Safety Attribute Inspection (SAI) Data Collection Tool
1.3.18 De−Icing Program (AW)

ELEMENT SUMMARY INFORMATION

Purpose of This Element (Certificate Holder's responsibility):

- To ensure that aircraft are dispatched or released only when no frost, ice, or snow is adhering to the wings, control surfaces, propellers, engine inlets, or other critical surfaces of the aircraft in accordance with its approved ground deicing/anti−icing program.

Objective (FAA oversight responsibility):

- To determine if the Certificate Holder's De−Icing Program meets all applicable requirements of the Federal Aviation Regulations and FAA policies.
- To determine if the Certificate Holder's De−Icing Program incorporates the System Safety Attributes.
- To identify any shortfalls in the Certificate Holder's De−Icing Program.

Specific Instructions:

- Intentionally left blank

SUPPLEMENTAL INFORMATION

Specific Regulatory Requirement(s) (SRRs):

- SRRs:
  121.135(a)(1)
  121.135(b)(1)
  121.135(b)(2)
  121.135(b)(3)
  121.629(c)(2)
  121.629(c)(2)(i)
  121.629(c)(2)(ii)
  121.629(c)(2)(iii)
  121.629(c)(2)(iv)
  121.629(c)(2)(v)
  121.629(c)(2)(vi)
  121.629(c)(2)(vii)

Related CFR(s) & FAA Policy/Guidance:

- Related CFRs:
  121.105
  121.123
  121.629(c)(4)

- FAA Policy/Guidance:
  FAA Order 8300.10, Volume 3, Chapter 131
  AC 120−58
  AC 120−60

SAI SECTION 1 − PROCEDURES ATTRIBUTE	
Objective: Procedures, instructions and information contained in Certificate Holder's manual are documented methods for accomplishing a process. Policies contained in the Certificate Holder's manual should establish the Certificate Holder's compliance posture. Policies may not be stand−alone statements but may be imbedded within procedures, instructions or information regarding a particular regulatory requirement. The questions in this section of the data collection tool are designed to assist the inspector in determining if the Certificate Holder's manual has documented or prescribed methods of accomplishing the process requirements that provide answers to the associated who, what, when, where and how type questions. This section of the data collection tool contains policy questions, procedural questions and instructional or informational questions pertaining to various types of Certificate Holder requirements such as actions, prohibitions or resources (i.e., personnel, facilities, equipment, technical data, etc.).	
Tasks	
To meet this objective, the inspector must accomplish the following tasks:	
1. Review the information listed in the Supplemental Information section of this data collection tool.	
2. Review the duties and responsibilities for management and other personnel identified by the Certificate Holder who accomplish the De−Icing Program.	
3. Review the Certificate Holder's manual to ensure that it contains policies, procedures, instructions and information necessary for the De−Icing Program.	
Questions	
To meet this objective, the inspector must answer the following questions:	
1. Does the Certificate Holder's manual content meet the specific regulatory and FAA policy requirements for a De−Icing Program:	
1.1 Does the Certificate Holder's manual contain general policies for the De−Icing Program that comply with the specific regulatory requirements? SRRs: 121.135(b)(1); 121.629(c)(2) *Related Design JTI's:* 1. Check that the Certificate Holder's manual has a policy that no person may dispatch, release, or takeoff an aircraft any time conditions are such that frost, ice, or snow is adhering aircraft, or when the takeoff would not be in compliance with 14 CFR section 121.629 paragraph (c) of this section. *Sources:* 121.629(b); 121.135(b)(1) *Interfaces:* 2.1.4−aw; 2.1.1−aw; 2.1.2−aw; 4.2.5−op; 4.2.6−op; 3.2.1−op; 2.1.1−op; 4.2.3−op; 2.1.5−op; 4.2.11−op; 3.1.13−op; 2.1.4−op 2. Check that the Certificate Holder's manual has a policy that no person may dispatch, release, or takeoff an aircraft any time conditions are such that frost, ice, or snow may reasonably be expected to adhere to the aircraft, unless the dispatch, release, and the takeoff comply with the approved ground deicing/anti−icing program in the operations specifications. *Sources:* 121.629(c); 121.135(b)(1) *Interfaces:* 2.1.1−aw; 3.2.1−op; 2.1.2−aw; 2.1.4−aw; 3.1.13−op; 2.1.2−op; 2.1.1−op; 3.1.4−op; 4.2.5−op; 2.1.4−op; 4.2.3−op	☐ Yes ☐ No, Explain

