox"/> Concentrate	_____ %	
Isopropyl Alcohol-Based Fluid	<input type="checkbox"/>	_____ gal/season	<input type="checkbox"/> Ready to Apply <input type="checkbox"/> Concentrate	_____ %	
Other: (Specify)	<input type="checkbox"/>	_____ gal/season _____ lb/season	<input type="checkbox"/> Ready to Apply <input type="checkbox"/> Concentrate	_____ %	

a - Season = 2002/2003 winter season.

- b. Indicate if the FBO or contractor used any of the following aircraft deicing/anti-icing materials and/or practices at any time in the 2002/2003 winter season. Check all that apply.

- | | |
|---|--|
| <input type="checkbox"/> Hot Water
<input type="checkbox"/> Infrared
<input type="checkbox"/> Forced air system | <input type="checkbox"/> Mechanical (e.g., brooms, ropes)
<input type="checkbox"/> Store Aircraft in Hangar |
|---|--|

Airport Name:

CBI?
 Yes

16. a. Provide the following information for the **Aircraft** deicing and anti-icing chemicals used by the FBO or contractor (for your own aircraft) in the **2003/2004 winter season** at this airport location. Check all that apply. If aircraft deicing/anti-icing was not performed by the FBO contractor during this winter season, check here and go to Question 17.

Deicing/Anti-Icing Chemical	Check (✓) if Used	Amount Used (as purchased) ^a	As Purchased Formulation	As Purchased Percent Concentration	Brand Name of Chemical
Type I Ethylene Glycol-Based Fluid	<input type="checkbox"/>	_____ gal/season	<input type="checkbox"/> Ready to Apply <input type="checkbox"/> Concentrate	_____ %	
Type II Ethylene Glycol-Based Fluid	<input type="checkbox"/>	_____ gal/season	<input type="checkbox"/> Ready to Apply <input type="checkbox"/> Concentrate	_____ %	
Type IV Ethylene Glycol-Based Fluid	<input type="checkbox"/>	_____ gal/season	<input type="checkbox"/> Ready to Apply <input type="checkbox"/> Concentrate	_____ %	
Type I Propylene Glycol-Based Fluid	<input type="checkbox"/>	_____ gal/season	<input type="checkbox"/> Ready to Apply <input type="checkbox"/> Concentrate	_____ %	
Type II Propylene Glycol-Based Fluid	<input type="checkbox"/>	_____ gal/season	<input type="checkbox"/> Ready to Apply <input type="checkbox"/> Concentrate	_____ %	
Type III Propylene Glycol-Based Fluid	<input type="checkbox"/>	_____ gal/season	<input type="checkbox"/> Ready to Apply <input type="checkbox"/> Concentrate	_____ %	
Type IV Propylene Glycol-Based Fluid	<input type="checkbox"/>	_____ gal/season	<input type="checkbox"/> Ready to Apply <input type="checkbox"/> Concentrate	_____ %	
Isopropyl Alcohol-Based Fluid	<input type="checkbox"/>	_____ gal/season	<input type="checkbox"/> Ready to Apply <input type="checkbox"/> Concentrate	_____ %	
Other: (Specify)	<input type="checkbox"/>	_____ gal/season _____ lb/season	<input type="checkbox"/> Ready to Apply <input type="checkbox"/> Concentrate	_____ %	

a - Season = 2003/2004 winter season.

- b. Indicate if the FBO or contractor used any of the following aircraft deicing/anti-icing materials and/or practices at any time in the 2003/2004 winter season. Check all that apply.

- | | |
|---|--|
| <input type="checkbox"/> Hot Water
<input type="checkbox"/> Infrared
<input type="checkbox"/> Forced air system | <input type="checkbox"/> Mechanical (e.g., brooms, ropes)
<input type="checkbox"/> Store Aircraft in Hangar |
|---|--|

Airport Name:

CBI?
 Yes

17. a. Provide the following information for the **Aircraft** deicing and anti-icing chemicals used by the FBO or contractor (for your own aircraft) in the **2004/2005 winter season** at this airport location. Check all that apply. If aircraft deicing/anti-icing was not performed by the FBO or contractor during this winter season, check here and go to Question 18.

Deicing/Anti-Icing Chemical	Check (✓) if Used	Amount Used (as purchased) ^a	As Purchased Formulation	As Purchased Percent Concentration	Brand Name of Chemical
Type I Ethylene Glycol-Based Fluid	<input type="checkbox"/>	_____ gal/season	<input type="checkbox"/> Ready to Apply <input type="checkbox"/> Concentrate	_____ %	
Type II Ethylene Glycol-Based Fluid	<input type="checkbox"/>	_____ gal/season	<input type="checkbox"/> Ready to Apply <input type="checkbox"/> Concentrate	_____ %	
Type IV Ethylene Glycol-Based Fluid	<input type="checkbox"/>	_____ gal/season	<input type="checkbox"/> Ready to Apply <input type="checkbox"/> Concentrate	_____ %	
Type I Propylene Glycol-Based Fluid	<input type="checkbox"/>	_____ gal/season	<input type="checkbox"/> Ready to Apply <input type="checkbox"/> Concentrate	_____ %	
Type II Propylene Glycol-Based Fluid	<input type="checkbox"/>	_____ gal/season	<input type="checkbox"/> Ready to Apply <input type="checkbox"/> Concentrate	_____ %	
Type III Propylene Glycol-Based Fluid	<input type="checkbox"/>	_____ gal/season	<input type="checkbox"/> Ready to Apply <input type="checkbox"/> Concentrate	_____ %	
Type IV Propylene Glycol-Based Fluid	<input type="checkbox"/>	_____ gal/season	<input type="checkbox"/> Ready to Apply <input type="checkbox"/> Concentrate	_____ %	
Isopropyl Alcohol-Based Fluid	<input type="checkbox"/>	_____ gal/season	<input type="checkbox"/> Ready to Apply <input type="checkbox"/> Concentrate	_____ %	
Other: (Specify)	<input type="checkbox"/>	_____ gal/season _____ lb/season	<input type="checkbox"/> Ready to Apply <input type="checkbox"/> Concentrate	_____ %	

a - Season = 2004/2005 winter season.

- b. Indicate if the FBO or contractor used any of the following aircraft deicing/anti-icing materials and/or practices at any time in the 2004/2005 winter season. Check all that apply.

- | | |
|--|---|
| <input type="checkbox"/> Hot Water | <input type="checkbox"/> Mechanical (e.g., brooms, ropes) |
| <input type="checkbox"/> Infrared | <input type="checkbox"/> Store Aircraft in Hangar |
| <input type="checkbox"/> Forced air system | |

Part A, Sections 2 and 3 of the questionnaire collect information for each airport location listed on page A-3.

Airport Name:

SECTION 3: POLLUTION PREVENTION PRACTICES

The questions in this section pertain to pollution prevention practices employed during the last three winter seasons at this airport location.

If another airline performed aircraft deicing/anti-icing on your own aircraft during the last three winter seasons at this airport location, skip to Part B on page B-1.

If you or a fixed-base operator or private contractor performed aircraft deicing/anti-icing on your aircraft at any time during the last three winter seasons at this airport location, complete Questions 19 through 28 on pollution prevention practices below.

CBI?
 Yes

19. a. Did your airline or an FBO (for your airline) perform an evaluation of application rates of deicing/anti-icing fluids to prevent excessive application at any time during the last three winter seasons at this airport location?

Yes

No (*Go to Question 20*)

b. Describe practice: _____

c. Cost if known:

Cost of installation/implementation \$ _____

Operating costs of the practice \$ _____

d. Net savings relative to previous practice if known \$/yr _____

Airport Name:

CBI?
 Yes

20. a. Did your airline or an FBO (for your airline) perform enhanced weather forecasting at any time during the last three winter seasons at this airport location?

- Yes
- No (*Go to Question 21*)

b. Describe practice: _____

c. Cost if known:

Cost of installation/implementation	\$ _____
Operating costs of the practice	\$ _____
d. Net savings relative to previous practice if known	\$/yr _____

CBI?
 Yes

21. a. Did your airline or an FBO (for your airline) use alternate chemicals (e.g., use of non-glycol-based fluids) at any time during the last three winter seasons at this airport location?

- Yes
- No (*Go to Question 22*)

b. Describe practice: _____

c. Cost if known:

Cost of installation/implementation	\$ _____
Operating costs of the practice	\$ _____
d. Net savings relative to previous practice if known	\$/yr _____

Airport Name:

CBI?
 Yes

22.

a. Did your airline or an FBO (for your airline) use custom fluid blending at any time during the last three winter seasons at this airport location?

- Yes
- No (*Go to Question 23*)

b. Describe practice: _____

c. Cost if known:

Cost of installation/implementation	\$ _____
Operating costs of the practice	\$ _____
d. Net savings relative to previous practice if known	\$/yr _____

CBI?
 Yes

23.

a. Did your airline or an FBO (for your airline) pretreat aircraft with hot water prior to deicing fluid application at any time during the last three winter seasons at this airport location?

- Yes
- No (*Go to Question 24*)

b. Describe practice: _____

c. Cost if known:

Cost of installation/implementation	\$ _____
Operating costs of the practice	\$ _____
d. Net savings relative to previous practice if known	\$/yr _____

Airport Name:

CBI?
 Yes

24. a. Did your airline or an FBO (for your airline) manually remove heavy accumulations of snow on aircraft at any time during the last three winter seasons at this airport location?