1.2 Does the Certificate Holder's manual cite the regulatory requirements listed in the Supplemental Information section of this SAI? SRRs: 121.135(b)(3)	☐ Yes ☐ No, Explain
1.3 Does the Certificate Holder's manual contain the duties and responsibilities for personnel who will accomplish the De−Icing Program? SRRs: 121.135(b)(2)	☐ Yes ☐ No, Explain
1.4 Does the Certificate Holder's manual include instructions and information for personnel to meet the requirements of the De−Icing Program? SRRs: 121.135(a)(1)	☐ Yes ☐ No, Explain
1.5 Does the Certificate Holder's De−Icing Program contain the specific qualification requirements for affected ground personnel (e.g., aircraft dispatchers, ground crews, contract personnel) in the following areas: SRRs: 121.629(c)(2)	
1.5.1 Use of holdover times? SRRs: 121.629(c)(2)(i) *Related Design JTI's:* 1. Check that the Certificate Holder who has and uses an approved ground deicing/anti−icing program includes qualification for all other affected personnel (e.g., aircraft dispatchers, ground crews, contract personnel) concerning the specific requirements of the approved program and each person's responsibilities and duties under the approved program, specifically covering the use of holdover times. *Sources:* 121.629(c)(2)(i) *Interfaces:* 4.2.6−op; 4.2.5−op; 2.1.1−op; 4.2.11−op; 2.1.2−aw; 2.1.2−op; 3.1.13−op; 2.1.1−aw; 4.2.1−aw	☐ Yes ☐ No, Explain
1.5.2 Aircraft ground deicing/anti−icing procedures? SRRs: 121.629(c)(2)(ii) *Related Design JTI's:* 1. Check that the Certificate Holder who has and uses an approved ground deicing/anti−icing program includes qualification for all other affected personnel (e.g., aircraft dispatchers, ground crews, contract personnel) concerning the specific requirements of the approved program and each person's responsibilities and duties under the approved program, specifically covering the aircraft deicing/anti−icing procedures, including inspection and check procedures and responsibilities. The training must include both general procedures and the specific requirements (differences) of each make, model, series, and variant of aircraft. *Sources:* 121.629(c)(2)(ii) *Interfaces:* 4.2.1−aw; 2.1.1−aw; 2.1.2−aw; 2.1.2−op; 2.1.1−op; 3.1.13−op; 4.2.6−op; 4.2.11−op; 4.2.5−op	☐ Yes ☐ No, Explain
1.5.3 Inspection procedures, check procedures and responsibilities? SRRs: 121.629(c)(2)(ii) *Related Design JTI's:* 1. Check that the Certificate Holder who has and uses an approved ground deicing/anti−icing program includes qualification for all other	☐ Yes ☐ No, Explain

affected personnel (e.g., aircraft dispatchers, ground crews, contract personnel) concerning the specific requirements of the approved program and each person's responsibilities and duties under the approved program, specifically covering the aircraft deicing/anti−icing procedures, including inspection and check procedures and responsibilities. The training must include both general procedures and the specific requirements (differences) of each make, model, series, and variant of aircraft. *Sources:* 121.629(c)(2)(ii) *Interfaces:* 4.2.1−aw; 2.1.1−aw; 2.1.2−aw; 2.1.2−op; 2.1.1−op; 3.1.13−op; 4.2.6−op; 4.2.11−op; 4.2.5−op	
1.5.4 Communications procedures? SRRs: 121.629(c)(2)(iii) *Related Design JTI's:* 1. Check that the Certificate Holder who has and uses an approved ground deicing/anti−icing program includes qualification for all other affected personnel (e.g., aircraft dispatchers, ground crews, contract personnel) concerning the specific requirements of the approved program and each person's responsibilities and duties under the approved program, specifically covering communications procedures. *Sources:* 121.629(c)(2)(iii) *Interfaces:* 3.1.13−op; 2.1.2−aw; 4.2.1−aw; 2.1.1−aw; 4.2.5−op; 4.2.6−op; 4.2.11−op; 2.1.2−op; 2.1.1−op	☐ Yes ☐ No, Explain
1.5.5 Aircraft surface contamination (i.e., adherence of frost, ice, or snow) and critical area identification? SRRs: 121.629(c)(2)(iv) *Related Design JTI's:* 1. Check that the Certificate Holder who has and uses an approved ground deicing/anti−icing program includes qualification for all other affected personnel (e.g., aircraft dispatchers, ground crews, contract personnel) concerning the specific requirements of the approved program and each person's responsibilities and duties under the approved program, specifically covering aircraft surface contamination (i.e., adherence of frost, ice, or snow) and critical area identification, and how contamination adversely affects aircraft performance and flight characteristics. *Sources:* 121.629(c)(2)(iv) *Interfaces:* 2.1.1−op; 2.1.2−op; 3.1.13−op; 4.2.6−op; 4.2.5−op; 4.2.11−op; 2.1.1−aw; 2.1.2−aw; 4.2.1−aw	☐ Yes ☐ No, Explain
1.5.6 How contamination adversely affects aircraft performance and flight characteristics? SRRs: 121.629(c)(2)(iv) *Related Design JTI's:* 1. Check that the Certificate Holder who has and uses an approved ground deicing/anti−icing program includes qualification for all other affected personnel (e.g., aircraft dispatchers, ground crews, contract personnel) concerning the specific requirements of the approved	☐ Yes ☐ No, Explain

program and each person's responsibilities and duties under the approved program, specifically covering aircraft surface contamination (i.e., adherence of frost, ice, or snow) and critical area identification, and how contamination adversely affects aircraft performance and flight characteristics. *Sources:* 121.629(c)(2)(iv) *Interfaces:* 2.1.1−op; 2.1.2−op; 3.1.13−op; 4.2.6−op; 4.2.5−op; 4.2.11−op; 2.1.1−aw; 2.1.2−aw; 4.2.1−aw	
1.5.7 Types and characteristics of deicing/anti−icing fluids? SRRs: 121.629(c)(2)(v) *Related Design JTI's:* 1. Check that the Certificate Holder who has and uses an approved ground deicing/anti−icing program includes qualification for all other affected personnel (e.g., aircraft dispatchers, ground crews, contract personnel) concerning the specific requirements of the approved program and each person's responsibilities and duties under the approved program, specifically covering the types and characteristics of deicing/anti−icing fluids. *Sources:* 121.629(c)(2)(v) *Interfaces:* 4.2.6−op; 4.2.5−op; 4.2.1−aw; 2.1.1−op; 2.1.2−op; 4.2.11−op; 2.1.2−aw; 3.1.13−op; 2.1.1−aw	☐ Yes ☐ No, Explain
1.5.8 Cold weather preflight inspection procedures? SRRs: 121.629(c)(2)(vi) *Related Design JTI's:* 1. Check that the Certificate Holder who has and uses an approved ground deicing/anti−icing program includes qualification for all other affected personnel (e.g., aircraft dispatchers, ground crews, contract personnel) concerning the specific requirements of the approved program and each person's responsibilities and duties under the approved program, specifically covering cold weather preflight. *Sources:* 121.629(c)(2)(vi) *Interfaces:* 2.1.1−aw; 4.2.1−aw; 2.1.2−aw; 2.1.2−op; 2.1.1−op; 4.2.6−op; 4.2.5−op; 3.1.13−op; 4.2.11−op	☐ Yes ☐ No, Explain
1.5.9 Techniques for recognizing contamination on the aircraft? SRRs: 121.629(c)(2)(vii) *Related Design JTI's:* 1. Check that the Certificate Holder who has and uses an approved ground deicing/anti−icing program includes qualification for all other affected personnel (e.g., aircraft dispatchers, ground crews, contract personnel) concerning the specific requirements of the approved program and each person's responsibilities and duties under the approved program, specifically covering the techniques for recognizing contamination on the aircraft. *Sources:* 121.629(c)(2)(vii) *Interfaces:* 2.1.2−aw; 3.1.13−op; 4.2.11−op; 2.1.1−aw; 4.2.5−op; 4.2.1−aw; 2.1.2−op; 4.2.6−op; 2.1.1−op	☐ Yes ☐ No, Explain
1.6 Does the Certificate Holder's De−Icing Program contain the specific responsibilities and duties for each affected person (e.g., aircraft dispatchers, ground crews, contract personnel)	

in the following areas: SRRs: 121.629(c)(2)	
1.6.1 Use of holdover times? SRRs: 121.629(c)(2)(i) *Related Design JTI's:* 1. Check that the Certificate Holder who has and uses an approved ground deicing/anti−icing program includes qualification for all other affected personnel (e.g., aircraft dispatchers, ground crews, contract personnel) concerning the specific requirements of the approved program and each person's responsibilities and duties under the approved program, specifically covering the use of holdover times. *Sources:* 121.629(c)(2)(i) *Interfaces:* 4.2.6−op; 4.2.5−op; 2.1.1−op; 4.2.11−op; 2.1.2−aw; 2.1.2−op; 3.1.13−op; 2.1.1−aw; 4.2.1−aw	☐ Yes ☐ No, Explain
1.6.2 Aircraft ground deicing/anti−icing procedures? SRRs: 121.629(c)(2)(ii) *Related Design JTI's:* 1. Check that the Certificate Holder who has and uses an approved ground deicing/anti−icing program includes qualification for all other affected personnel (e.g., aircraft dispatchers, ground crews, contract personnel) concerning the specific requirements of the approved program and each person's responsibilities and duties under the approved program, specifically covering the aircraft deicing/anti−icing procedures, including inspection and check procedures and responsibilities. The training must include both general procedures and the specific requirements (differences) of each make, model, series, and variant of aircraft. *Sources:* 121.629(c)(2)(ii) *Interfaces:* 4.2.1−aw; 2.1.1−aw; 2.1.2−aw; 2.1.2−op; 2.1.1−op; 3.1.13−op; 4.2.6−op; 4.2.11−op; 4.2.5−op	☐ Yes ☐ No, Explain
1.6.3 Inspection procedures, check procedures and responsibilities? SRRs: 121.629(c)(2)(ii) *Related Design JTI's:* 1. Check that the Certificate Holder who has and uses an approved ground deicing/anti−icing program includes qualification for all other affected personnel (e.g., aircraft dispatchers, ground crews, contract personnel) concerning the specific requirements of the approved program and each person's responsibilities and duties under the approved program, specifically covering the aircraft deicing/anti−icing procedures, including inspection and check procedures and responsibilities. The training must include both general procedures and the specific requirements (differences) of each make, model, series, and variant of aircraft. *Sources:* 121.629(c)(2)(ii) *Interfaces:* 4.2.1−aw; 2.1.1−aw; 2.1.2−aw; 2.1.2−op; 2.1.1−op; 3.1.13−op; 4.2.6−op; 4.2.11−op; 4.2.5−op	☐ Yes ☐ No, Explain