- Yes
- No (*Go to Question 25*)

b. Describe practice: _____

c. Cost if known:

Cost of installation/implementation	\$ _____
Operating costs of the practice	\$ _____
d. Net savings relative to previous practice if known	\$/yr _____

CBI?
 Yes

25. a. Did your airline or an FBO (for your airline) perform overnight pre-treatment/storage of aircraft to minimize/reduce next day ADF usage at any time during the last three winter seasons at this airport location?

- Yes
- No (*Go to Question 26*)

b. Describe practice: _____

c. Cost if known:

Cost of installation/implementation	\$ _____
Operating costs of the practice	\$ _____
d. Net savings relative to previous practice if known	\$/yr _____

Airport Name:

CBI?
 Yes

26. a. Did your airline or an FBO (for your airline) institute policies and operational procedures to identify, prevent, and correct leaks and/or deicing/anti-icing equipment failures at any time during the last three winter seasons at this airport location?

- Yes
- No (*Go to Question 27*)

b. Describe practice: _____

c. Cost if known:
Cost of installation/implementation \$ _____
Operating costs of the practice \$ _____
d. Net savings relative to previous practice if known \$/yr _____

CBI?
 Yes

27. a. Did your airline or an FBO (for your airline) conduct specialized employee training at any time during the last three winter seasons at this airport location?

- Yes
- No (*Go to Question 28*)

b. Describe practice: _____

c. Cost if known:
Cost of installation/implementation \$ _____
Operating costs of the practice \$ _____
d. Net savings relative to previous practice if known \$/yr _____

Airport Name:

CBI?
 Yes

28.

a. Did your airline or an FBO (for your airline) perform any other pollution prevention practices at any time during the last three winter seasons at this airport location?

Yes (*specify*): _____

No (*Go to Question 29*)

b. Describe practice: _____

c. Cost if known:

Cost of installation/implementation \$ _____

Operating costs of the practice \$ _____

d. Net savings relative to previous practice if known \$/yr _____

Airport Name:

CBI?
 Yes

29. At this time, does your airline or an FBO (for your airline) plan on implementing any new or additional pollution prevention practices in the next five years at this airport location? If yes, please list below.

- Yes
- No (*Go to Question 30*)

Practice	Scheduled Implementation (Year)

CBI?
 Yes

30. a. Are there pollution prevention practices that your airline or an FBO (for your airline) considered and rejected at this airport location?

- Yes
- No (*Go to Question 31*)

b. Describe the practices and why they were rejected.

PART B: DEICING COSTS AND OPERATIONS

SECTION 1: AIRLINE DEICING COSTS AND OPERATIONS

Please provide the following information on all deicing costs and operations for your airline.

1. Provide the following information for the primary contact for the deicing cost and operations information supplied in Part B of this questionnaire:

_____	(_____)
Primary Contact Name	Telephone Number
_____	(_____)
Title	Fax Number

E-mail Address	
_____	Convenient time to call:
Street Address or Post Office Box	between ____ am/pm and ____ am/pm
	(Eastern Time)
_____	_____
City	State Zip Code

2. Which of the following financial structures best describes this company?
- a. C Corporation
 - b. S Corporation/Limited Liability Corporation
 - c. Limited Partnership
 - d. General partnership
 - e. Sole Proprietorship
 - f. Other: please describe _____

3. Is the company listed in Question 2?
- a. Publicly held
 - b. Privately held

- CBI?**
 Yes 4. If this airline were to borrow money in the next six months to finance capital improvements, what interest rate would it expect to pay on such loans? (Enter "NA" if money is not borrowed.)
- Interest Rate ____ ____ . ____ %

- CBI?**
 Yes 5. If this airline were to finance capital improvements through equity in the next six months, what rate would it expect to use? The equity rate is the minimum return on capital required to compensate equity owners for bearing risk. (Enter "NA" if stock is not used to raise capital.)
- Equity Rate ____ ____ . ____ %

CBI?
 Yes

6. If this airline were to finance capital improvements through the issuance of bonds in the next six months, what rate would it expect to use? The bond rate is the minimum return on capital required to compensate bond holders for bearing risk. (Enter "NA" if bonds are not used to raise capital.)

Bond Rate ____ ____%.

CBI?
 Yes

7. If this airline were to finance capital improvements in the next six months, what is the approximate mix of interest, equity, and bonds that it would expect to use?

Interest (Question 4) ____ ____%

Equity (Question 5) ____ ____%

Bonds (Question 6) ____ ____%

CBI?
 Yes

8. Please provide a copy of this airline's end-of-year financial statement **INCLUDING THE NOTES** for 2004 with your completed survey. These may be accountant reports, annual reports, and/or 10-K forms. These statements need not be audited but should conform to generally accepted accounting principles (GAAP).

SECTION 2: AIRPORT-SPECIFIC DEICING COSTS AND OPERATIONS

Instructions for Part B, Section 2

FOR EACH AIRPORT LOCATION LISTED IN PART A, SECTION 2 (PAGE A-3), COMPLETE PART B, SECTION 2 (AIRPORT-SPECIFIC DEICING COSTS AND OPERATIONS). EPA HAS PROVIDED YOU WITH THE NUMBER OF COPIES OF PART B, SECTION 2 NEEDED FOR THESE AIRPORT LOCATIONS.

You do not need to provide part B, Section 2 information for airport locations not listed on page A-3.

Electronic Questionnaire

If you use the electronic questionnaire to complete your response, please note that the electronic questionnaire form on EPA's website does not list the specific airport locations shown above. See "Electronic Questionnaire" on page ii of the Introduction. Detailed instructions for completing the electronic questionnaire form are provided on EPA's website.

This electronic form does not have the capability to fill in multiple copies of questions. To complete multiple copies for Part B, Section 2, an individual file for this section is provided on EPA's website. To prepare your response, use the following procedure:

1. Open the MS Word file for Part B, Section 2.
2. Save a file on your local computer for each airport location listed in Part A, Section 2 on page A-3.
3. Enter the airport name and your airline ID in the spaces provided on each page.
4. Complete the responses to each question and save the airport file on your computer.

If you complete the survey electronically, you must print the survey response, sign the Certification Statement on page v, and **submit it as a hard copy**.

Airport Name:

- CBI?**
 Yes
- 9.** Does this airport serve as an operational hub for your airline?
- Yes
 No

- CBI?**
 Yes
- 10.** How many of your aircraft typically overnight at this airport? _____

- CBI?**
 Yes
- 11. a.** Please provide this airline's budget for deicing services at this airport for the 2004/2005 deicing season (rounded to the nearest thousand dollars). If necessary, provide a best estimate of the deicing budget for this airport, and describe the basis for that estimate in the Comments section on page B-5.
- \$____,____,000

Which of the following expense categories associated with deicing operations are intended to be covered by this budget (check all that apply)

- b. Cost of deicing services provided by this airline:
 - c. Cost of deicing services provided to another airline:
 - d. Cost of deicing services provided by another airline:
 - e. Cost of deicing services provided by an FBO:
 - f. Hiring additional/seasonal labor to perform deicing:
 - g. Purchases of aircraft deicing fluid (ADF):
 - h. Purchases of non-ADF materials:
 - i. Purchases of capital equipment:
 - j. Depreciation of capital equipment:
 - k. Other: please describe _____
-

Airport Name:

CBI?
 Yes

12. During the 2004/2005 deicing season, of your airline's departures from this airport that required deicing, what percentage were deiced by each of the following (the sum of "your airline," "other airlines," and "FBOs" should add to approximately 100%):

	Percent	Your Airline	Other Airline(s)	FBO(s)
a.	Greater than 90%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b.	70% to 90%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c.	50% to 70%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d.	30% to 50%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e.	10% to 30%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f.	Less than 10%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g.	None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h.	Unknown	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

CBI?
 Yes

13. Please estimate this airline's average annual direct capital purchases of deicing equipment at this airport over the past three years (rounded to the nearest thousand dollars). Do not include capital expenditures by the airport or other service providers paid for indirectly by your airline in the form of increased fees.

\$ _____, _____, 0 0 0

CBI?
 Yes

14. Have deicing costs per aircraft departure been increasing, decreasing, or approximately constant at this airport over the last five years?

- Increasing
- Decreasing
- Approximately constant
- Unknown

If deicing costs have been increasing or decreasing, briefly indicate the most important reasons:

Copy ____ of ____

CBI?
 Yes **15. Comments for Part B**

Please cross-reference your comments by question number and indicate if your comment is confidential by checking "yes" in the column titled "CBI" (Confidential Business Information). **If you need additional space, please photocopy this page before writing on it, and number each copy in the space provided.**

Question Number	CBI	Comment
	<input type="checkbox"/> Yes	
	<input type="checkbox"/> Yes	
	<input type="checkbox"/> Yes	
	<input type="checkbox"/> Yes	
	<input type="checkbox"/> Yes	
	<input type="checkbox"/> Yes	
	<input type="checkbox"/> Yes	
	<input type="checkbox"/> Yes	
	<input type="checkbox"/> Yes	
	<input type="checkbox"/> Yes	
	<input type="checkbox"/> Yes	
	<input type="checkbox"/> Yes	