1.6.4 Communications procedures? SRRs: 121.629(c)(2)(iii) *Related Design JTI's:* 1. Check that the Certificate Holder who has and uses an approved ground deicing/anti−icing program includes qualification for all other affected personnel (e.g., aircraft dispatchers, ground crews, contract personnel) concerning the specific requirements of the approved program and each person's responsibilities and duties under the approved program, specifically covering communications procedures. *Sources:* 121.629(c)(2)(iii) *Interfaces:* 3.1.13−op; 2.1.2−aw; 4.2.1−aw; 2.1.1−aw; 4.2.5−op; 4.2.6−op; 4.2.11−op; 2.1.2−op; 2.1.1−op	☐ Yes ☐ No, Explain
1.6.5 Aircraft surface contamination (i.e., adherence of frost, ice, or snow) and critical area identification? SRRs: 121.629(c)(2)(iv) *Related Design JTI's:* 1. Check that the Certificate Holder who has and uses an approved ground deicing/anti−icing program includes qualification for all other affected personnel (e.g., aircraft dispatchers, ground crews, contract personnel) concerning the specific requirements of the approved program and each person's responsibilities and duties under the approved program, specifically covering aircraft surface contamination (i.e., adherence of frost, ice, or snow) and critical area identification, and how contamination adversely affects aircraft performance and flight characteristics. *Sources:* 121.629(c)(2)(iv) *Interfaces:* 2.1.1−op; 2.1.2−op; 3.1.13−op; 4.2.6−op; 4.2.5−op; 4.2.11−op; 2.1.1−aw; 2.1.2−aw; 4.2.1−aw	☐ Yes ☐ No, Explain
1.6.6 How contamination adversely affects aircraft performance and flight characteristics? SRRs: 121.629(c)(2)(iv) *Related Design JTI's:* 1. Check that the Certificate Holder who has and uses an approved ground deicing/anti−icing program includes qualification for all other affected personnel (e.g., aircraft dispatchers, ground crews, contract personnel) concerning the specific requirements of the approved program and each person's responsibilities and duties under the approved program, specifically covering aircraft surface contamination (i.e., adherence of frost, ice, or snow) and critical area identification, and how contamination adversely affects aircraft performance and flight characteristics. *Sources:* 121.629(c)(2)(iv) *Interfaces:* 2.1.1−op; 2.1.2−op; 3.1.13−op; 4.2.6−op; 4.2.5−op; 4.2.11−op; 2.1.1−aw; 2.1.2−aw; 4.2.1−aw	☐ Yes ☐ No, Explain

1.6.7 Types and characteristics of deicing/anti−icing fluids? SRRs: 121.629(c)(2)(v) *Related Design JTI's:* 1. Check that the Certificate Holder who has and uses an approved ground deicing/anti−icing program includes qualification for all other affected personnel (e.g., aircraft dispatchers, ground crews, contract personnel) concerning the specific requirements of the approved program and each person's responsibilities and duties under the approved program, specifically covering the types and characteristics of deicing/anti−icing fluids. *Sources:* 121.629(c)(2)(v) *Interfaces:* 4.2.6−op; 4.2.5−op; 4.2.1−aw; 2.1.1−op; 2.1.2−op; 4.2.11−op; 2.1.2−aw; 3.1.13−op; 2.1.1−aw	☐ Yes ☐ No, Explain
1.6.8 Cold weather preflight inspection procedures? SRRs: 121.629(c)(2)(vi) *Related Design JTI's:* 1. Check that the Certificate Holder who has and uses an approved ground deicing/anti−icing program includes qualification for all other affected personnel (e.g., aircraft dispatchers, ground crews, contract personnel) concerning the specific requirements of the approved program and each person's responsibilities and duties under the approved program, specifically covering cold weather preflight. *Sources:* 121.629(c)(2)(vi) *Interfaces:* 2.1.1−aw; 4.2.1−aw; 2.1.2−aw; 2.1.2−op; 2.1.1−op; 4.2.6−op; 4.2.5−op; 3.1.13−op; 4.2.11−op	☐ Yes ☐ No, Explain
1.6.9 Techniques for recognizing contamination on the aircraft? SRRs: 121.629(c)(2)(vii) *Related Design JTI's:* 1. Check that the Certificate Holder who has and uses an approved ground deicing/anti−icing program includes qualification for all other affected personnel (e.g., aircraft dispatchers, ground crews, contract personnel) concerning the specific requirements of the approved program and each person's responsibilities and duties under the approved program, specifically covering the techniques for recognizing contamination on the aircraft. *Sources:* 121.629(c)(2)(vii) *Interfaces:* 2.1.2−aw; 3.1.13−op; 4.2.11−op; 2.1.1−aw; 4.2.5−op; 4.2.1−aw; 2.1.2−op; 4.2.6−op; 2.1.1−op	☐ Yes ☐ No, Explain
1.7 Does the Certificate Holder's De−Icing Program comply with the related requirements of 14 CFR 121.105? Related CFRs: 121.105 *Related Design JTI's:* 1. Check that the Certificate Holder conducting domestic operations in icing conditions at such points along the Certificate Holder's route has for competent personnel for the proper servicing, maintenance, and preventive maintenance of deicing/anti−icing equipment. *Sources:* 121.105 *Interfaces:* 5.1.1−aw; 4.2.6−op; 2.1.4−op; 2.1.4−aw; 5.1.5−op	☐ Yes ☐ No, Explain ☐ Not Applicable

	2. Check that the Certificate Holder conducting domestic operations in icing conditions at such points along the Certificate Holder's route has adequate facilities and equipment as are necessary for the proper servicing, maintenance, and preventive maintenance of deicing/anti−icing equipment. *Sources:* 121.105 *Interfaces:* 2.1.4−op; 5.1.1−aw; 5.1.5−op; 2.1.4−aw; 4.2.6−op 3. Check that the Certificate Holder conducting flag operations in icing conditions at such points along the Certificate Holder's route has competent personnel as are necessary for the proper servicing, maintenance, and preventive maintenance of deicing/anti−icing equipment. *Sources:* 121.105 *Interfaces:* 5.1.5−op; 2.1.4−aw; 5.1.1−aw; 4.2.6−op; 2.1.4−op 4. Check that the Certificate Holder conducting flag operations in icing conditions at such points along the Certificate Holder's route has adequate facilities and equipment as are necessary for the proper servicing, maintenance, and preventive maintenance of deicing/anti−icing equipment. *Sources:* 121.105 *Interfaces:* 5.1.5−op; 5.1.1−aw; 4.2.6−op; 2.1.4−op; 2.1.4−aw	
1.8	Does the Certificate Holder's De−Icing Program comply with the related requirements of 14 CFR 121.123? Related CFRs: 121.123 *Related Design JTI's:* 1. Check that the Certificate Holder conducting supplemental operations has procedures so that competent personnel and adequate facilities and equipment to conduct operations in icing conditions are available for the proper servicing, maintenance, and preventive maintenance of deicing/anti−icing equipment. *Sources:* 121.123 *Interfaces:* 2.1.4−op; 5.1.1−aw; 2.1.4−aw; 5.1.5−op; 4.2.6−op	☐ Yes ☐ No, Explain ☐ Not Applicable
1.9	Does the Certificate Holder's De−Icing Program comply with the related requirements of 14 CFR 121.629(c)(4)? Related CFRs: 121.629(c)(4) *Related Design JTI's:* 1. Check that the Certificate Holder's program includes aircraft deicing/anti−icing procedures. *Sources:* 121.629(c)(4) *Interfaces:* 2.1.1−aw; 2.1.5−aw; 2.1.3−aw; 2.1.4−aw; 2.1.2−aw; 2.1.4−op; 2.1.2−op; 2.1.1−op; 2.1.5−op; 2.1.3−op 2. Check that the Certificate Holder's program includes aircraft deicing/anti−icing responsibilities. *Sources:* 121.629(c)(4) *Interfaces:* 2.1.4−aw; 2.1.5−aw; 2.1.2−aw; 2.1.3−aw; 2.1.1−aw; 2.1.5−op; 2.1.4−op; 2.1.3−op; 2.1.2−op; 2.1.1−op 3. Check that the Certificate Holder's program includes pretakeoff check procedures. *Sources:* 121.629(c)(4)	☐ Yes ☐ No, Explain

Interfaces: 2.1.2−op; 2.1.5−op; 2.1.1−op; 2.1.3−op; 2.1.4−op; 2.1.3−aw; 2.1.2−aw; 2.1.4−aw; 2.1.5−aw; 2.1.1−aw 4. Check that the Certificate Holder's program includes pretakeoff check responsibilities. *Sources:* 121.629(c)(4) *Interfaces:* 2.1.5−op; 2.1.4−op; 2.1.3−op; 2.1.1−aw; 2.1.2−aw; 2.1.1−op; 2.1.3−aw; 2.1.2−op; 2.1.5−aw; 2.1.4−aw 5. Check that the Certificate Holder's program includes pretakeoff contamination check responsibilities. *Sources:* 121.629(c)(4) *Interfaces:* 2.1.2−op; 2.1.1−op; 2.1.3−op; 2.1.4−op; 2.1.5−op; 2.1.1−aw; 2.1.3−aw; 2.1.2−aw; 2.1.4−aw; 2.1.5−aw	
1.10 Does the Certificate Holder's De−Icing Program comply with the guidance contained in FAA Order 8300.10? *Related Design JTI's:* 1. Check that the Certificate Holder has procedures so that the chemical storage and dispensing equipment is in compliance with the air carrier's manual. *Sources:* 8300.10 Volume 3, Chapter 131, Paragraph 5E4 *Interfaces:* 2.1.4−op; 2.1.1−op; 5.1.1−aw; 1.3.3−aw; 2.1.1−aw; 2.1.4−aw 2. Check that the Certificate Holder has procedures so that the serviceability of equipment is in compliance with the air carrier's manual. *Sources:* 8300.10 Volume 3, Chapter 131, Paragraph 5E4 *Interfaces:* 2.1.1−aw; 1.3.3−aw; 2.1.4−aw; 5.1.1−aw; 2.1.4−op; 2.1.1−op 3. Check that the Certificate Holder has procedures so that the general condition and safety of storage areas is in compliance with the air carrier's manual. *Sources:* 8300.10 Volume 3, Chapter 131, Paragraph 5E4 *Interfaces:* 2.1.4−aw; 2.1.4−op; 2.1.1−aw; 5.1.1−aw; 2.1.1−op; 1.3.3−aw 4. 1. If deicing services are provided on a contract basis, check that the Certificate Holder has procedures so that the contractor meets the Certificate Holder's manual requirements for chemical storage and dispensing equipment, serviceability of equipment, general condition and safety of storage areas, and training of personnel in operator's deicing procedures. *Sources:* 8300.10 Volume 3, Chapter 131, Paragraph 5E4 *Interfaces:* 5.1.1−aw; 2.1.1−op; 2.1.4−op; 1.3.3−aw; 2.1.4−aw; 2.1.1−aw; 4.2.1−aw	☐ Yes ☐ No, Explain
1.11 Does the Certificate Holder's De−Icing Program comply with the guidance contained in AC 120−58? *Related Design JTI's:* 1. If the Certificate Holder utilizes military deicing fluids, check that they have procedures to incorporate The U.S. Department of Defense military specifications, "Anti−Icing and Deicing/Defrosting Fluids." These documents specify the following types of FPDs:	☐ Yes ☐ No, Explain

MIL−A−4823C Type I − standard MIL−A−4823C Type II − standard with inhibitor MIL−A−4823D Type I (propylene glycol base) MIL−A−4823D Type II (ethylene and propylene glycol mix) Military Types I and II fluids are essentially the same, except that Military Type II fluids contain a fire inhibitor. Military Types I and II fluids are unrelated to SAE and ISO Types I and II fluids. Military Type I and Type II fluids are both "Deicing" fluids only. No holdover times are available. *Sources:* AC−120−58 *Interfaces:* 2.1.3−op; 2.1.4−op; 2.1.5−op; 2.1.2−op; 2.1.2−aw; 2.1.3−aw; 2.1.1−op; 2.1.1−aw; 2.1.4−aw; 2.1.5−aw	
1.12 Does the Certificate Holder's De−Icing Program comply with the guidance contained in AC 120−60? *Related Design JTI's:* 1. If the Certificate Holder operates without an approved ground deicing/anti−icing program, check to ensure it has approved procedures and properly trained personnel for conducting an "outside−the−aircraft check". *Sources:* AC 120−60 Paragraph 11 *Interfaces:* 2.1.1−aw; 2.1.3−aw; 2.1.2−aw; 2.1.1−op; 2.1.2−op; 2.1.4−aw; 4.2.1−aw; 2.1.5−aw; 4.2.6−op; 2.1.3−op; 2.1.4−op; 2.1.5−op; 4.2.3−op	☐ Yes ☐ No, Explain
1.13 If alternate procedures exist for use during irregular conditions, do the alternate procedures provide an equivalent level of safety to achieve the same results as the primary procedures?	☐ Yes ☐ No, Explain ☐ Not Applicable

SAI SECTION 1 − PROCEDURES ATTRIBUTE −Drop Down Menu
1. No procedures, policy, instructions or information specified.
2. Procedures or instructions and information do not identify (who, what, when, where, how).
3. Procedures, policy or instructions and information do not comply with CFR.
4. Procedures, policy or instructions and information do not comply with FAA policy and guidance.
5. Procedures, policy or instructions and information do not comply with other documentation (e.g., manufacturer's data, Jeppesen's Charts, etc.).
6. Procedures, policy or instructions and information unclear or incomplete.
7. Documentation quality (e.g., unreadable or illegible).
8. Procedures, policy or instructions and information inconsistent across Certificate Holder manuals (FOM − Flight Operations Manual to GMM − General Maintenance Manual, etc.).
9. Procedures, policy or instructions and information inconsistent across media (e.g., paper, microfiche, electronic).
10. Resource requirements incomplete (personnel, facilities, equipment, technical data).
11. Other.

SAI SECTION 2 − CONTROLS ATTRIBUTE	
Objective: Controls are checks and restraints designed into a process to ensure a desired result. The questions in this section of the data collection tool are designed to assist the inspector in determining if checks and restraints are designed into the process to ensure the desired result is achieved. Controls should be written into the manual system to ensure that the most important manual policies, procedures or instructions and information will be complied with. Controls may be in the form of "administrative controls" which are secondary or supplemental written procedures. Like written procedures, administrative controls also need to provide answers to the associated who, what, when, where and how type questions. Controls may also be in the form of "engineered controls" such as automated features or mechanical actions or devices (i.e., safety devices, warning devices, etc.).	
Tasks	
To meet this objective, the inspector must accomplish the following tasks:	
1. Review the control questions below.	
2. Review the Certificate Holder's policies, procedures, instructions and information to gain an understanding of the controls that it has documented.	
Questions	
To meet this objective, the inspector must answer the following questions:	
2. Are the following controls built into the De−Icing Program:	
2.1 Is there a control in place to ensure that the Certificate Holder and/or its vendors properly deice/anti−ice the aircraft prior to takeoff, preventing it from taking off with frost, ice, or snow adhering to the wings, control surfaces, propellers, engine inlets, or other critical surfaces?	☐ Yes ☐ No, Explain
2.2 Is there a control in place to ensure that the Certificate Holder's personnel are adequately trained and qualified in its De−Icing Program ?	☐ Yes ☐ No, Explain
2.3 Is there a control in place to ensure that the the Certificate Holder uses adequate storage facilities and dispensing equipment to conduct operations in icing conditions?	☐ Yes ☐ No, Explain
2.4 Does the Certificate Holder have a documented method for assessing the impact of any changes made to the controls in the De−Icing Program?	☐ Yes ☐ No, Explain

SAI SECTION 2 − CONTROLS ATTRIBUTE −Drop Down Menu
1. No controls specified.
2. Documentation for the controls do not identify (who, what, when, where, how).
3. Controls incomplete.
4. Controls could be circumvented.
5. Controls could be unenforceable.
6. Resource requirements incomplete (personnel, facilities, equipment, technical data).
7. Other.

SAI SECTION 3 − PROCESS MEASUREMENT ATTRIBUTE	
Objective: Process measurements are used by the Certificate Holder to measure and assess its processes to identify and correct problems or potential problems and to make improvements to the processes. The questions in this section of the data collection tool are designed to assist the inspector in determining if the Certificate Holder measures or assesses information to identify, analyze and document potential problems with the process. Process measurements are basically a Certificate Holder's internal evaluation or auditing of the most important policies, procedures or instructions and information associated with an element. To prevent the duplication of work that would otherwise occur, Process Measurements are most commonly addressed through a combination of auditing features contained in both the Certificate Holder's Safety Program/Internal Evaluation Program (for Operations and Cabin Safety related issues) and the auditing function of the Continuous Analysis &Surveillance System (for Airworthiness or Maintenance/Inspection related issues). The Director of Safety and the Quality Assurance Department often work in conjunction to accomplish this function for the Certificate Holder. This approach simply requires amendment of the Safety Program/Internal Evaluation Program audit forms or checklists and the Continuous Analysis &Surveillance System audit forms or checklists to include the specific process measurements for each element.	
Tasks	
To meet this objective, the inspector must accomplish the following tasks:	
1. Review the process measurement questions below.	
2. Review the Certificate Holder's policies, procedures, instructions and information to gain an understanding of the process measurements that it has documented.	
Questions	
To meet this objective, the inspector must answer the following questions:	
3. Does the Certificate Holder's De−Icing Program include the following process measurements:	
3.1 Process measurements that would reveal if the Certificate Holder and/or its vendors did not properly deice/anti−ice the aircraft prior to takeoff, allowing it to take off with frost, ice, or snow adhering to the wings, control surfaces, propellers, engine inlets, or other critical surfaces?	☐ Yes ☐ No, Explain
3.2 Process measurements that would reveal if the Certificate Holder's personnel were not adequately trained and qualified on its De−Icing Program?	☐ Yes ☐ No, Explain
3.3 Process measurements that would reveal if the Certificate Holder did not use adequate chemical storage facilities and dispensing equipment to conduct operations in icing conditions?	☐ Yes ☐ No, Explain
3.4 Does the Certificate Holder document its process measurement methods and results?	☐ Yes ☐ No, Explain
3.5 Does the organization that conducts the process measurements have direct access to the person with responsibility for the De−Icing Program?	☐ Yes ☐ No, Explain

SAI SECTION 3 − PROCESS MEASUREMENT ATTRIBUTE −Drop Down Menu
1. No process measurements specified.
2. Documentation for the process measurements does not identify (who, what, when, where, how).
3. Inability to identify negative findings.
4. No provisions for implementing corrective actions.
5. Ineffective follow−up to determine effectiveness of corrective actions.
6. Resources requirements (personnel, facilities, equipment, technical data).
7. Other.

SAI SECTION 4 − INTERFACES ATTRIBUTE	
Objective: Interfaces are used by the Certificate Holder to identify and manage the interactions between processes. The questions in this section of the data collection tool are designed to assist the inspector in determining whether or not interactions between the procedures, policies or instructions and information associated with other independent processes within the Certificate Holder's organization are documented. Written procedures, policies or instructions and information that are interrelated and located in different manuals within the Certificate Holder's manual system need to be consistent and complement each other. For the interfaces to be effectively managed, it is not only important to identify what the interfaces are, but it is imperative to document the specific location of the interfaces within the Certificate Holder's manual system.	
Tasks	
To meet this objective, the inspector must accomplish the following tasks:	
1. Review the interfaces associated with the De−Icing Program that have been identified along with the individual questions in the Procedures Section (1) of this data collection tool.	
2. Review the Certificate Holder's policies, procedures, instructions and information to gain an understanding of the interfaces that it has documented.	
Questions	
To meet this objective, the inspector must answer the following questions: NOTE: ALL EXPLANATIONS IN THE DROP DOWN MENU FOR "NO" ANSWERS MUST INCLUDE THE INDIVIDUAL QUESTION NUMBER FROM THE PROCEDURES SECTION (1) OF THIS DATA COLLECTION TOOL AND THE ELEMENT NUMBER(S) OF THE INTERFACE(S) THAT WERE NOT ADDRESSED.	
4. Does the Certificate Holder's manual:	
4.1 Properly address the interfaces that are identified along with the individual questions in the Procedures Section (1)?	☐ Yes ☐ No, Explain
4.2 Document a method for assessing the impact of any changes to the associated interfaces within the De−Icing Program?	☐ Yes ☐ No, Explain
4.3 List additional interfaces identified during the accomplishment of this SAI.	

SAI SECTION 4 − INTERFACES ATTRIBUTE −Drop Down Menu
1. No interfaces specified.
2. The following interfaces not identified within the Certificate Holder's manual system:
3. Interfaces listed are inaccurate.
4. Specific location of interfaces not identified within the manual system.
5. Other

SAI SECTION 5 − MANAGEMENT RESPONSIBILITY & AUTHORITY ATTRIBUTE	
Objective: The questions in this section of the data collection tool address the responsibility and authority of the process. They are designed to assist the inspector in determining if there is a clearly identifiable, qualified and knowledgeable person who is responsible for the process, is answerable for the quality of the process and has the authority to establish and modify the process. (The person with the authority may or may not be the person with the responsibility.)	
Tasks	
To meet this objective, the inspector must accomplish the following tasks:	
1. Identify the person who has overall responsibility for the De−Icing Program.	
2. Identify the person who has overall authority for the De−Icing Program.	
3. Review the duties and responsibilities of the person(s), documented in the Certificate Holder's manual.	
4. Review the appropriate organizational chart.	
Questions	
To meet this objective, the inspector must answer the following questions:	
5. Are the following aspects of the Management Responsibility and Authority Attributes addressed in the De−Icing Program:	
5.1 Does the Certificate Holder's manual clearly identify who is responsible for the quality of the De−Icing Program?	☐ Yes ☐ No, Explain Name/Title:
5.2 Does the Certificate Holder's manual clearly identify who has authority to establish and modify the policies, procedures, instructions and information for the De−Icing Program?	☐ Yes ☐ No, Explain Name/Title:
5.3 Does the Certificate Holder's manual include the duties and responsibilities of those who manage the work required by the De−Icing Program? SRRs: 121.135(b)(2)	☐ Yes ☐ No, Explain
5.4 Does the Certificate Holder's manual include instructions and information for those who manage the work required by the De−Icing Program? SRRs: 121.135(a)(1)	☐ Yes ☐ No, Explain
5.5 Does the Certificate Holder's manual clearly and completely document the authority for this position?	☐ Yes ☐ No, Explain
5.6 Does the Certificate Holder's manual clearly and completely document their qualification standards for the person having responsibility for the De−Icing Program?	☐ Yes ☐ No, Explain
5.7 Does the Certificate Holder's manual clearly and completely document their qualification standards for the person having authority to establish and modify the Certificate Holder's policies, procedures, instructions and information for the De−Icing Program?	☐ Yes ☐ No, Explain
5.8 Does the Certificate Holder's manual clearly and completely document the procedures for delegation of authority for the De−Icing Program?	☐ Yes ☐ No, Explain

SAI SECTION 5 − MANAGEMENT RESPONSIBILITY & AUTHORITY ATTRIBUTE −Drop Down Menu
1. Not documented.
2. Documentation unclear.
3. Documentation incomplete.
4. Other.